



NORTHEAST POWER COORDINATING COUNCIL, INC.  
1040 AVE OF THE AMERICAS, NEW YORK, NY 10018 TELEPHONE (212) 840-1070 FAX (212) 302-2782

August 27, 2012

Scott Auxier  
Bangor Hydro Electric Co.  
21 Telcom Drive  
Bangor, Me 04401

Re: NPCC Response to a Request for Criteria Interpretation on Regional Reliability  
Directory# 3 *Maintenance Criteria for Bulk Power System Protection*

Dear Mr. Auxier:

In accordance with the NPCC Directory Development and Revision Manual the Task Force on System Protection (TFSP) has considered your *Request for Criteria Interpretation* and has provided the attached response.

The subject request which seeks clarification of certain criteria within Directory#3 *Maintenance Criteria for Bulk Power System Protection* was reviewed and approved by the TFSP at its meeting on July 17<sup>th</sup> and 18<sup>th</sup>, 2012.

Please find attached the TFSP response along with the original Request for Interpretation.

NPCC has established an archive for this and other such requests in the Directory section of the NPCC website.

<https://www.npcc.org/Standards/Directory%20Interpretations/Forms/AllItems.aspx>

Please let me know if I can provide any further assistance in this matter.

Thank you.

Gerry Dunbar  
Northeast Power Coordinating Council, Inc.  
212.840.1070 (p)

[gdunbar@npcc.org](mailto:gdunbar@npcc.org)



NORTHEAST POWER COORDINATING COUNCIL, INC.  
1040 AVE OF THE AMERICAS, NEW YORK, NY 10018 TELEPHONE (212) 840-1070 FAX (212) 302-2782

## NPCC Request for Criteria Interpretation

**Note: an Interpretation cannot be used to revise a Directory.**

Request for an Interpretation of a Directory
Date submitted: 7-9-2012 Date revised version submitted:
<b>Contact information for person requesting the interpretation:</b>
Name: Scott Auxier
Organization: Bangor Hydro Electric
Telephone: 207-973-2540
E-mail: sauxier@bhe.com
<b>Identify the Directory that needs clarification:</b>
Directory Number : 3
Directory Title: Maintenance Criteria for Bulk Power System Protection
<b>Identify specifically what portion of the Criteria needs clarification:</b>
Text of Requirement:

### 5.6.2 Channel Health

*For telecommunication system channels that are continuously monitored and continuously provide verification of trip capability to an Operator, no additional testing is necessary.*

What is meant by: "continuously provide verification of trip capability to an Operator"? As an example, we have an FSK communication channel of RFL-9745 tone sets. The Guard tones are continuously monitored and Loss of Communication is alarmed to our operators. There is also a Hardware Alarm that is monitored by the operators and seems to provide verification of trip capability. Does this system meet the requirements such that no additional Channel Health testing is required? As such may the telecommunications terminal equipment be tested on the same interval as the protection assembly?

#### **Identify the material impact associated with this interpretation:**

Identify the material impact to your organization or others caused by the lack of clarity or an incorrect interpretation of this Directory:

Incorrect interpretation will cause us to test on incorrect intervals. We will either not be meeting the criteria or over-testing which is both costly and potentially detrimental to system reliability.

**Interpretation: Response to Request for an Interpretation of Directory XX  
for the XXXX Corporation**

The following interpretation of Directory was developed by the Task Force on XXXXX

**Directory Number and Text of Requirement**

**Question 1**

**Response to Question 1**

**Question 2**

**Response to Question 2**

## Task Force on System Protection

### Response to Request for Interpretation

#### Directory#3 Maintenance Criteria Bulk Power System Protection

What is meant by: "continuously provide verification of trip capability to an Operator"?

What is meant here, is that the communications equipment is capable of detecting and alarming (to an operator) failure modes that could prevent the trip signal from reaching the remote end.

As an example, we have an FSK communication channel of RFL-9745 tone sets. The Guard tones are continuously monitored and Loss of Communication is alarmed to our operators.

In your FSK example, the alarming would have to give an indication of the equipment's ability to actually send a trip signal to the remote end, not just the presence of the guard tone.

There is also a Hardware Alarm that is monitored by the operators and seems to provide verification of trip capability.

It is TFSPs understanding of this RFL equipment, that the hardware alarm is not a trip capability alarm so much as it is a hardware failure alarm, which is one failure mode, but not all failure modes.

Does this system meet the requirements such that no additional Channel Health testing is required?

This system meets the channel health testing requirements but does not provide trip capability verification, which is required annually.

As such may the telecommunications terminal equipment be tested on the same interval as the protection assembly?

The Contact outputs from the telecommunications equipment can be tested on the same interval as the protection assembly. For example, your RFL equipment may pick up an auxiliary device which has contact outputs going into your protection assembly...These contacts do not fall under the telecommunications equipment testing requirements but instead under the protection assembly testing requirements.