



Enforcement Webinar

Aaron Hornick and Jason Wang

April 23, 2024



Contents

- Enforcement 101
 - NPCC Enforcement Team
 - Purpose of Enforcement
 - Enforcement Tools
- Enforcement Metrics
 - Forecasting
 - Top 10 Violated Standards and Requirement
 - CIP vs O&P
 - Discovery Method
 - Enforcement Output
 - Open Caseload (**NPCC Only** as of 4/1/2024)
- FAQ Enforcement Questions
 - What is enforcement doing to address the high number of incoming violations?
 - Why are more violations being reported?
 - What is the status of my violation?
 - Why is my violation taking so long to process?
 - I may have encountered a violation, what do I do?
 - How can I help with the enforcement process?
 - Do all violations result in a monetary penalty?
 - Additional Questions



Enforcement Organizational Chart

Damase Hebert

General Counsel and Corporate Secretary

Jason Wang

Manager, Compliance Enforcement and Mitigation

Arthur Brown

Senior Counsel

Melissa De Saedeleer

Associate Counsel

Aaron Hornick
Senior Compliance Mitigation Analyst

Open
Senior CIP Analyst

Deketa Wall
CIP Risk and Mitigation Analyst

Francesco Elmi
Senior Compliance Engineer

Kurt Wahl
Senior O&P Risk Assessment Mitigation Analyst

Open
O&P Analyst

Nicolette Kerner
Compliance Program Support Assistant



Enforcement 101 - Purpose

- Determine the relevant facts and circumstances necessary to understand each noncompliance.
- Evaluate and assigns a risk assessment to each noncompliance.
- Evaluate and approves the mitigation activities or Mitigation Plan for each noncompliance.
- Assess the relevant compliance history for each noncompliance.
- Determine the disposition method for each noncompliance.
- Calculate penalties and sanctions in a consistent manner.



Enforcement Process

Potential Noncompliance (PNC) Intake

Triage

Fact Finding through Requests for Information (RFI)

Review Mitigation

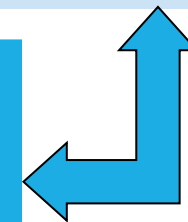
Draft Disposition Document



Enforcement Tools – Disposition Tracks

Compliance Exception (CE)	Find, Fix, Track Report (FFT)	Settlement Agreement
<ul style="list-style-type: none">Minimal riskNot considered in compliance history for penalty purposes	<ul style="list-style-type: none">Typically, moderate riskConsidered in compliance history	<ul style="list-style-type: none">Agreement between Entity and Regional Entity about facts and risk of violation(s)Entity either (a) admits or (b) neither admits nor denies the facts and risk of the underlying violation(s)

Spreadsheet Notice of Penalty (SNOP)	Notice of Penalty (NOP)
<ul style="list-style-type: none">Moderate or minimal risk but inappropriate for CE or FFT	<ul style="list-style-type: none">Serious risk, systemic, intentional, or significant failures





Enforcement 101 – Minimal, Moderate, Serious



Minimal: Nothing serious could have occurred and there were complete or significant protections in place to reduce the risk. (FERC Order Approving CMEP Program, 150 FERC ¶ 61,108)



Moderate: Something serious could have occurred and there were only some protections in place to reduce risk. (FERC Order Approving CMEP Program, 150 FERC ¶ 61,108)



Serious: The most serious risk issues are: (i) those involving or resulting in (a) extended outages, (b) loss of load, (c) cascading blackouts, (d) vegetation contacts and (e) systemic or significant performance failures; and (ii) those involving (a) intentional or willful acts or omissions, (b) gross negligence and (c) other misconduct. (FERC March 15, 2012 Order, 138 FERC ¶ 61,193)



Enforcement Metrics (ERO and NPCC)

- Forecasting (2017-2029)
- CIP vs O&P (2019-2024)
- Top 10 Violated Standards and Requirement (2019-2024)
- Discovery Method (2019-2024)
- Enforcement Output (2019-2024)
- Open Caseload (**NPCC Only** as of 4/1/2024)



[2017 Annual CMEP Report.pdf \(nerc.com\)](#)

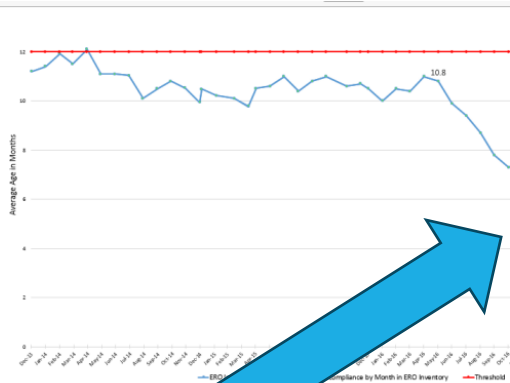


Figure A.2: Average Age in Months of Noncompliance in the ERO Enterprise

Number of New Noncompliance Discovered in 2017

The number of new noncompliance slowed in September and October, but resumed its heightened pace in the last two months of 2017. The 2,050 instances of noncompliance discovered in 2017 represent approximately 1.5x the number discovered in 2016 (1,301), which had already nearly doubled from 2015 (867). The increase between 2015 and 2017 reversed a trend of declining discovered noncompliance that had peaked in 2011 with 2,597 and fell steadily through 2015.

Approximately 75 percent of all newly discovered noncompliance in the first half of 2017 involved Reliability Standards that have gone into effect since July 2016.³⁵ Prior spikes in reported noncompliance may provide insights into this trend. The last surge of noncompliance, also associated with new standards, lasted approximately three years, peaking after the completion of the first full year the new standards were in effect. If this increase follows a similar pattern, then 2017 would be the peak, the total discovered noncompliance should begin to fall in 2018, and fall again more significantly in 2019 as registered entities become familiar with the requirements necessary for compliance with the new standards and the ERO Enterprise completes compliance monitoring activities for the applicable registered entities.

Number of New Noncompliance Discovered in 2017

The number of new noncompliance slowed in September and October, but resumed its heightened pace in the last two months of 2017. The 2,050 instances of noncompliance discovered in 2017 represent approximately 1.5x the number discovered in 2016 (1,301), which had already nearly doubled from 2015 (867). The increase between 2015 and 2017 reversed a trend of declining discovered noncompliance that had peaked in 2011 with 2,597 and fell steadily through 2015.

Approximately 75 percent of all newly discovered noncompliance in the first half of 2017 involved Reliability Standards that have gone into effect since July 2016.³⁵ Prior spikes in reported noncompliance may provide insights into this trend. The last surge of noncompliance, also associated with new standards, lasted approximately three years, peaking after the completion of the first full year the new standards were in effect. If this increase follows a similar pattern, then 2017 would be the peak, the total discovered noncompliance should begin to fall in 2018, and fall again more significantly in 2019 as registered entities become familiar with the requirements necessary for compliance with the new standards and the ERO Enterprise completes compliance monitoring activities for the applicable registered entities.

³⁴ The age of noncompliance runs from the time the noncompliance is identified to the time it is resolved (e.g., through CE, FFT, SNOP, or Full NOP processing).

³⁵ For MRREs participating in the Coordinated Oversight Program, noncompliance will be accounted for in its Lead RE statistics, but may actually affect assets in the Affected RE's regional footprint.



Year	# New Effective Standards and Revision Changes	Highlights
2016	32	CIP V5, PRC-005-6, PRC-024-2, PRC-019-2, MOD-025-2
2017	37	VAR-002-4.1
2018	10	
2019	12	
2020	10	CIP-10-3 and CIP-005-6
2021	18	FAC-008-5
2022	7	CIP-010-4, CIP-005-7, PRC-024-3
2023	4	
2024	15	CIP-004-7, CIP-011-3



IBR Registration Milestones

Phase 1: May 2023–May 2024

- Complete Rules of Procedure revisions and approvals
- Commence Category 2 GO and GOP candidate outreach and education (e.g., through trade organizations)

Phase 2: May 2024–May 2025

- Complete identification of Category 2 GO and GOP candidates
- Continue Category 2 GO and GOP candidate outreach and education (e.g., quarterly updates, webinars, workshops, etc.)

Phase 3: May 2025–May 2026

- Complete registration of Category 2 GO and GOP candidates thereafter subject to applicable NERC Reliability Standards
- Conduct specific Category 2 GO and GOP outreach and education (e.g., quarterly updates, webinars, workshops, etc.)

- The addition of inverter-based resources may provide an additional source of incoming violations that could reverse the what may be a slowing trend of incoming violations.
- New standards or new Registered Entities may provide a new stream of noncompliance similar to the ones seen in the rollout of CIP Version 5, depending on the number of entities affected.



FERC Order 881

Ambient Adjusted Ratings (AAR) required for transmission lines.



Hourly updates of the ratings.



Seasonal AAR ratings for transmission lines.



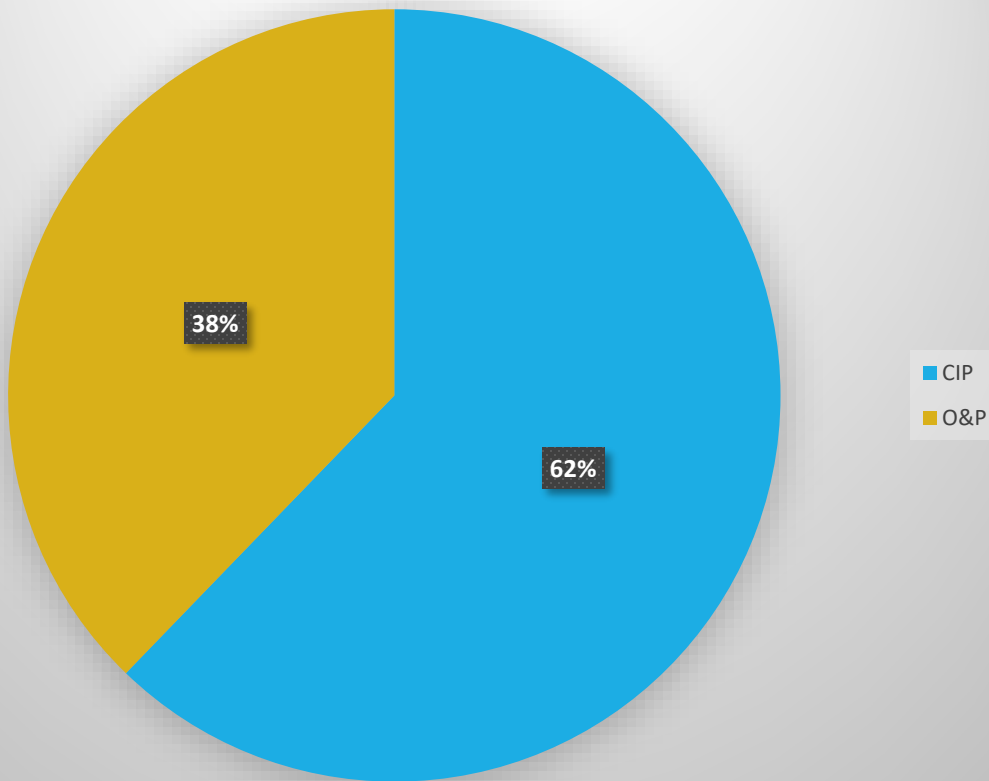
Will impact Facility Rating Standards.



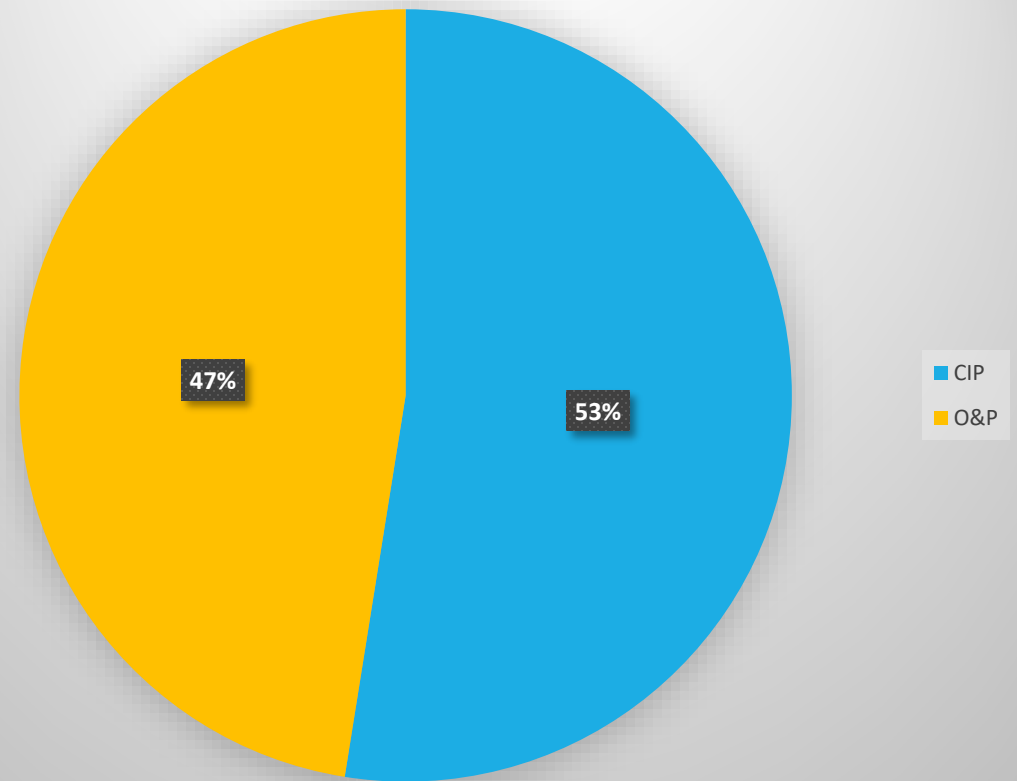
CIP vs O&P

2019 - 2024

ERO Incoming CIP/O&P (2019-2024)

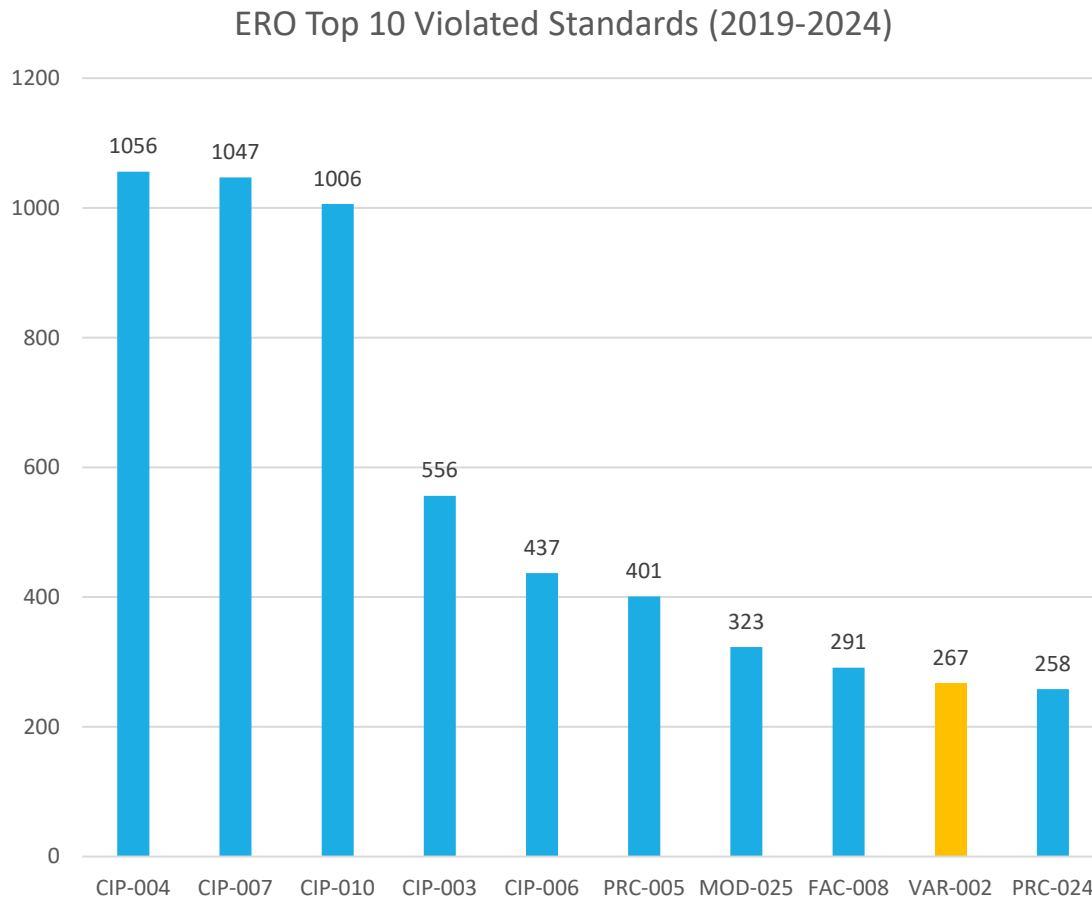


NPCC Incoming CIP/O&P (2019-2024)





ERO Top 10 Violated Standards 2019 – 2024

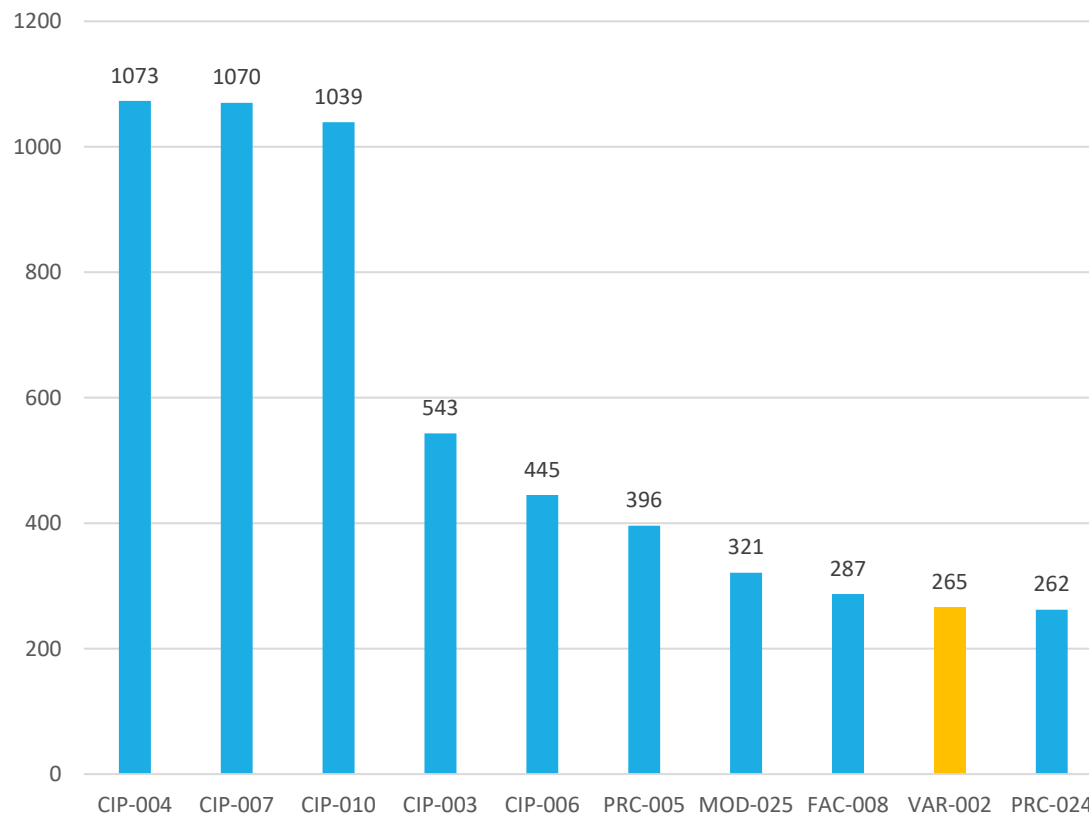


ERO Top 10 Violated Standards	Brief Description
CIP-004	Personnel and Training
CIP-007	System Security Management
CIP-010	Configuration Change Management and Vulnerability Assessments
CIP-003	Security Management Controls
CIP-006	Physical Security of BES Cyber Systems
PRC-005	Protection System, Automatic Reclosing, and Sudden Pressure Relaying Maintenance
MOD-025	Verification and Data Reporting of Generator Real and Reactive Power Capability and Synchronous Condenser Reactive Power Capability
FAC-008	Facility Ratings
VAR-002	Generator Operation for Maintaining Network Voltage Schedules
PRC-024	Frequency and Voltage Protection Settings for Generating Resources

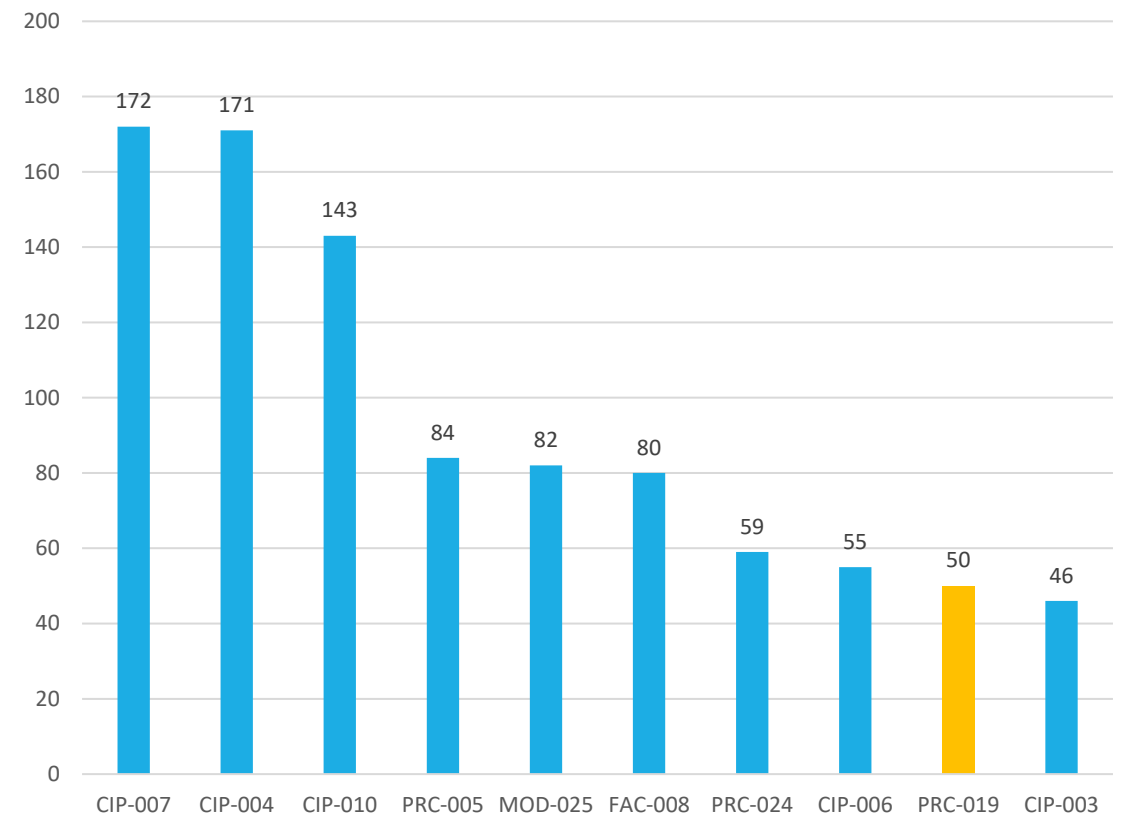


Comparison ERO vs NPCC (Standards)

ERO Top 10 Violated Standards (2019-2024)



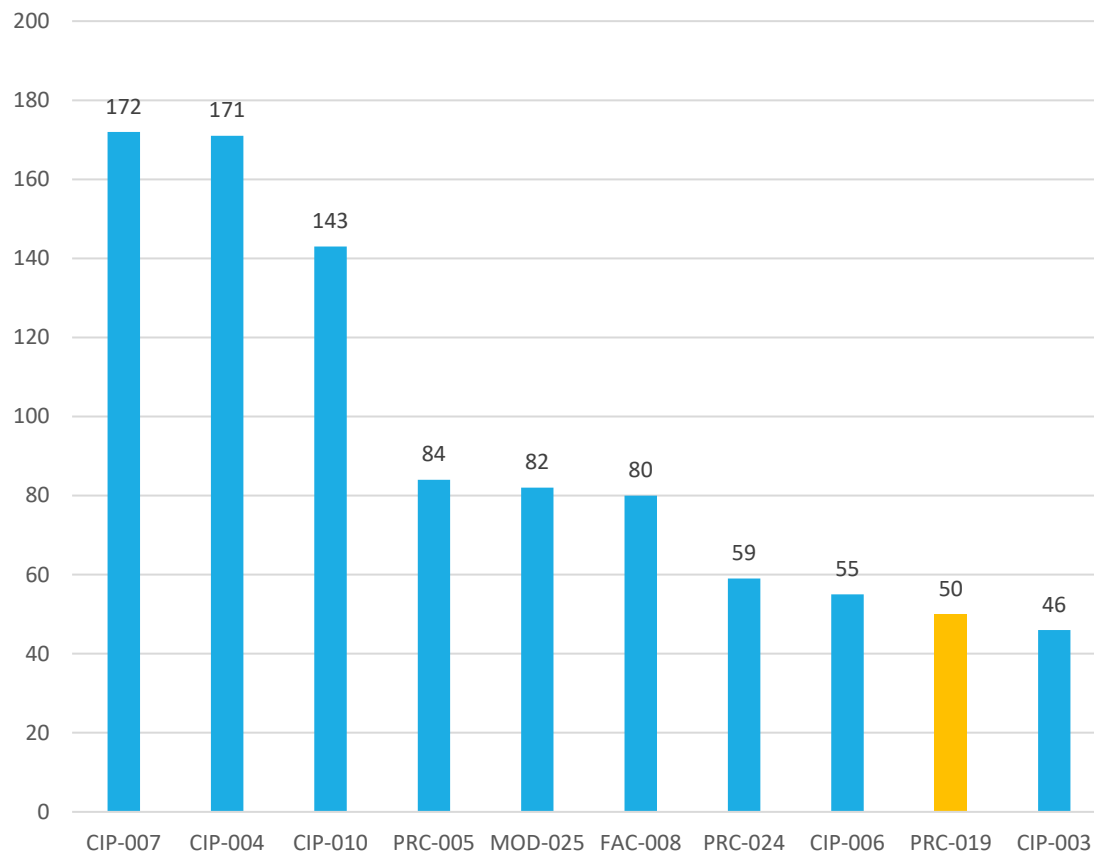
NPCC Top 10 Violated Standards (2019-2024)





NPCC Top 10 Violated Standards 2019 – 2024

NPCC Top 10 Violated Standards (2019-2024)

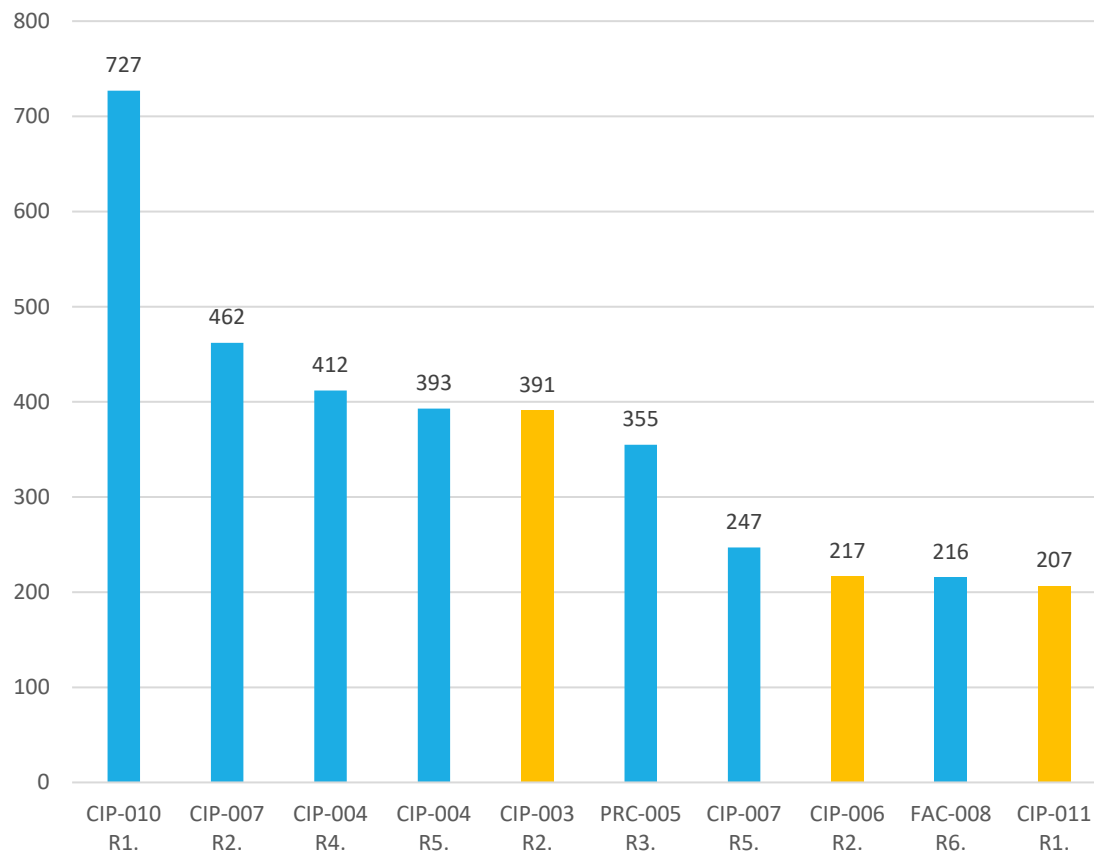


NPCC Top 10 Violated Standards	Brief Description
CIP-007	System Security Management
CIP-004	Personnel and Training
CIP-010	Configuration Change Management and Vulnerability Assessments
PRC-005	Protection System, Automatic Reclosing, and Sudden Pressure Relaying Maintenance
MOD-025	Verification and Data Reporting of Generator Real and Reactive Power Capability and Synchronous Condenser Reactive Power Capability
FAC-008	Facility Ratings
PRC-024	Frequency and Voltage Protection Settings for Generating Resources
CIP-006	Physical Security of BES Cyber Systems
PRC-019	Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection
CIP-003	Security Management Controls



ERO Top 10 Violated Requirements 2019 – 2024

ERO Top 10 Violated Requirements (2019-2024)

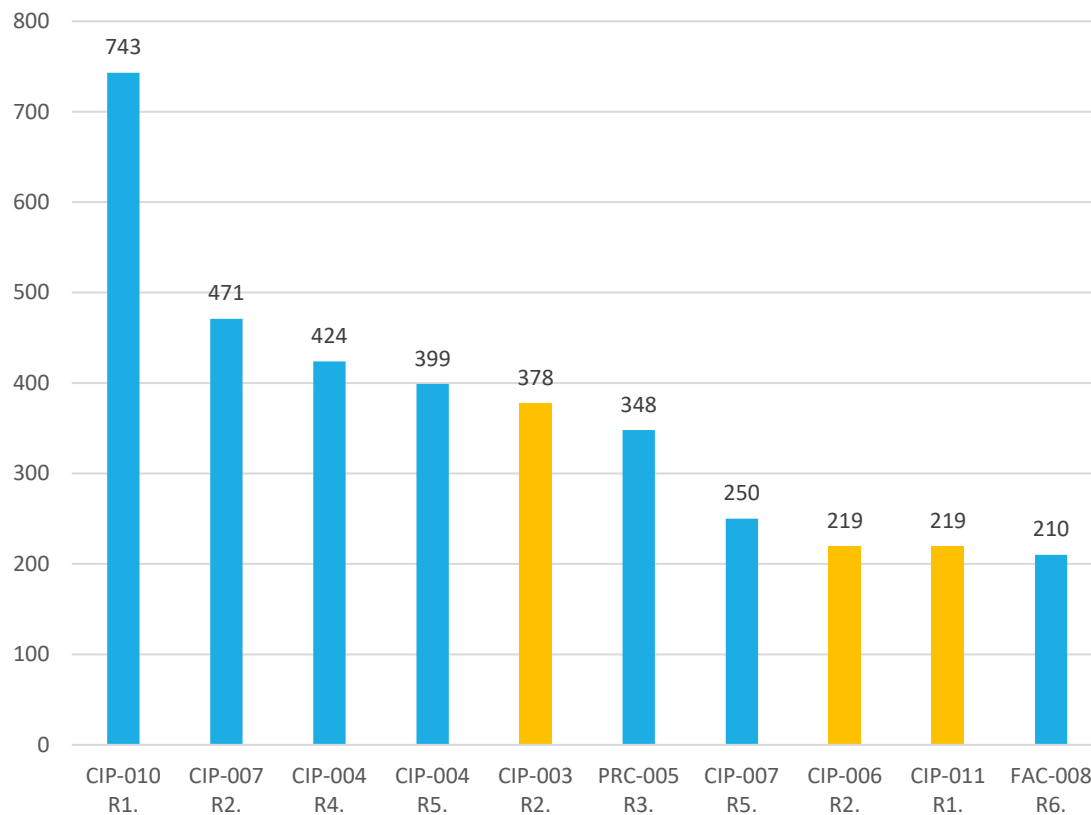


ERO Top 10 Violated Requirements	Brief Description
CIP-010 R1.	Baseline configuration, authorization of changes, and deviation from baselines
CIP-007 R2.	Security Patch Management
CIP-004 R4.	Authorize Access, Quarterly Access Review, 15 Month Access Review
CIP-004 R5.	Access Revocation and Password Changes
CIP-003 R2.	Cyber Security Plans for Low Impact BES Cyber Systems
PRC-005 R3.	Maintain components within specified intervals and within the Standard Implementation plan timelines
CIP-007 R5.	System Access Controls (Authentication, Inventory Accounts, Shared Accounts, Change Default Passwords, Password Parameters, and Brute Force Attacks)
CIP-006 R2.	Visitor controls
FAC-008 R6.	Facility Ratings Consistent with Methodology
CIP-011 R1.	Identify and Protect BCSI

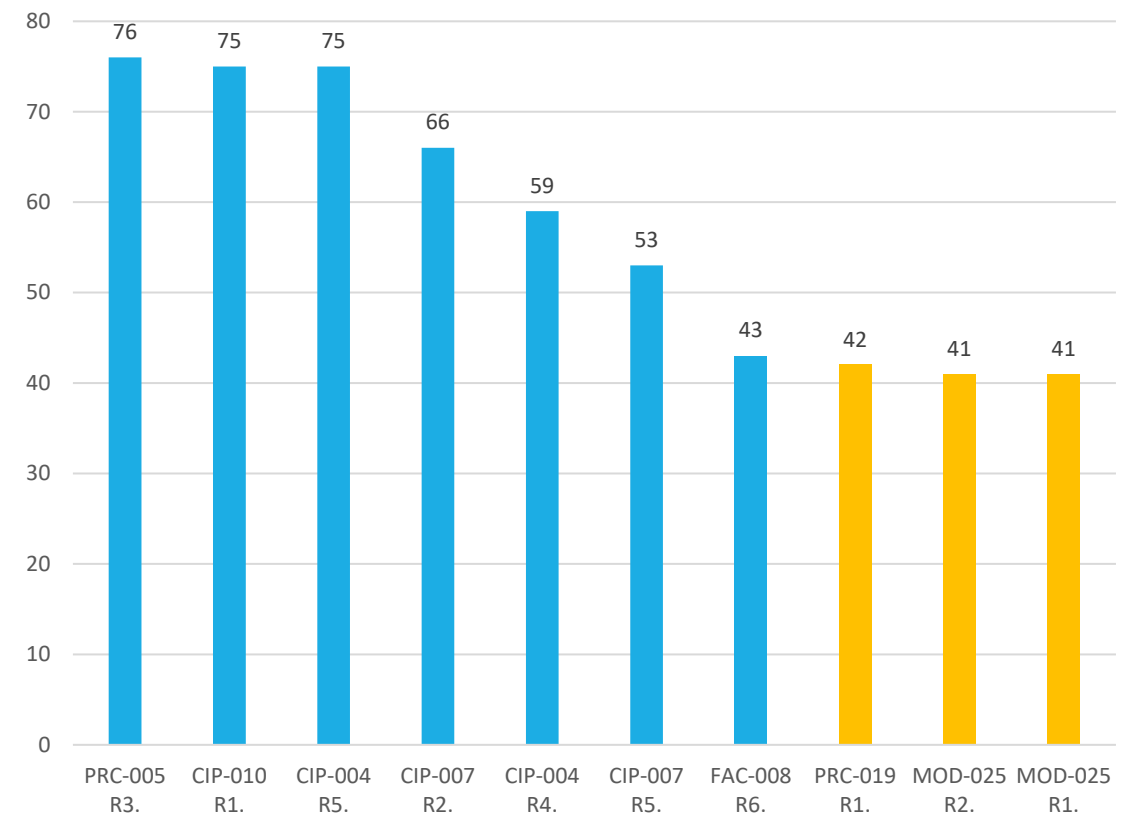


Comparison ERO vs NPCC (Requirements)

ERO Top 10 Violated Requirements (2019-2024)



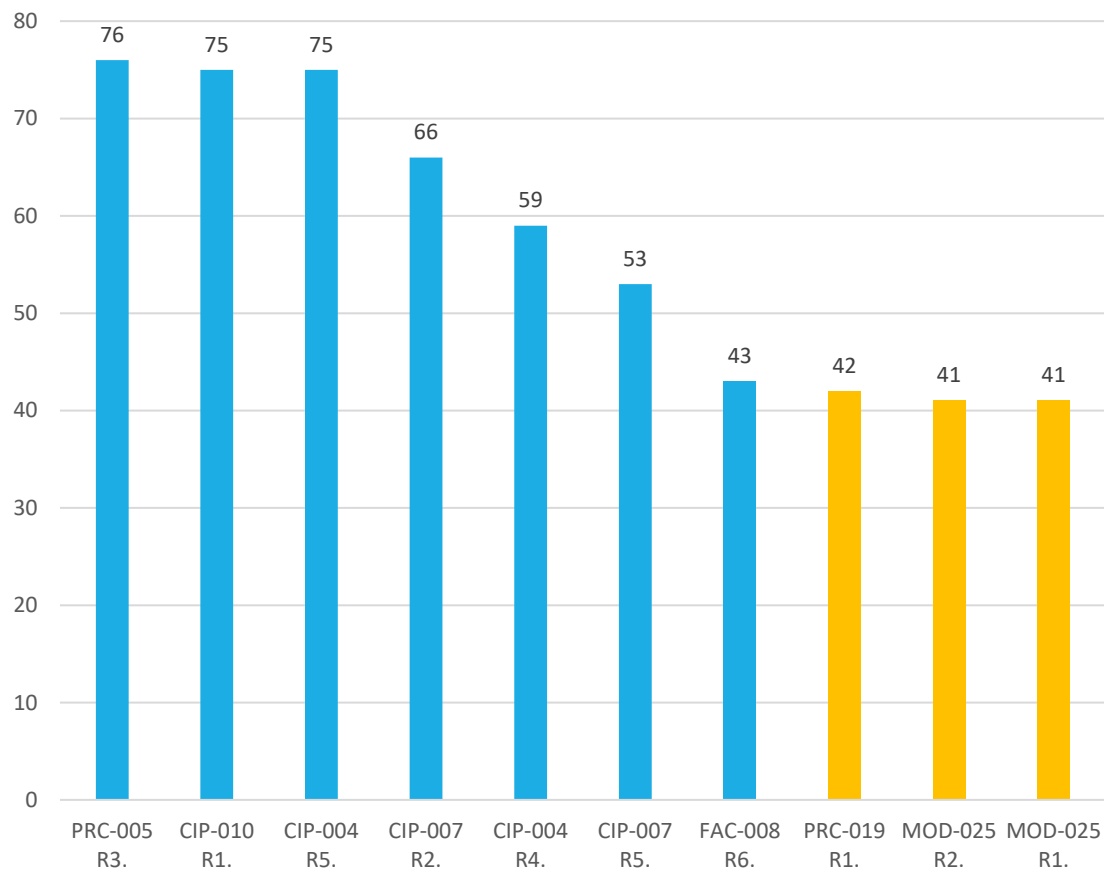
NPCC Top 10 Violated Requirements (2019-2024)





NPCC Top 10 Violated Requirements 2019 – 2024

NPCC Top 10 Violated Requirements (2019-2024)



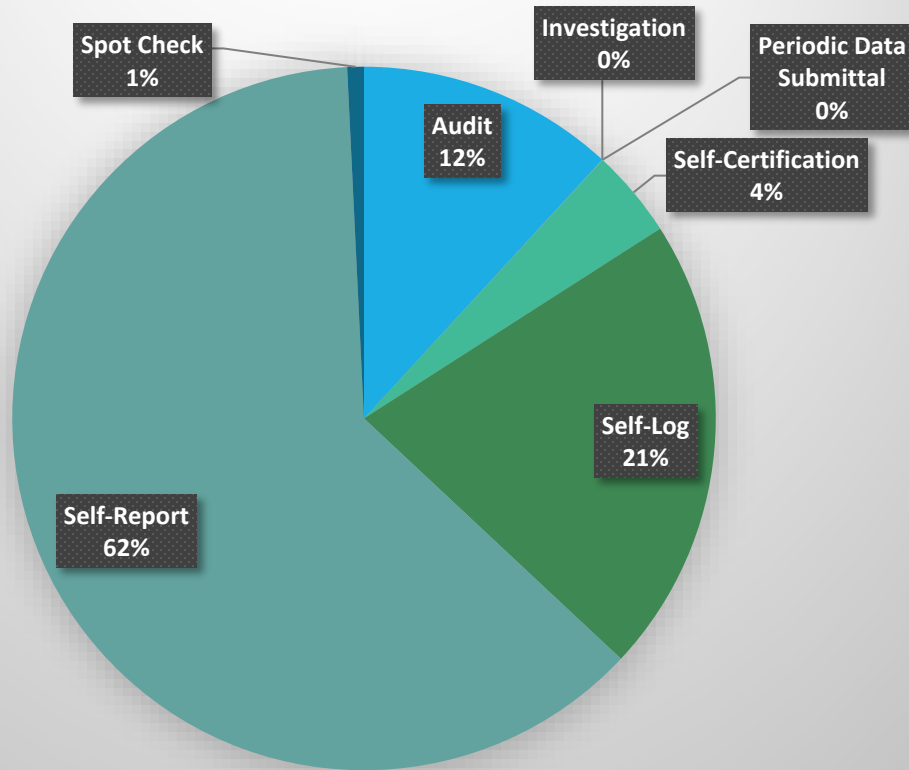
NPCC Top 10 Violated Requirements	Brief Description
PRC-005 R3.	Maintain components within specified intervals and within the Standard Implementation plan timelines
CIP-010 R1.	Baseline configuration, authorization of changes, and deviation from baselines
CIP-004 R5.	Access Revocation and Password Changes
CIP-007 R2.	Security Patch Management
CIP-004 R4.	Authorize Access, Quarterly Access Review, 15 Month Access Review
CIP-007 R5.	System Access Controls (Authentication, Inventory Accounts, Shared Accounts, Change Default Passwords, Password Parameters, and Brute Force Attacks)
FAC-008 R6.	Establish Facility Ratings consistent with methodology
PRC-019 R1.	Coordinating voltage regulating system controls
MOD-025 R2.	Verification of Reactive Power capability
MOD-025 R1.	Verification of Real Power capability



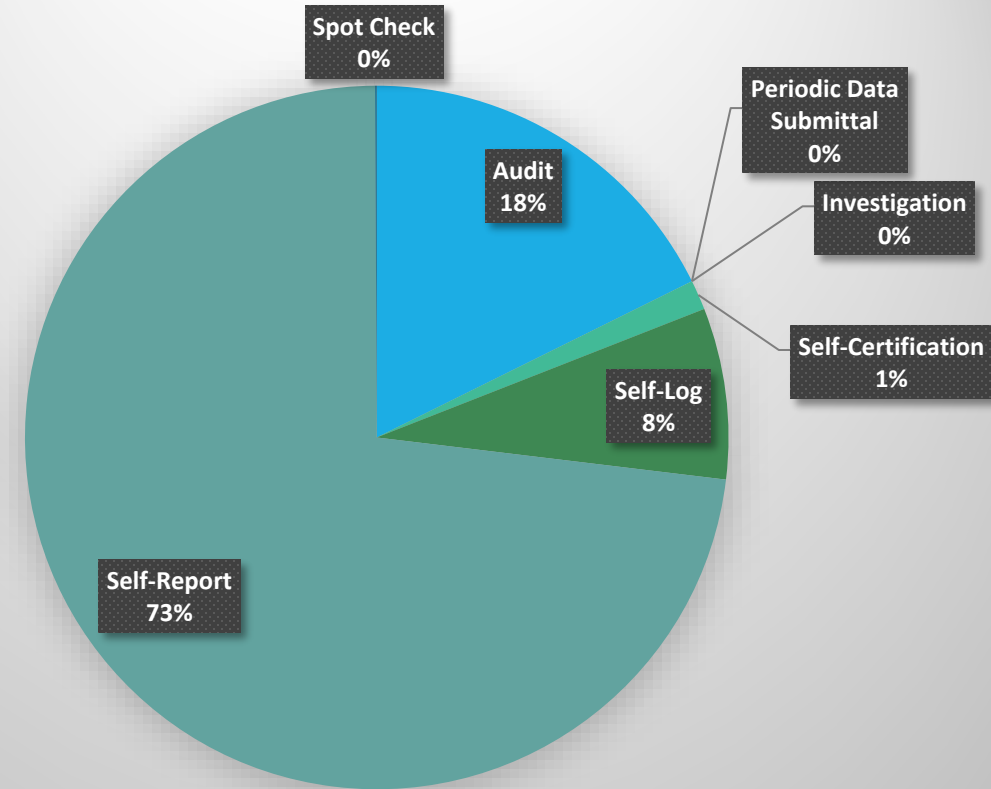
Discovery Method

2019 - 2024

ERO Discovery Method (2019-2024)



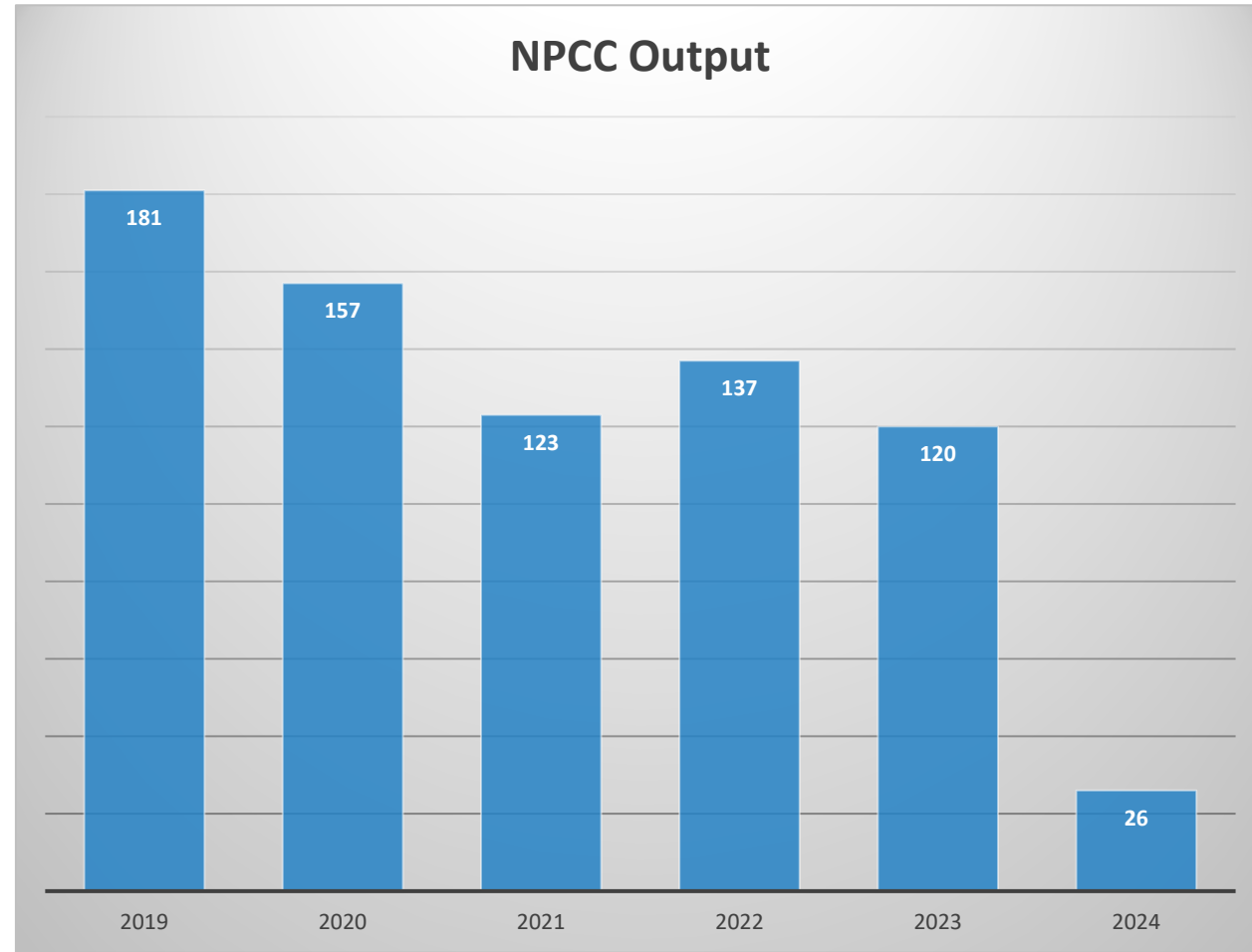
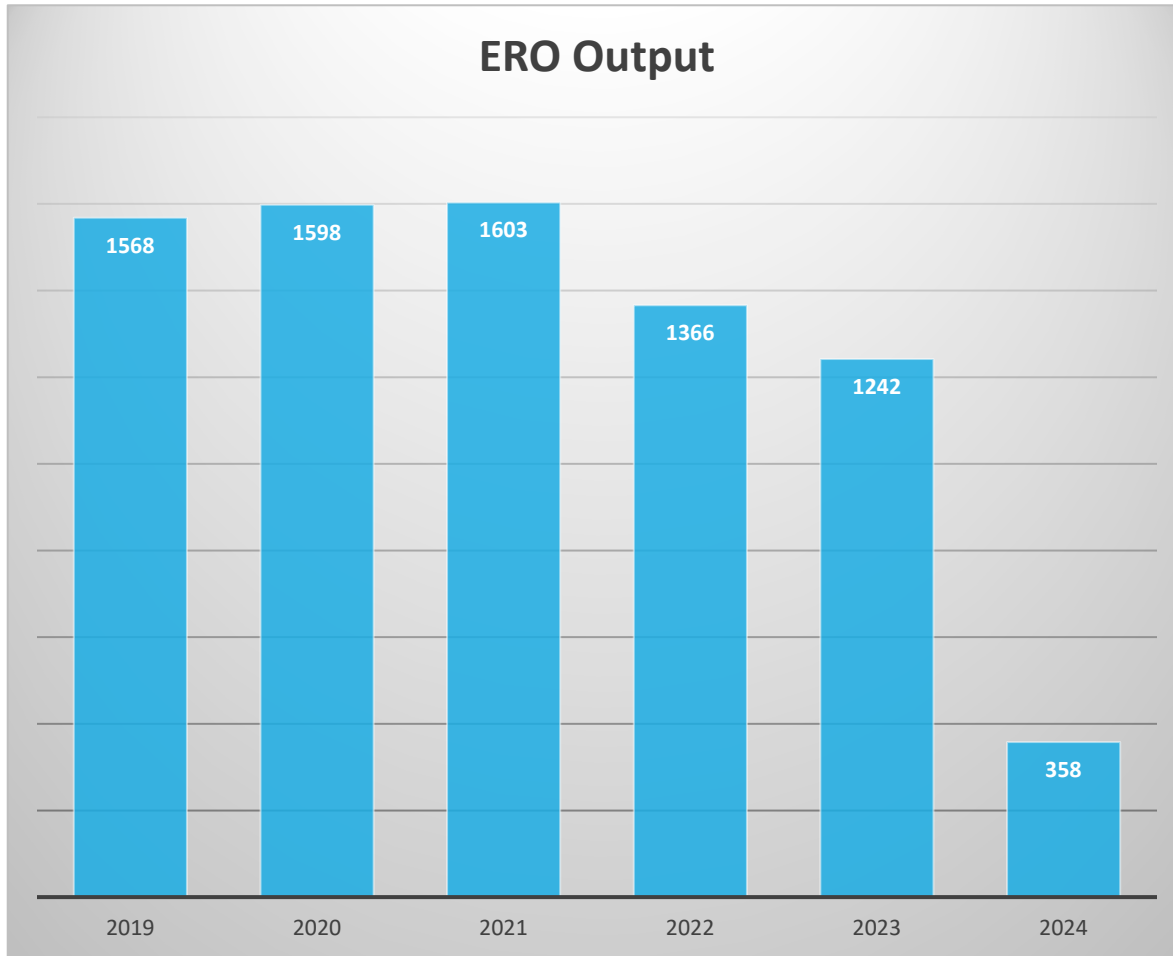
NPCC Discovery Method (2019-2024)





Enforcement Output

2019-2024

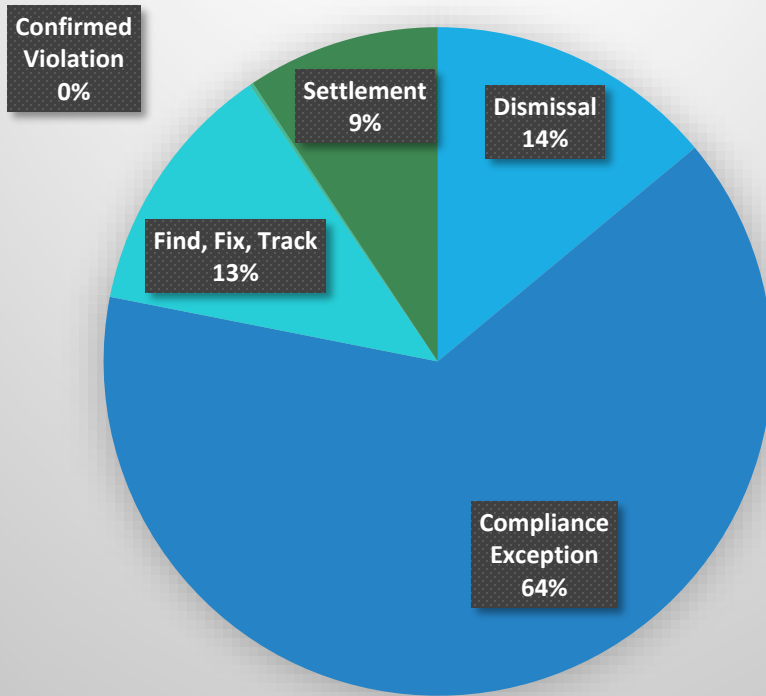




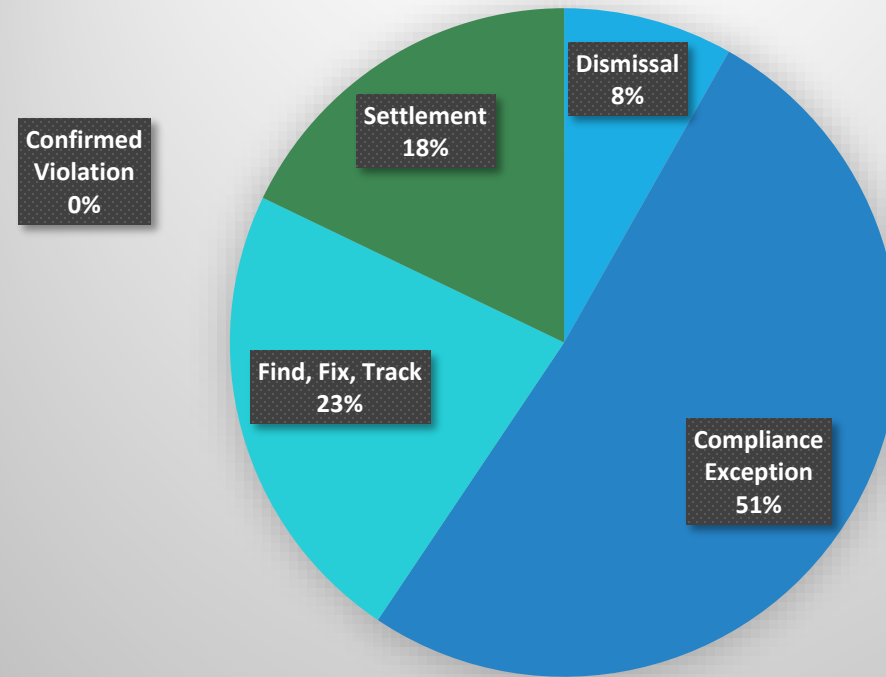
Enforcement Output

2019-2024

ERO Disposition Methods (2019-2024)



NPCC Disposition Methods (2019-2024)

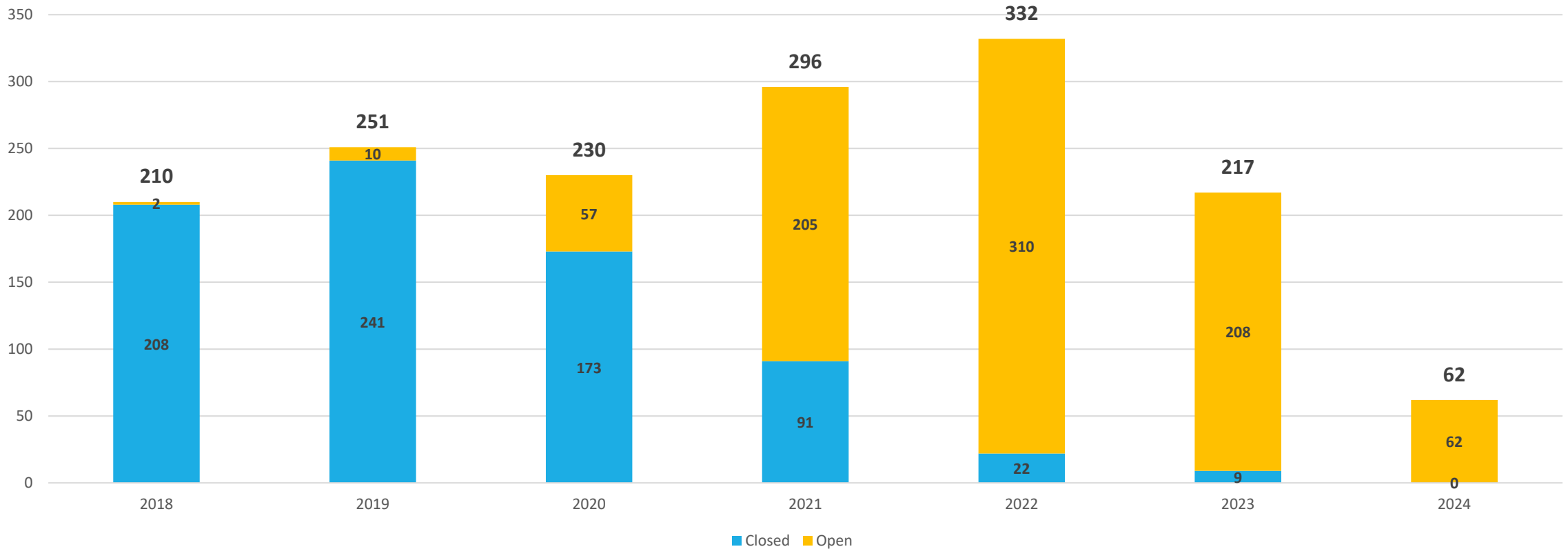




Open Caseload (NPCC Only)

As of 4/1/2024

Open Noncompliance By Year





Enforcement FAQ

What is enforcement doing to address the high number of incoming violations?

Why are more violations being reported?

What is the status of my violation?

Why is my violation taking so long to process?

I may have encountered a violation, what do I do?

How can I help with the enforcement process?

Do all violations result in a monetary penalty?

Additional Questions



What is Enforcement Doing to Address the High Number of Incoming Noncompliance ?

Example: MOD-025-2 R1 - Identifying Criteria from the Sample

Primary Population	Criteria
(Examples: Substation, etc.)	Previous submittal still reliable
1-8	Inherent Properties
9	Balancing Authority Operating Reserve
10-19	General Factors #4...5...6...Etc...
20-40	
41-100	
101-100	
1001 +	

The entity synchronized the Facility on March 29, 2017 and the net active power output identified during commissioning testing was approximately 106 MWs, which is the same value provided by the June 6, 2018 power test.

The Entity owns and operates a single steam turbine generator with nameplate capabilities of 112.5 MW and 132.4 MVA, which interconnect with the host Transmission Owner's BES substation via two 65 MVA generator step-up transformers. In addition, the generator operated at capacity factors of 23.23% in 2017 and 20.82% in 2018.

The rated capability of the generator is 5.7% of the Entity's Balancing Authority (NYISO) required Operating Reserve (1965 MW). Therefore, the capacity of this unit can be replaced by the NYISO in the event of an unnecessary trip or loss of generating capability due to inaccurate information.



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

MOD-025-2 Enforcement Approach

Background Information

- [MOD-025-2 Standard Language](#)
- [MOD-025-2 Implementation Plan](#)

Standard/Implementation Plan Effective Dates

- United States

Standard	Requirement	Effective Date	% of Applicable Facilities
MOD-025-2	R1., R2., R3.	07/01/2016	40%
MOD-025-2	R1., R2., R3.	07/01/2017	60%
MOD-025-2	R1., R2., R3.	07/01/2018	80%
MOD-025-2	R1., R2., R3.	07/01/2019	100%

Key Terminology

Applicable Facilities:

- Individual generating unit greater than 20 MVA (gross nameplate rating) directly connected to the Bulk Electric System.
- Synchronous condenser greater than 20 MVA (gross nameplate rating) directly connected to the Bulk Electric System.
- Generating plant/Facility greater than 75 MVA (gross aggregate nameplate rating) directly connected to the Bulk Electric System.

Real Power

The portion of electricity that supplies energy to the load

Reactive Power

The portion of electricity that establishes and sustains the electric and magnetic fields of alternating-current equipment. Reactive Power must be supplied to most types of magnetic equipment, such as motors and transformers. It also must supply the reactive losses on transmission facilities. Reactive Power is provided by generators, synchronous condensers, or electrostatic equipment such as capacitors and directly influences electric system voltage. It is usually expressed in kilovars (kvar) or megavars (Mvar).



Why are more violations being reported?



New Standards and Standard Revisions



New Registered Entities or Assets in BES



Inclusion of New Jurisdictions to Mandatory Reliability



What is the status of my violation?

Enforcement Processing

Align For Entities

My Open Findings

My Closed Findings

NCR00124 Editor 1 Ipswich Municipal Light Department

MY OPEN FINDINGS

	MONITORING METHOD	UNIQUE_ID	REGION OR LRE	DATE SUBMITTED	REGISTRATION	STANDARD	REQ	START DATE	CREATED BY	MODIFIED BY	MODIFIED ON	FINDING STATUS	SEND UPDATE	MITIGATION
<input type="checkbox"/>	Self-Report	2021-00219	NPCC	03/24/2021	NCR00124 - Ipswich Municipal Light Department in NPCC	PRC-005-1.1b	R1.	02/16/2021	NCR00124 Editor 1	Admin Admin	11/01/2021	Enforcement Processing	+	Mitigating Activities CEA Processing
<input type="checkbox"/>	Self-Report	2021-00223	NPCC	03/24/2021	NCR00124 - Ipswich Municipal Light Department in NPCC	PRC-005-6	R4.	03/02/2021	NCR00124 Editor 1	Admin Admin	11/01/2021	PNC Review	+	Mitigation Plan Active
<input type="checkbox"/>	Self-Report	2021-00053	NPCC	03/24/2021	NCR00124 - Ipswich Municipal Light Department in NPCC	CIP-002-5.1a	R1.	02/24/2021	NCR00124 Editor 1	Admin Admin	11/01/2021	Enforcement Processing	+	Mitigating Activities Complete
<input type="checkbox"/>	Self-Report	2021-00221	NPCC	03/24/2021	NCR00124 - Ipswich Municipal Light Department in NPCC	PRC-006-3	R9.	02/16/2021	NCR00124 Editor 1	Admin Admin	11/01/2021	Enforcement Processing	+	Mitigation Plan NERC Processing
<input type="checkbox"/>	Self-Log	2021-00225	NPCC	03/24/2021	NCR00124 - Ipswich Municipal Light Department in NPCC	PRC-005-6	R4.	03/02/2021	NCR00124 Editor 1	Admin Admin	11/01/2021	Enforcement Processing	+	Mitigation Plan CEA Processing
<input type="checkbox"/>	Self-Report	2021-00659 (Consolidation)	NPCC	11/23/2021	NCR00124 - Ipswich Municipal Light Department in NPCC	PRC-005-6	R2.	11/01/2021	NCR00124 Editor 1	NCR00124 Editor 1 Ipswich Municipal Light...	11/23/2021	Enforcement Processing	+	Mitigating Activities CEA Processing
<input type="checkbox"/>	Self-Report	2021-00224	NPCC	03/24/2021	NCR00124 - Ipswich Municipal Light Department in NPCC	PRC-006-3	R9.	03/15/2021	NCR00124 Editor 1	Admin Admin	11/01/2021	Enforcement Processing	+	Mitigation Plan NERC Processing
<input type="checkbox"/>	Self-Report	2021-00358	NPCC	04/08/2021	NCR00124 - Ipswich Municipal Light Department in NPCC	PRC-005-6	R1.	04/01/2021	NCR00124 Editor 1	Admin Admin	11/01/2021	PNC Review	+	Mitigating Activities Active
<input type="checkbox"/>	Self-Report	2022-00179	NPCC	07/26/2022	NCR00124 - Ipswich Municipal Light Department in NPCC	PRC-006-5	R8.	07/01/2022	NCR00124 Editor 1	NCR00124 Editor 1 Ipswich Municipal Light...	07/26/2022	PNC Review	+	Mitigating Activities CEA Processing
<input type="checkbox"/>	Self-Report	2022-00244	NPCC	07/26/2022	NCR00124 - Ipswich Municipal Light Department in NPCC	PRC-005-6	R1.	07/01/2022	NCR00124 Editor 1	NCR00124 Editor 1 Ipswich Municipal Light...	07/26/2022	PNC Review	+	Mitigating Activities CEA Processing
<input type="checkbox"/>	Self-Report	2022-00228	NPCC	07/26/2022	NCR00124 - Ipswich Municipal Light Department in NPCC	PRC-005-1.1b	R1.	07/01/2022	NCR00124 Editor 1	NCR00124 Editor 1 Ipswich Municipal Light...	07/26/2022	PNC Review	+	Mitigating Activities CEA Processing
<input type="checkbox"/>	Self-Report	2022-00263	NPCC	07/26/2022	NCR00124 - Ipswich Municipal Light Department in NPCC	PRC-005-1.1b	R1.	07/01/2022	NCR00124 Editor 1	NCR00124 Editor 1 Ipswich Municipal Light...	07/26/2022	PNC Review	+	Mitigating Activities CEA Processing

Page 1 of 137

INSTRUCTIONS

This is your Findings dashboard. From here, you can see the status of all the potential noncompliances associated with your Registration(s). You can View those findings, and you can send a Finding Update to provide your Region with more information. You can also access your Mitigation from this screen. A summary of the process a Finding goes through is shown on the right.

Finding

Preliminary Screening

PNC Review

Enforcement Processing

Dismissal

Compliance Exception

Find, Fix, Track

Settlement

Confirmed Violation

Processing Complete

Closed

Finding Process Summary



Why is my violation taking so long to process?

High Number of Enforcement Caseload

Higher prioritized noncompliance

Complex stories

Lack of Expectations



I may have encountered a violation, what do I do?

- Identify the issue
 - Look over the Standard Language and the Implementation Plan
 - Determine where the failure exists
- Situation Awareness
 - Communicate the issue internally
- Investigation
 - Determine the scope of the issue, the risks, and the actions to fix the issue.
- Communicate Results
 - Communicate the updated information to NPCC Enforcement



How can I help with the Enforcement process?

- General
 - Meet with SME and Enforcement
- Violation
 - Updates can go into SEL
 - Updates can go into Finding Update
 - You do not need NPCC to perform an action to update NPCC
- Mitigation
 - Identify the changes to any policies/procedures.



Do all violations result in a monetary penalty?

No

Compliance Exception (CE)	Find, Fix, Track Report (FFT)	Settlement Agreement
<ul style="list-style-type: none">Minimal riskNot considered in compliance history for penalty purposes	<ul style="list-style-type: none">Typically, moderate riskConsidered in compliance history	<ul style="list-style-type: none">Agreement between Entity and Regional Entity about facts and risk of violation(s)Entity either (a) admits or (b) neither admits nor denies the facts and risk of the underlying violation(s)

Spreadsheet Notice of Penalty (SNOP)	Notice of Penalty (NOP)
<ul style="list-style-type: none">Moderate or minimal risk but inappropriate for CE or FFT	<ul style="list-style-type: none">Serious risk, systemic, intentional, or significant failures



