

Agenda

Compliance Committee

November 6, 2018 | 10:00–11:00 a.m. Eastern

Grand Hyatt Atlanta in Buckhead
3300 Peachtree Rd NE
Atlanta, GA 30305

Introduction and Chair's Remarks

NERC Antitrust Compliance Guidelines and Public Announcement

Agenda Items

- 1. Minutes* – Approve**
 - a. August 15, 2018, Meeting
- 2. Follow-up Regarding Action Items from Prior Meeting – Discussion**
- 3. Policy Input Regarding ERO Enterprise Program Alignment Efforts – Discussion**
- 4. 2019 Compliance Monitoring and Enforcement Program Implementation Plan* – Update**
- 5. Compliance Monitoring and Enforcement Program Quarterly Report* – Update**
- 6. Adjournment**

*Background materials included.

NERC Antitrust Compliance Guidelines

General

It is NERC's policy and practice to obey the antitrust laws and to avoid all conduct that unreasonably restrains competition. This policy requires the avoidance of any conduct that violates, or that might appear to violate, the antitrust laws. Among other things, the antitrust laws forbid any agreement between or among competitors regarding prices, availability of service, product design, terms of sale, division of markets, allocation of customers, or any other activity that unreasonably restrains competition.

It is the responsibility of every NERC participant and employee who may in any way affect NERC's compliance with the antitrust laws to carry out this commitment.

Antitrust laws are complex and subject to court interpretation that can vary over time and from one court to another. The purpose of these guidelines is to alert NERC participants and employees to potential antitrust problems and to set forth policies to be followed with respect to activities that may involve antitrust considerations. In some instances, the NERC policy contained in these guidelines is stricter than the applicable antitrust laws. Any NERC participant or employee who is uncertain about the legal ramifications of a particular course of conduct or who has doubts or concerns about whether NERC's antitrust compliance policy is implicated in any situation should consult NERC's General Counsel immediately.

Prohibited Activities

Participants in NERC activities (including those of its committees and subgroups) should refrain from the following when acting in their capacity as participants in NERC activities (e.g., at NERC meetings, conference call,s and in informal discussions):

- Discussions involving pricing information, especially margin (profit) and internal cost information, and participants' expectations as to their future prices or internal costs;
- Discussions of a participant's marketing strategies;
- Discussions regarding how customers and geographical areas are to be divided among competitors;
- Discussions concerning the exclusion of competitors from markets;
- Discussions concerning boycotting or group refusals to deal with competitors, vendors, or suppliers; and
- Any other matters that do not clearly fall within these guidelines should be reviewed with NERC's General Counsel before being discussed.

Activities That Are Permitted

From time to time, decisions or actions of NERC (including those of its committees and subgroups) may have a negative impact on particular entities and thus in that sense adversely impact competition. Decisions

and actions by NERC (including its committees and subgroups) should only be undertaken for the purpose of promoting and maintaining the reliability and adequacy of the bulk power system. If you do not have a legitimate purpose consistent with this objective for discussing a matter, please refrain from discussing the matter during NERC meetings and in other NERC-related communications.

You should also ensure that NERC procedures, including those set forth in NERC's Certificate of Incorporation, Bylaws, and Rules of Procedure are followed in conducting NERC business.

In addition, all discussions in NERC meetings and other NERC-related communications should be within the scope of the mandate for or assignment to the particular NERC committee or subgroup, as well as within the scope of the published agenda for the meeting.

No decisions should be made nor any actions taken in NERC activities for the purpose of giving an industry participant or group of participants a competitive advantage over other participants. In particular, decisions with respect to setting, revising, or assessing compliance with NERC reliability standards should not be influenced by anti-competitive motivations.

Subject to the foregoing restrictions, participants in NERC activities may discuss:

- Reliability matters relating to the bulk power system, including operation and planning matters such as establishing or revising reliability standards, special operating procedures, operating transfer capabilities, and plans for new facilities;
- Matters relating to the impact of reliability standards for the bulk power system on electricity markets, and the impact of electricity market operations on the reliability of the bulk power system;
- Proposed filings or other communications with state or federal regulatory authorities or other governmental entities; and
- Matters relating to the internal governance, management, and operation of NERC, such as nominations for vacant committee positions, budgeting and assessments, and employment matters; and procedural matters such as planning and scheduling meetings.

DRAFT Minutes

Compliance Committee

August 15, 2018 | 11:00 a.m. – 12:00 p.m. Mountain

The Westin Calgary
320 4th Avenue SW
Calgary, AB T2P 2S6
Canada

Janice B. Case, Chair, called to order the duly noticed meeting of the Board of Trustees Compliance Committee (BOTCC) of the North American Electric Reliability Corporation (NERC) on August 15, 2018, at approximately 11:00 a.m. Mountain, and a quorum was declared present.

Present at the meeting were:

Committee Members

Janice B. Case, Chair
Robert G. Clarke
Kenneth W. DeFontes, Jr.
Jan Schori
Roy Thilly

Board of Trustees Members

Frederick W. Gorbet
David Goulding
George Hawkins
Suzanne Keenan
Robin E. Manning
James B. Robb, President and Chief Executive Officer

NERC Staff

Charles A. Berardesco, Senior Vice President, General Counsel, and Corporate Secretary
Tina Buzzard, Associate Director to Office of the President and Chief Executive Officer
Ed Kichline, Senior Counsel and Director of Enforcement Oversight
Ken McIntyre, Vice President and Director of Regulatory Programs

Regional Entity Staff

Florida Reliability Coordinating Council

Andrew Williamson, Director of Enforcement, Risk Assessment and Mitigation

Midwest Reliability Organization (MRO)

Richard Burt, Senior Vice President and Chief Operating Officer

Introduction and Chair's Remarks

Ms. Case reviewed the Full Notices of Penalty approved at the August 14, 2018, Executive Session, noting the ERO Enterprise's continued focus on violations of Operations and Planning Reliability Standards. Mr. DeFontes emphasized the BOTCC's concerns about registered entity internal controls and an increase in high risk violations related to fundamental utility responsibilities like vegetation management and facility ratings.

NERC Antitrust Compliance Guidelines and Public Announcement

Ms. Case directed the participants' attention to the NERC Antitrust Compliance Guidelines.

Minutes

Upon motion duly made and seconded, the BOTCC approved the May 9, 2018, meeting minutes as presented at the meeting.

ERO Enterprise Program Alignment Efforts

Mr. McIntyre updated the BOTCC on the ERO Enterprise Program Alignment efforts, including the program's progress during its initial implementation year, outreach efforts, and examples of submitted and resolved cases.

Mr. McIntyre discussed the importance of the Compliance and Certification Committee's (CCC) support of the program. He explained that the CCC has formally established a CCC Alignment Working Group responsible for executing the CCC's role within the program, noting its members have participated directly in stakeholder outreach during NERC and Regional Entity conferences.

Mr. McIntyre also noted some early observations, including an increase in cases submitted to the program by stakeholders. This has provided an opportunity to resolve quickly perceived or actual alignment issues related to Compliance Monitoring and Enforcement Program (CMEP) practices.

Trends in Operations and Planning Violations

Ms. Case explained the BOTCC's focus in the areas of vegetation management, facility ratings, and protection system maintenance and testing.

Mr. Kichline presented data for all reported vegetation contacts, detailing recent violations involving these areas of focus, emphasizing the mitigation of risks and enhancement of internal controls. Mr. McIntyre detailed the ERO Enterprise's strategies for assessing the sustainability of the registered entities' internal controls and monitoring compliance with NERC's Operations and Planning Reliability Standards. Mr. Williamson and Mr. Burt discussed these focus areas from the Regional Entity perspective, highlighting specific cases from their regions and best practices regarding assurance of reliability in these areas.

CMEP Quarterly Report

Ms. Case directed the BOTCC's attention to the CMEP quarterly report included in the agenda package. Ms. Case requested that Mr. McIntyre provide an update on the Southwest Power Pool Regional Entity (SPP RE) transition. Mr. McIntyre noted that NERC has assumed the role of Compliance Enforcement Authority for SPP and that the transition of registered entities from SPP RE to MRO and SERC Reliability Corporation has been successful.

Adjournment

There being no further business, and upon motion duly made and seconded, the meeting was adjourned.

Submitted by,



Charles A. Berardesco
Corporate Secretary

2019 Compliance Monitoring and Enforcement Program Implementation Plan

Action

Update

Background

The Electric Reliability Organization (ERO) Enterprise Compliance Monitoring and Enforcement Program (CMEP) Implementation Plan (IP) is the annual operating plan used by the ERO Enterprise in performing CMEP responsibilities and duties.

The Rules of Procedure (ROP) require NERC to provide an IP to the Regional Entities (REs) on or about September 1 of the preceding year.¹ REs must then submit their IPs to NERC for review and approval on or about October 1. After collecting and reviewing the RE IPs to help ensure REs provide appropriate and consistent information on how they conduct CMEP activities, NERC posts and maintains a consolidated IP that provides guidance and implementation information common to NERC and the REs. NERC monitors RE progress on CMEP activities against the RE IPs throughout the year and reports on CMEP activities in a year-end annual CMEP report.²

Summary

At the time these materials were prepared, NERC anticipated posting the combined 2019 CMEP IP on or about November 5, 2019. NERC will further provide outreach and explanation of the 2019 CMEP IP during a stakeholder webinar scheduled for November 13, 2018.

During the implementation year, NERC or an RE may update its portions of the IP. Updates may include, but are not limited to, changes to compliance monitoring processes; changes to RE processes; or updates resulting from a major event, FERC Order, or other matter. REs submit updates to the NERC Compliance Assurance group, which reviews the updates and makes any needed changes. When changes occur, NERC posts a revised plan on its website and issues an announcement.

2019 CMEP IP Content

The 2019 CMEP IP provides information to highlight ongoing CMEP activities along with identification of specific Risk Elements and Areas of Focus that shape and prioritize ERO Enterprise CMEP activities. The CMEP IP also captures ongoing ERO Enterprise activities that support our programs. These activities for 2019 include the following:

- **Program Alignment:** Greater alignment across the ERO Enterprise can help maintain focus on the most significant risks to reliability using aligned practices in the monitoring and enforcement of compliance with the Reliability Standards.
- **Compliance Guidance:** The ERO Enterprise will continue to emphasize and support both Implementation Guidance and CMEP Practice Guides under the Compliance Guidance Policy.

¹ [NERC ROP](#), Section 403 (Required Attributes of RE Compliance Monitoring and Enforcement Programs).

² ERO Enterprise Annual CMEP Reports available at <http://www.nerc.com/pa/comp/Pages/AnnualReports.aspx>

- **Coordinated Oversight of Multi-Region Registered Entities (MRREs):** The ERO Enterprise Guide for Coordinated Oversight of MRREs³ contains additional details on the process, including criteria for inclusions and roles and responsibilities.
- **Southwest Power Pool (SPP) RE Dissolution:** The 2019 CMEP IP emphasizes continued effective integration of registered entities transferred to SERC and MRO, along with Compliance Enforcement Authority activities of NERC relative to SPP, the registered entity.

The ERO Enterprise uses its Risk-based Framework⁴ to identify risks to the reliability of the bulk power system (BPS), as well as mitigating factors that may reduce or eliminate a given reliability risk. Through the CMEP IP, NERC identifies risk elements using data including, but not limited to, compliance findings; event analysis experience; data analysis; and the expert judgment of NERC and RE staff, committees, and subcommittees (e.g., NERC Reliability Issues Steering Committee (RISC)). NERC uses these risk elements to identify and prioritize interconnection- and continent-wide risks to the reliability of the BPS. These identified risks, as well as risks to the reliability of the BPS identified by each RE for its footprint, will be used by REs to focus monitoring activities.

For each identified risk element in the CMEP IP, NERC highlights areas of focus (i.e., identified Reliability Standard requirements) for ERO Enterprise-wide and RE-specific risks that merit increased focus for CMEP activities and that may become a part of an individual registered entity’s monitoring activities. The areas of focus represent neither the exclusive list of important or relevant Reliability Standards or requirements nor the entirety of the risks that may affect the reliability of the BPS. Rather, they are a reflection of specific Reliability Standards where the ERO Enterprise expects specific emphasis through CMEP activities and for which registered entities should consider prioritizing their controls to support reliability and security. REs will consider the risk elements and areas of focus to help prioritize compliance monitoring efforts.

Enhancements to 2019 CMEP IP Risk Elements Approach

For 2019, the risk elements in the CMEP IP reflect a maturation of the risk-based approach to CMEP activities. When developing the enhancements to the 2019 CMEP IP, the ERO Enterprise also emphasized using information from across the ERO Enterprise to connect the risk elements to ERO Enterprise priorities and emerging issues, including Bulk Electric System performance data such as the reports and alerts related to inverter-based resources, the RISC’s reliability risk priorities, and trend or uptick information in areas such as vegetation management. Compared to prior years’ risk elements, the ERO Enterprise evolved the 2019 risk elements to focus them on discrete issues that can more effectively link to CMEP activities and specific areas of focus for emphasis. Previous risk elements were generally broader, and the ERO Enterprise intends that the 2019 risk elements will provide better guidance to industry and REs through the areas of focus. Further, focusing on discrete risks allows the ERO Enterprise and industry to demonstrate over time how the identified risks in the risk elements are being mitigated.

Table 1 illustrates the risk elements’ evolution from 2018 to 2019. It is important to note that risk elements are written in the negative because they are risks that the ERO Enterprise desires to focus upon, and one should not construe them as specific deficiencies for particular registered

³ https://www.nerc.com/pa/comp/Reliability Assurance Initiative/ERO_Enterprise_Coord_Oversight_Guide.pdf

⁴ https://www.nerc.com/pa/comp/Reliability Assurance Initiative/Overview_of_the_ERO_Enterprise%E2%80%99s_Risk-Based_CMEP.pdf

entities. Instead, they represent the risk-informed set of indicators and risks upon which the ERO Enterprise is prioritizing its CMEP activities.

| Table 1: Comparison of 2016-2018 Risk Elements and 2019 Risk Elements ⁵ | |
|--|--|
| 2016-2018 Risk Elements | 2019 Risk Elements |
| Critical Infrastructure Protection | Improper Management of Employee and Insider Access |
| Extreme Physical Events | Insufficient Long-Term Planning Due to Inadequate Models |
| Maintenance and Management of BPS Assets | Insufficient Operational Planning Due to Inadequate Models |
| Monitoring and Situational Awareness | Spare Equipment with Extended Lead Time |
| Protection System Failures | Inadequate Real-time Analysis During Tool and Data Outages |
| Event Response/Recovery | Improper Determination of Misoperations |
| Planning and System Analysis | Inhibited Ability to Ride Through Events |
| Human Performance | Gaps in Program Execution |

A summary of the reasoning that led to each identified risk element is as follows:

- Improper Management of Employee and Insider Access:** This risk element establishes a focus on the human element of security, one of the descriptors of cyber security vulnerabilities identified in the 2018 ERO Reliability Risk Priorities⁶ report. Regardless of the sophistication of a security system, there is potential for human error.
- Insufficient Long-Term Planning Due to Inadequate Models:** Adequately modeled planning cases become increasingly critical as a changing resource mix, deployment of new technologies, etc., affect the risk to BPS reliability. For instance, the models should reflect whether the power electronic controls of utility-scale inverter-based resources, such as PV resources, give these resources the ability to provide both real and reactive power.
- Insufficient Operational Planning Due to Inadequate Models:** More comprehensive dynamic load models will be necessary to incorporate sufficiently behind-the-meter generation and distributed load resources such as demand-side management programs. In addition, with the recent and expected increases of both utility-scale solar resources and distributed generation, the causes of a sudden reduction in power output from utility-scale power inverters need to be widely communicated and addressed by the industry. Registered entities with increasing inverter-based resources should be aware of these considerations and addressing them within their models.

⁵ The risk elements below are not a comprehensive list of all risks to the reliability of the BPS. The Reliability Standards, requirements, and associated functions for each area of focus may be updated throughout the year to reflect new versions of the Reliability Standards that become effective.

⁶ [https://www.nerc.com/comm/RISC/Related Files DL/ERO-Reliability- Risk Priorities- Report Board Accepted February 2018.pdf](https://www.nerc.com/comm/RISC/Related%20Files%20DL/ERO-Reliability- Risk Priorities- Report Board Accepted February 2018.pdf)

- **Spare Equipment with Extended Lead Time:** As the BPS ages, less-than-adequate infrastructure maintenance is a reliability risk that continues to grow.
- **Inadequate Real-time Analysis during Tool and Data Outages:** Registered entities should have realistic plans to continue real-time assessment during outages of tools, loss of data, or both. This risk element is made more important in situations where planning models may not keep pace with increasing BPS complexity and accurately reflect area specific dependencies on inverters, natural gas, or other items. Forecasting BPS resource requirements to meet customer demand is becoming increasingly difficult due to the penetration of distributed energy resources, which can mask the customer's electric energy use and the operating characteristics of distributed resources without sufficient visibility. Compliance monitoring should understand the plan and the capability and feasibility of the registered entities' skilled workforce to implement the plan within a reasonable time frame. Monitoring should include a keen eye on events and the human evaluation rather than simply looking at real-time contingency analysis (RTCA) scans. RTCA is a tool to help achieve the intent of these requirements, but real-time assessment is the human evaluation of computer-generated results. While the two are linked in this process, simply having RTCA running in the background does not constitute an assessment of the system.
- **Improper Determination of Misoperations:** The 2018 ERO Enterprise Reliability Risk Priorities⁷ report includes a key point that the ERO Enterprise, the impacted organizations, and the respective forums and trade organizations should perform post-event reviews to capture lessons learned to reduce the impact of future events. These reviews will be incomplete if not every event is noticed because the relay operations were not reviewed by qualified personnel. The report also identifies the risk posed by the increasing complexity in protection and control systems, further emphasizing the importance of a skilled workforce analyzing events and relay operations.
- **Inhibited Ability to Ride through Events:** Generating plant protection schemes and their settings should be coordinated with transmission protection, control systems, and system conditions to minimize unnecessary trips of generation during system disturbances. Increased implementation of inverter-based resources has brought an emphasized focus on this issue.
- **Gaps in Program Execution:** Where records are not kept up to date, especially following asset transfers, addition of new equipment, or mergers and acquisitions, adverse reliability impacts or damaged equipment may result from inaccurate models, failures in vegetation management programs, or other program deficiencies.

⁷ [https://www.nerc.com/comm/RISC/Related Files DL/ERO-Reliability- Risk Priorities- Report Board Accepted February 2018.pdf](https://www.nerc.com/comm/RISC/Related%20Files%20DL/ERO-Reliability- Risk Priorities- Report Board Accepted February 2018.pdf)

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Agenda Item 5

Compliance Monitoring and Enforcement Program Quarterly Report

Q3 2018

November 6, 2018

RELIABILITY | ACCOUNTABILITY



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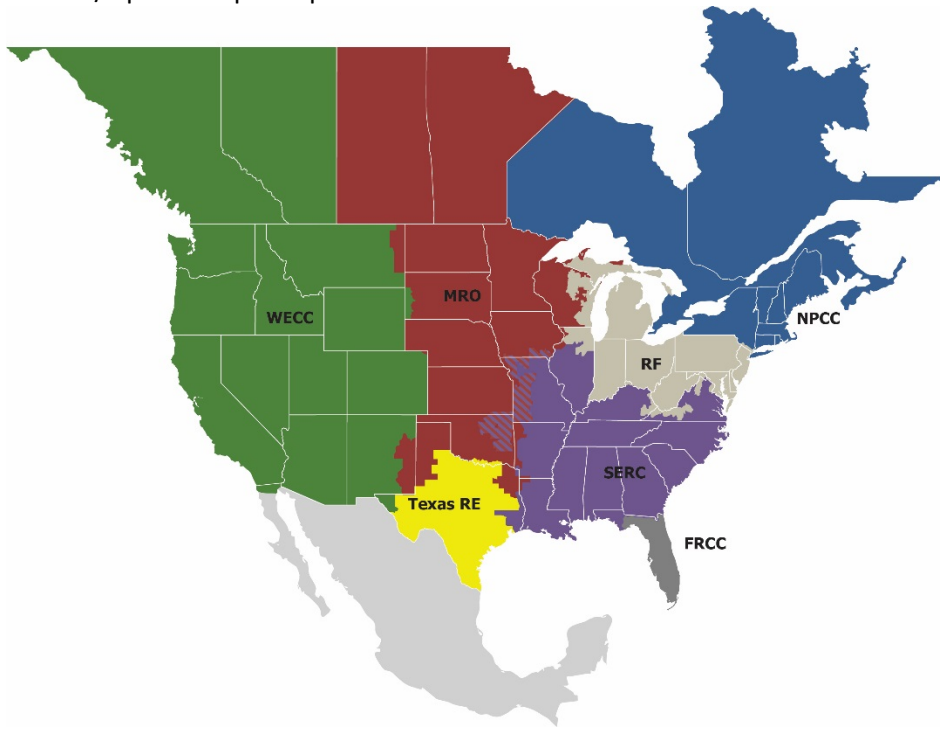
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Preface

The vision for the Electric Reliability Organization (ERO) Enterprise, which is comprised of the North American Electric Reliability Corporation (NERC) and the seven Regional Entities (REs), is a highly reliable and secure North American bulk power system (BPS). Our mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid.

The North American BPS is divided into seven RE boundaries as shown in the map and corresponding table below. The multicolored area denotes overlap as some load-serving registered entities participate in one RE while associated Transmission Owners/Operators participate in another.



| | |
|-----------------|--|
| FRCC | Florida Reliability Coordinating Council |
| MRO | Midwest Reliability Organization |
| NPCC | Northeast Power Coordinating Council |
| RF | ReliabilityFirst |
| SERC | SERC Reliability Corporation |
| Texas RE | Texas Reliability Entity |
| WECC | Western Electricity Coordinating Council |

Executive Summary

This report highlights key ERO Enterprise¹ Compliance Monitoring and Enforcement Program (CMEP) activities that occurred in Q3 2018 and provides information and statistics regarding those activities. In Q3 2018, CMEP activities throughout the ERO Enterprise reflected continuing implementation of a risk-based approach that has allowed the ERO Enterprise to focus resources on risks to the reliability of the BPS, entity-specific risks, and serious risk noncompliance with Reliability Standards. NERC and the REs also collaborated on various compliance monitoring activities to identify lessons learned and provide additional insight and information to industry stakeholders. Most significantly, in Q3 2018, the ERO Enterprise focused on the continued alignment of core CMEP activities.

In Q3 2018, the ERO Enterprise resolved three reported consistency issues through its ERO Enterprise Program Alignment Process.² NERC did not identify any new issues in Q3 2018.

In Q3 2018, NERC filed seven Full Notices of Penalty (NOPs), one involving a vegetation contact and one involving a serious risk violation of the Critical Infrastructure Protection (CIP) Reliability Standards.

In Q3 2018, the ERO Enterprise transitioned the entities registered in SPP RE over to the new REs.

1 The “ERO Enterprise” refers to the affiliation between NERC and the seven REs for the purpose of coordinating goals, objectives, metrics, methods, and practices across statutory activities. The operation of the ERO Enterprise does not conflict with obligations of each organization through statutes, regulations, and delegation agreements. The activities discussed in this report relate to compliance monitoring and enforcement performed in connection with United States registered entities. ERO Enterprise activities outside of the United States are not specifically addressed.

2 The ERO Enterprise developed the ERO Enterprise Program Alignment Process to track (identify and capture), triage (classify, analyze, and prioritize), and provide transparency on (post and report) alignment areas where the ERO Enterprise could improve or increase alignment.

Chapter 1: CMEP Activities

Program Alignment

The ERO Enterprise is enhancing alignment of CMEP activities under a broader ERO Enterprise Program Alignment Process.³ The program includes efforts to identify, prioritize, and resolve alignment issues across the ERO Enterprise. These efforts include multiple methods of identifying potential issues. Among others, these methods include the Consistency Reporting Tool,⁴ oversight process reviews, and post-Compliance Audit and post-Spot Check surveys. In Q3 2018, the ERO Enterprise Program Alignment Process addressed two reported consistency issues related to TOP-001-4 attributes and CIP-002-5.1a low impact assets and a NERC-submitted issue regarding internal controls. Additionally, NERC updated the Issues and Recommendations Tracking⁵ spreadsheet to reflect the completed issues.

The ERO Enterprise has four remaining issues from previous quarters under review, which NERC identified.

SPP RE Transition

In Q3 2018, the ERO Enterprise transitioned the entities registered in SPP RE to the other REs. The CMEP reporting systems were available for registered entity use on July 2, 2018. In Q3 2018, NERC coordinated with SERC and the Southwest Power Pool, Inc. and transitioned the Compliance Enforcement Authority (CEA) function from SERC to NERC as the CEA. Additionally, on September 6, 2018, the Federal Energy Regulatory Commission (FERC) issued a letter Order accepting revisions to the MRO Bylaws. The revisions were in response to the transfer of registered entities from the SPP RE to MRO: add two Regional Director positions reflecting the geography of the MRO's expanded footprint on its Board of Directors, increase the number of independent director positions on its Board of Directors, and other administrative changes.

CMEP Technology Project

In Q3 2018, work continued on the CMEP Technology Project, one of the four strategic programs described in the ERO Enterprise System Initiative. The purpose of the CMEP Technology Project is to improve and standardize compliance monitoring and enforcement processes across the ERO Enterprise and implement them within a single technology solution. The project team is working with the Compliance and Certification Committee's Alignment Working Group (CCC-AWG) to collect registered entity perspectives and feedback for consideration during the design of the new CMEP system.

In addition to the CMEP Technology Project, the ERO Enterprise is also working to improve and standardize the registration process within a new registration system. The new registration system will use the ERO Enterprise xRM platform and will provide entity information to the CMEP system for use in compliance monitoring and enforcement. The members of the Organization Registration and Certification Group (ORCG) are working with NERC staff to ensure that registered entities experience a smooth transition when the new system is brought online.

CCC Self-Certification

On a triennial, rotating basis, the CCC audits NERC's adherence to the Rules of Procedure (ROP), particularly the CMEP, Organization Registration and Certification Program (ORCP), and Standard Processes Manual (SPM). During the years between audits, the CCC requests that NERC self-certify its own, and the REs', adherence to these guiding documents. On June 21, 2018, the CCC issued self-certification requests to NERC that focused on CMEP, ORCP, and SPM activities performed by the ERO Enterprise in 2017. Recognizing that the REs perform a number of the activities in the CMEP and ORCP program areas, NERC coordinated with them and provided a consolidated response for the CMEP and ORCP self-certifications. In contrast, the SPM self-certification focuses on NERC's actions; therefore, NERC

³ <http://www.nerc.com/pa/comp/Pages/EROEnterProAlign.aspx>

⁴ <https://secure.ethicspoint.com/domain/media/en/gui/51749/index.html>

⁵ http://www.nerc.com/pa/comp/ERO Enterprise Program AlignmentDL/Issues-Recommendations_EXTERNAL.xlsx

did not coordinate with the REs on a response. NERC and the REs will work with NERC Internal Audit regarding any observations that may result from the self-certifications.

Coordinated Oversight Program

The purpose of the Coordinated Oversight Program is to increase efficiency and eliminate unnecessary duplication of compliance monitoring and enforcement activities for multi-region registered entities (MRREs). A registered entity operating in or owning assets in two or more REs' jurisdictions with one or more NERC Compliance Registry (NCR) identification numbers is a potential candidate for inclusion in the Coordinated Oversight Program. The program is voluntary. In connection with the program, the ERO Enterprise takes into account reliability considerations such as, but not limited to, a registered entity's registered functions, load and generation capacity, transmission assets, and transmission and generation control centers.

During Q3 2018, the ERO Enterprise received requests from two MRREs for entry into the Coordinated Oversight Program that are currently under review. Due to recent consolidation of a large MRRE group into a single NCR identification number, the number of registered entities participating in the Coordinated Oversight Program changed from 222 in Q3 to 206.⁶

ERO Enterprise Staff Training and Industry Outreach

In August 2018, NERC announced and opened registration for a technical training on Planning/Operations Base Cases and Modeling Parameters for RE CMEP staff. The two-day training will be held in December at NERC's office in Atlanta and WECC's office in Salt Lake City. The training module provides a knowledge base on data requirements and power system modeling in relation to the Reliability Standards. Furthermore, the topics covered will include several common aspects to power system parameters and simulation modeling. The material presented in the module is essential for oversight activities of Reliability Standards where power system models and cases are used. This is the first training in a series of technical training modules that will be offered to RE CMEP staff.

Industry Outreach via Webinar and Regional Workshops

The ERO Enterprise, along with the CCC-AWG representatives, provided outreach for the Program Alignment Process during the July Standards and Compliance Workshop held in Columbus. During the workshop, NERC staff and the CCC-AWG representative presented on the history and purpose of the ERO Enterprise Program Alignment Process, how to view and submit possible alignment issues, and the status of pending issues under review. The outreach also included discussion on the outcome of closed issues that had been resolved to date.

Additionally, REs provided outreach throughout Q3 2018 via workshops, monthly newsletters, entity-specific outreach visits, and other events with industry stakeholders.

⁶ Appendix B includes further information on the MRREs participating in the Coordinated Oversight Program.

Chapter 2: Enforcement Oversight

Annual Find, Fix, Track, and Report and Compliance Exception Programs Review

In Q3 2018, NERC and FERC staff provided feedback from the annual review of the Find, Fix, Track, and Report (FFT) and Compliance Exception (CE) programs. NERC and FERC staff sampled 26 FFTs and 100 CEs to collect data on the effectiveness and efficiency of the FFT and CE programs, as well as to assess the REs' adherence to the risk-based CMEP, various FERC Orders, and NERC and FERC-issued guidance. FERC issued a Notice of Staff Review to mark the conclusion of the review on July 25, stating that the FFT and CE programs are meeting expectations with limited exceptions. FERC staff noted that the identification of root cause in FFTs and CEs has improved significantly over the past four years, moving from 38 percent missing an identification of root cause to less than 1 percent. FERC staff also noted a significant improvement in the clear identification of factors affecting the risk before mitigation (such as potential and actual risk) and actual harm, which was identified in all samples. In addition, FERC staff noted that the FFTs and CEs sampled did not contain any material misrepresentations by the registered entities.

As of the end of Q3 2018, NERC provided feedback letters to the REs and will provide the results from the 2018 review in its annual FFT and CE compliance filing in Q4 2018.

Enforcement Q3 2018 Metrics Highlights

These enforcement metrics updates are current as of the end of Q3 2018 (September 30, 2018).⁷

Focus on Serious Risk Issues

NERC filed seven Full NOPs in Q3 2018 with a combined penalty amount of \$835,000.

Vegetation Management

NERC filed one Full NOP resolving a violation of FAC-003 R2 in Q3 2018.⁸ The ERO Enterprise has increased its focus on vegetation management based on more frequent vegetation encroachments on Bulk Electric System (BES) transmission facilities.

The contact in this case was the result of a combination of factors. Inspection forms did not require detailed documentation of inspection results, and the vegetation management program had gaps related to follow-up on vegetation-related issues identified during inspections. Contributing factors also included a lack of training and a lack of controls.

CIP

NERC filed one Full NOP with FERC to resolve one CIP violation that posed a serious and substantial risk to the reliability of the BPS. The violation was the result of the registered entity's misinterpretation of the Reliability Standard.

Spreadsheet Notices of Penalty

In Q3 2018, NERC filed 10 Spreadsheet NOPs (SNOPs) that included 36 violations of the NERC Reliability Standards and carried a total combined penalty of approximately \$382,000.

NERC's oversight of SNOPs in Q3 2018 confirmed that the REs continue to use this disposition method appropriately. REs used the SNOP disposition to address penalties for larger groups of minimal and moderate risk noncompliance that did not pose an elevated risk to the BPS but that were not otherwise appropriate for FFT or CE treatment. Other

⁷ Appendix A includes the NERC enforcement metrics-related graphs and charts.

⁸ FERC Docket No. NP18-23-000

reasons for SNOP treatment in Q3 2018 including lengthy durations of noncompliance, prior violations involving similar conduct, and weak detective controls.

Continued Success of Streamlined Disposition

As of the end of Q3 2018, the ERO Enterprise added three registered entities into the Self-Logging Program. There are now 73 registered entities self-logging.

Out of 286 instances of noncompliance posing a minimal risk to the reliability of the BPS processed during Q3 2018, the ERO Enterprise treated 262 (92 percent) as CEs. The ERO Enterprise processed the remaining instances of noncompliance posing a minimal risk as SNOPs.

In Q3 2018, most REs continued to see significant reporting of noncompliance for the newly effective CIP, MOD-025, PRC-019, and PRC-024 NERC Reliability Standards beginning after their mandatory and enforceable date in 2016.⁹ NERC has posted the majority of these instances as CEs. They tend to be the result of registered entities' lack of understanding related to the implementation plans for these new Reliability Standards. NERC still expects reporting of these standards to begin to decrease as registered entities become more familiar with the phased implementation and the ERO Enterprise continues its outreach efforts.

Caseload

The trend of an overall continuing decrease in the noncompliance average age began to reverse in the fall of 2017.¹⁰ In 2017, the average age of noncompliance was 8.0 months; so far in 2018, the average age rose to 8.8 months in Q1, 9.6 in Q2, and to 10.4 in Q3. The increase in age is most likely a result of the Reliability Standards that went into effect in 2016, which led to an increase in the reported noncompliance.

Reduced Repeat Moderate and Serious Risk Violations

In its Five-Year Order,¹¹ FERC identified repeat noncompliance as a key indicator of the effectiveness of the CMEP in recognizing, mitigating, and preventing violations. In response to the Order, NERC tracks moderate and serious risk violations to identify whether there is prior relevant compliance history.¹² NERC uses this information to determine why the prior mitigation activities failed to prevent the more recent noncompliance. This focused review of mitigation activities then informs the review of mitigation activities going forward, leading to continued improvement.

The number of noncompliance with similar prior conduct has remained relatively constant over the last five years despite the fluctuation in the number of filed violations. NERC continues to analyze the underlying cause of repeats and identify appropriate mitigation measures, and the metric has served to provide NERC with additional insight into repeat noncompliance.

Through the first three quarters of 2018, there have been 46 violations with moderate or serious risk with compliance history, but only 22 of these violations had similar prior conduct. In comparison, in 2016, NERC filed 111 violations with moderate or serious risk determinations that had prior noncompliance with similar conduct for the entire year. The total number of violations with moderate or serious risk determinations with similar conduct was 48 in 2017.

⁹ See Appendix A, Figure A.5 for the most violated NERC Reliability Standards discovered in Q3 2018.

¹⁰ Unlike the duration of a noncompliance, which is determined by the amount of time it takes a registered entity to mitigate the noncompliance, the age of noncompliance is determined by the amount of time between the discovery of the noncompliance by the RE and the conclusion of the resulting disposition.

¹¹ “[W]e direct NERC to include an analysis of repeat violations in its next Performance Assessment that will allow NERC, the REs, and FERC to evaluate whether NERC’s compliance and enforcement efforts have been effective in improving registered entities’ compliance and overall reliability.” North American Electric Reliability Corporation, [Order on the Electric Reliability Organization’s Five-year Performance Assessment](#), 149 FERC ¶ 61,141 at P 39 (2014).

¹² To measure the effectiveness of the risk-based CMEP in reducing noncompliance, NERC reviews moderate and serious risk violations and includes them in one of three categories: 1) noncompliance with no prior compliance history; 2) noncompliance with prior compliance history that does not involve similar conduct; and 3) noncompliance with compliance history that includes similar conduct.

Self-Assessment and Self-Identification of Noncompliance

Prompt and accurate self-reporting is integral to identifying, mitigating, and preventing repeat noncompliance. Registered entities self-identify noncompliance for approximately 80 percent of new noncompliance. For purposes of this analysis, self-identification included Self-Reports, Self-Logs, Self-Certifications, and Periodic Data Submittals. In 2017, the self-report rate was 82 percent. The first three quarters of 2018 have seen a relatively consistent pace of internal discovery, but the rate of self-reporting has been lower. Registered entities identified 78 percent of noncompliance through Self-Reports in Q1, 79 percent in Q2, and 76 percent in Q3.

Chapter 3: Compliance Monitoring Oversight

NERC Oversight Activities

In Q3 2018, NERC continued to execute its RE compliance monitoring oversight plan to assess implementation of risk-based compliance monitoring activities. NERC completed its on-site activities at six REs. The purpose of these on-site discussions was to review ongoing enhancements for risk-based compliance monitoring, ensuring REs use ERO, regional, and entity-specific risks to make compliance monitoring determinations. Additionally, NERC reviewed RE processes and controls that help ensure the accuracy and completion of data and information relied upon during Inherent Risk Assessment (IRA) and Compliance Oversight Plan (COP) development. While on-site, NERC and REs walked through implementation activities related to NERC's 2017 oversight recommendations.

NERC also observed six Compliance Audits conducted by five REs. Some objectives of NERC's observation activities include the following:

- Ensuring the RE assessments of compliance during audits provide reasonable assurance of compliance and are supported by sufficient and adequate evidence and documentation for focus areas;
- Ensuring assessments of compliance involve understanding entity internal controls and how the registered entity mitigates the risk of noncompliance; and
- Determining whether REs assess compliance with Reliability Standards using consistent audit approaches and testing methods that lead to reasonable results.

NERC will finalize feedback and reporting for all oversight in Q4 2018 to close out 2018 activities and plan for 2019.

Continuous Monitoring

Continuous monitoring consists of NERC staff's ongoing review of processes and information to evaluate program effectiveness, which informs NERC oversight, staff training, and guidance needs. Throughout the year, NERC conducts continuous monitoring by collecting and reviewing IRA Summary Reports, Audit Notification Letters (ANLs), Post-Audit Feedback Surveys, and Compliance Audit Reports to assess effectiveness of program implementation and inform ongoing ERO Enterprise staff training, industry outreach and education, and other opportunities for program improvements.

Results

Registered Entity Post-Audit Feedback Surveys

During Q3 2018, registered entities submitted 18 surveys for recent Compliance Audits conducted across five REs. From the 18 surveys collected, NERC concluded RE audit staff conducted Compliance Audits in a professional, efficient, and effective manner. Survey responses also indicated opportunities to communicate ERO Enterprise expectations around the use of an Internal Control Evaluation (ICE) and its relation to compliance monitoring activities. Further, four survey responses identified a need for REs to communicate risk results and how IRAs, annual Implementation Plans and Risk Elements, and other considerations ultimately affect audit scope determinations. NERC will continue to monitor this type of registered entity feedback and, through ongoing oversight, will work with the REs to help ensure registered entities understand how risk and internal controls inform the audit scope.

Compliance Audit and Spot Check Reports

During Q3 2018, NERC continued the ongoing review of 63 CIP Compliance Audit reports and 8 CIP Spot Check reports pertaining to the CIP compliance engagements conducted by the REs in Q2, Q3, and Q4 of 2017. The purpose of the review is to ensure REs are using a common reporting template and adequately justifying findings and determinations. NERC expects to complete the review of the 71 CIP compliance engagement reports by the end of Q4 2018.

IRAs and ANLs for Q3 2018 Scheduled Audits and Spot Checks

During Q3 2018, NERC received and reviewed IRA Summary Reports and ANLs for the 73 Compliance Audits scheduled during the quarter. NERC's review ensured the REs were following the NERC ROP process and using ERO Enterprise templates.

Throughout 2018, NERC will perform analysis around IRA, Coordinated Oversight Program, and Compliance Audit results to understand how REs conducted compliance monitoring around high-risk areas, specifically related to ERO Enterprise and Regional Risk Elements.

Compliance Monitoring Metric Updates

These compliance monitoring metrics are current as of the end of Q3 2018 (September 30, 2018).¹³

Compliance Guidance

During Q3 2018, the ERO Enterprise did not receive or endorse any proposed Implementation Guidance documents. The ERO Enterprise is currently reviewing two proposed Implementation Guidance documents submitted in Q1 and Q2 2018, respectively. Details on Compliance Guidance, including Implementation Guidance, are available on the NERC Compliance Guidance website.¹⁴

IRA and ICE Completion

During Q3 2018, RE progress toward completion of initial IRAs continued on track according to regional plans within WECC and RF.¹⁵ Completion plans for WECC and RF remain unchanged with expected completion by the end of 2018 and 2019, respectively. Completion plans consider the total number of registered entities, registered functions, risk priorities, and regional resources. At the end of Q3 2018, REs had completed two ICE engagements and had six in-progress. REs continue to conduct internal control review activities and implement processes for conducting reviews of internal controls during CMEP activities, such as Compliance Audits.

¹³ Appendix B includes the NERC compliance monitoring metrics-related graphs and charts.

¹⁴ <http://www.nerc.com/pa/comp/guidance/Pages/default.aspx>

¹⁵ Additional information regarding the percentage of IRAs completed for all registered entities within each RE across the ERO Enterprise is available in Appendix B. REs will continue to prioritize IRA completions based on registered functions and registration changes throughout the year.

Chapter 4: Registration and Certification

Registration

Centralized Organization Registration Entity System Registration Process

In Q3 2018, efforts continued on a new project to develop an application for automating registration processes. The objectives of the effort are the following:

- Establish a centralized registration process for the registered entities, REs, and NERC;
- Support a single repository of information and streamline processes to provide efficiencies across the ERO Enterprise and registered entities; and
- Capture the data elements that need to be integrated with the CMEP Tool.

NERC and the REs developed high-level business requirements in Q2, and in Q3, they further specified the detailed requirements. In addition, NERC engaged the CCC's Organization Registration and Certification Subcommittee and CCC-AWG at the Q3 CCC meeting to discuss the status of the project and next steps. Industry engagement will continue throughout the duration of the project.

Q3 2018 Registration Changes

NERC verifies registration change activity by monitoring the REs and reviewing documentation relating to change requests to the registry. NERC processed 202 functional registration changes, including 77 functional activations and 125 functional deactivations.¹⁶ Of the 125 functional deactivations:

- Two were BES Exceptions,
- Eighty-four were consolidated into a mutually owned entity registration,
- Four were determined to be and registered as DP-UFLS only,
- Eleven were determined to no longer meet registration criteria,
- Three had their compliance responsibilities assumed by another registered entity,
- Six were shut down, and
- Fifteen were sold to another registered entity.¹⁷

Certification

In Q3 2018, three organizations pursued activity to begin performing Reliability Coordinator functions in the Western Interconnection. One Canadian and two United States organizations announced their intent to begin performing Reliability Coordinator functions in the Western Interconnection by the end of 2019. A second Canadian organization currently performing Reliability Coordinator-like functions in Canada expects to continue unchanged.

These re-alignments will affect all of the 39 Balancing Authorities and 53 Transmission Operators currently operating throughout the Interconnection, including *Centro Nacional de Control de Energía—Gerencia de Control Regional Baja California* (“CENACE-GCRBC”) in Mexico. The new Reliability Coordinators are expected to require certification and will be evaluated under the NERC ROP, Section 500, and Appendix 5A during 2019. Planning and coordination for these engagements will continue throughout 2018 and 2019.

¹⁶ All BPS owners, operators, and users are required to register with NERC. Section 500 and Appendix 5A of the NERC ROP describe the process for registration. The NCR lists all organizations registered and, therefore, subject to compliance with approved Reliability Standards.

¹⁷ <https://www.nerc.com/pa/comp/RegistrationNewsDL/ERO%20Enterprise%20Revised%20Registration%20Practice%20Guide%20Posted.pdf>

Q3 2018 Certification Completions

During Q3 2018, NERC and the REs completed one certification review and declined to review changes at six other already-certified and operational entities.

Appendix A: Enforcement

CMEP Metrics

Mitigation Completion Status

Mitigation of the oldest noncompliance (dating from 2015 and earlier) is over 99 percent complete with only a single minimal risk instance of noncompliance with a date of 2014 or earlier.¹⁸ NERC continues to monitor this instance of noncompliance, as well as those from 2016 and 2017, as priorities for mitigation completion.

Table A.1: Mitigation Completion Status

| Time Frame | Required Mitigation | On-going | Progress Toward Goal | Threshold | Target | Progress Since Last Quarter |
|----------------|---------------------|----------|----------------------|-----------|--------|-----------------------------|
| 2015 and Older | 10206 | 8 | 99.92% | 99% | 100% | 0.01% |
| 2016 | 1150 | 116 | 89.91% | 85% | 90% | 1.11% |
| 2017 | 2008 | 732 | 63.55% | 70% | 75% | 6.55% |

Age of Noncompliance in ERO Enterprise Inventory

Figure A.1 shows the age of noncompliance from all non-federal entities and noncompliance from federal entities discovered after November 2014.¹⁹ The inventory of noncompliance less than one year old has declined from 87 percent to 63 percent since October 2017. The age of caseload inventory is increasing from an ERO Enterprise perspective. This is due in part to an increase in the number of new instances of noncompliance discovered in 2016 and continues in 2018. The ERO Enterprise is focusing on processing the increased noncompliance at an appropriate pace.

Age of Noncompliance in ERO Enterprise's Inventory

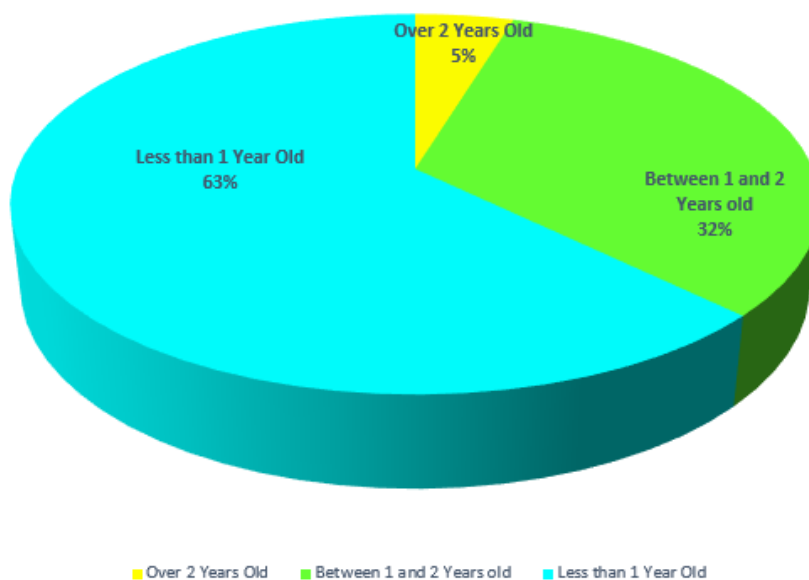


Figure A.1: Age of Noncompliance in the ERO Enterprise Inventory

¹⁸ The registered entity at issue requires an outage to address its last milestone; the outage is scheduled for Q4 2018.

¹⁹ The U.S. Court of Appeals for the District of Columbia Circuit ruled in November 2014 that monetary penalties could not be imposed on federal entities. All previously reported federal entity violations were formerly on hold pending the court's decision. The pre-court case federal entity violations and the post-court case violations have been separated because routine processing was interrupted.

Average Age of Noncompliance in the ERO Enterprise Inventory

The average age of noncompliance increased from 8.8 months in Q1 to 9.6 months in Q2 and 10.4 months in Q3.²⁰ The average age of noncompliance in the ERO Enterprise inventory has been steadily increasing since September 2017 when it was at 7.0 months. The increasing average age of inventory is a result of the increased number of noncompliance reported from Reliability Standards that became enforceable since July 2016. Noncompliance with CIP-007-6 (21 percent) and CIP-010-2 (15 percent) make up over a third of all noncompliance in the inventory.

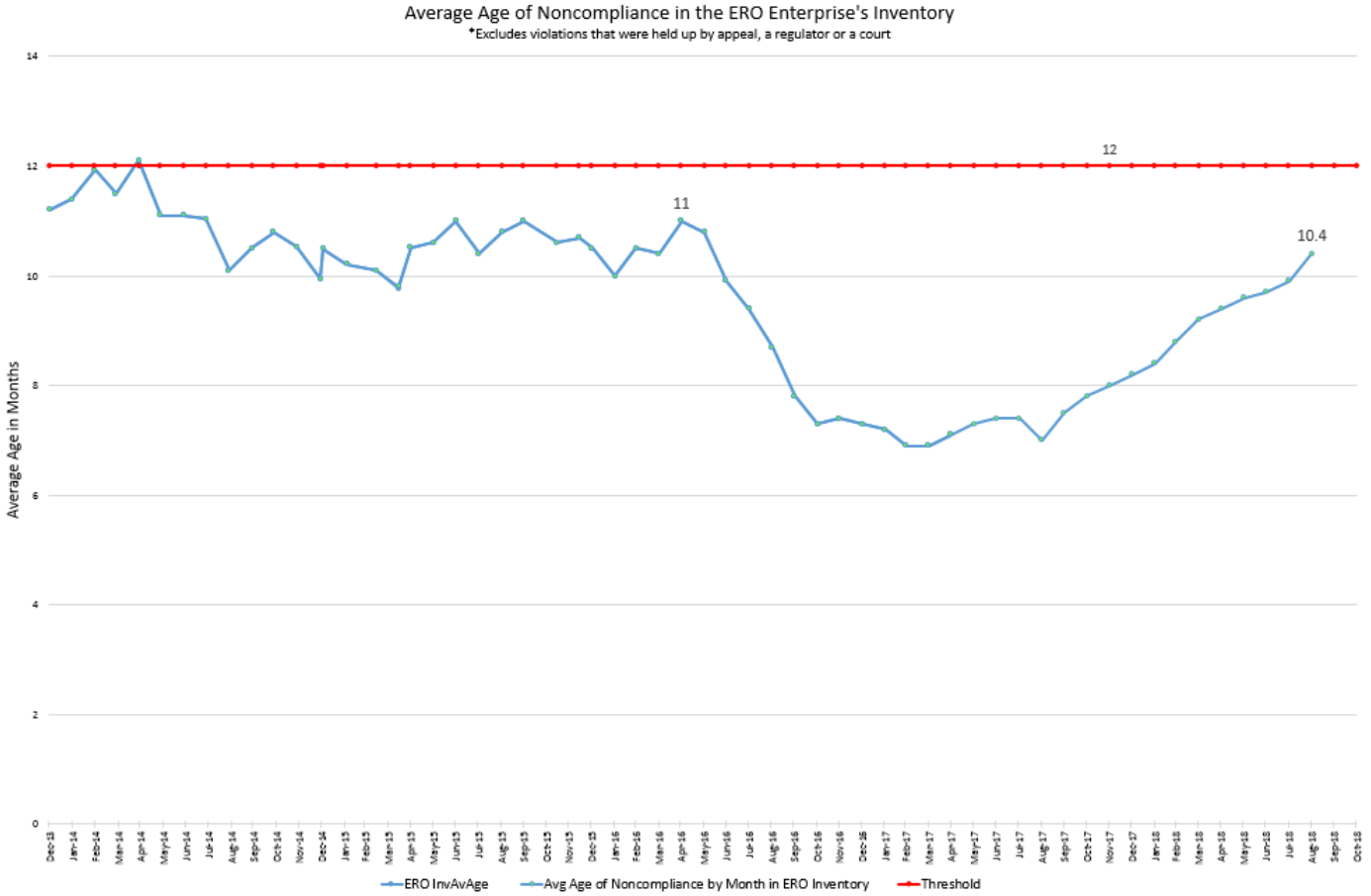


Figure A.2: Average Age of Noncompliance in the ERO Enterprise Inventory

²⁰ The age of noncompliance runs from the time the noncompliance is identified to the time it is resolved (i.e., through CE, FFT, SNOP, or Full NOP processing).

Number of New Noncompliance Discovered in 2018

The number of new noncompliance has remained high in Q3 2018. The 2,050 issues of noncompliance discovered in 2017 represented approximately 1.5 times the number discovered in 2016 (1,301), which had already nearly increased from the same pace from 2015 (867). The increase between 2015 and 2016 reversed a trend of declining discovered noncompliance that had peaked in 2011 with 2,597 and declined steadily through 2015. The vast majority of newly discovered noncompliance so far in 2018 involved Reliability Standards that have gone into effect since July 2016.²¹ The disproportionate representation of these Reliability Standards is a trend that continued through 2017 and appears to be continuing in 2018.

Table A.2: Noncompliance Discovered in 2018

| Discovery Month | FRCC | MRO | NPCC | RF | SERC | SPP RE | Texas RE | WECC | Total |
|-----------------|-----------|------------|------------|------------|------------|-----------|------------|------------|-------------|
| January | 10 | 27 | 7 | 23 | 30 | 11 | 15 | 49 | 172 |
| February | 1 | 0 | 30 | 34 | 18 | 24 | 21 | 54 | 182 |
| March | 4 | 7 | 16 | 35 | 33 | 5 | 9 | 31 | 140 |
| April | 3 | 32 | 7 | 25 | 18 | 11 | 33 | 25 | 154 |
| May | 4 | 11 | 7 | 42 | 41 | 0 | 26 | 35 | 166 |
| June | 2 | 7 | 16 | 30 | 27 | 0 | 32 | 40 | 154 |
| July | 5 | 22 | 20 | 39 | 22 | 0 | 19 | 67 | 194 |
| August | 0 | 5 | 8 | 35 | 52 | 0 | 12 | 57 | 169 |
| September | 1 | 1 | 15 | 11 | 7 | 0 | 11 | 36 | 76 |
| Total | 30 | 112 | 126 | 274 | 248 | 51 | 178 | 394 | 1407 |

Prior spikes in reported noncompliance may provide insights into this trend. As illustrated by Figure A.3, the last surge of noncompliance – also associated with new Reliability Standards – lasted approximately three years, peaking after the completion of the first full year the new Reliability Standards were in effect. If this increase follows a similar pattern and 2017 is the peak, earlier projections predicted the total discovered noncompliance should begin to decrease sometime in 2018 and again more significantly in 2019. There has been no significant decrease in noncompliance discovered yet. Any decrease would follow ERO Enterprise outreach efforts and registered entities' familiarity with the requirements necessary for compliance with the new standards, as well as the ERO Enterprise completing compliance monitoring activities for the applicable registered entities.

²¹ For MRREs participating in the Coordinated Oversight Program, noncompliance will be accounted for in the Lead RE (LRE) statistics but may actually affect assets in the Affected RE's (ARE's) regional footprint.

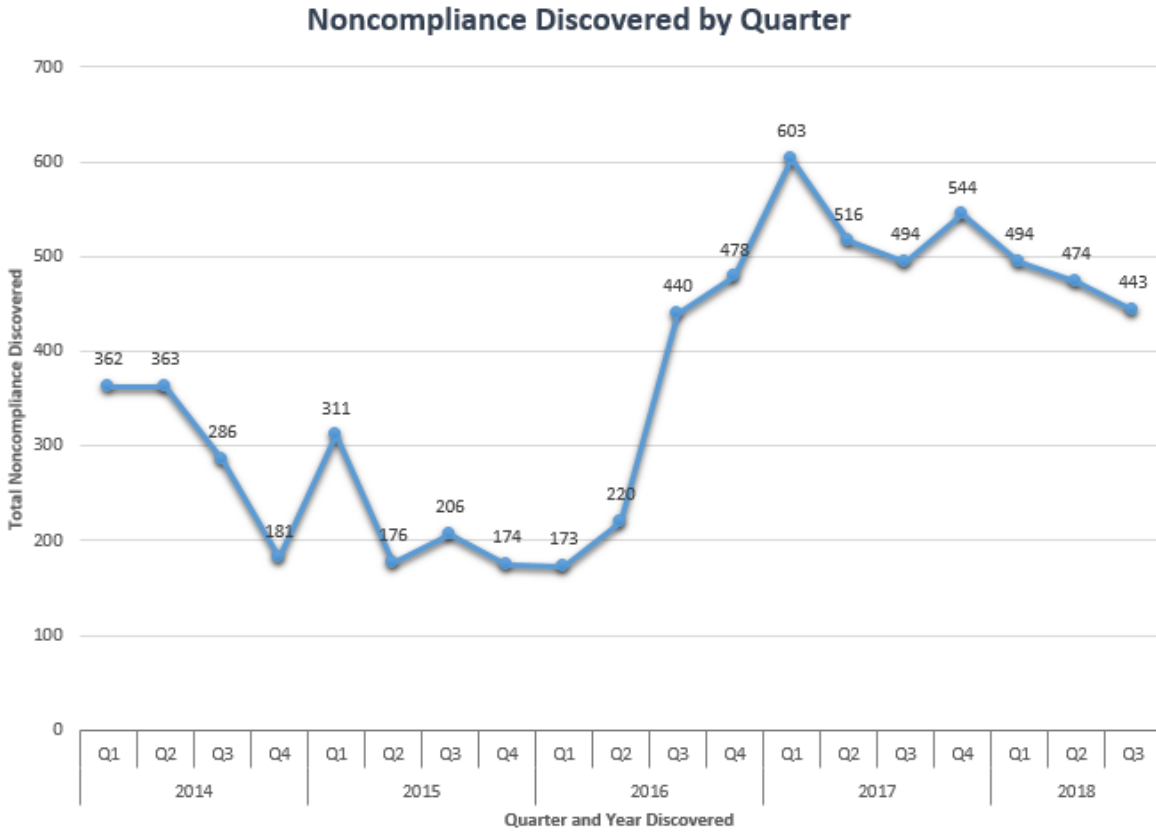


Figure A.3: Noncompliance Discovered by Quarter

Percentage of Self-Logging and CEs

The percentage of self-logged CEs increased slightly since the previous quarter. It has increased from 12 to 14 percent in Q3 2018. This percentage of self-logged CEs has remained consistent over the last several years, hovering between 10 and 14 percent.

Percentage of Self-Logged Compliance Exceptions Since June 2014

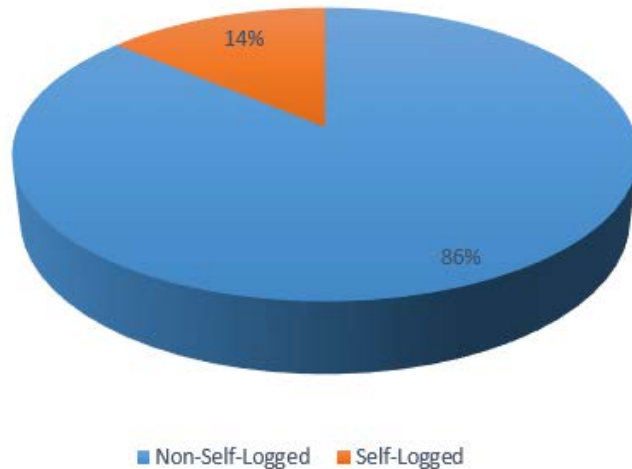


Figure A.4: Percentage of Self-Logged CEs since June 2014

Disposition of Noncompliance

Figure A.5 reviews the number of all noncompliance processed by disposition type and RE in the first three quarters of 2018.

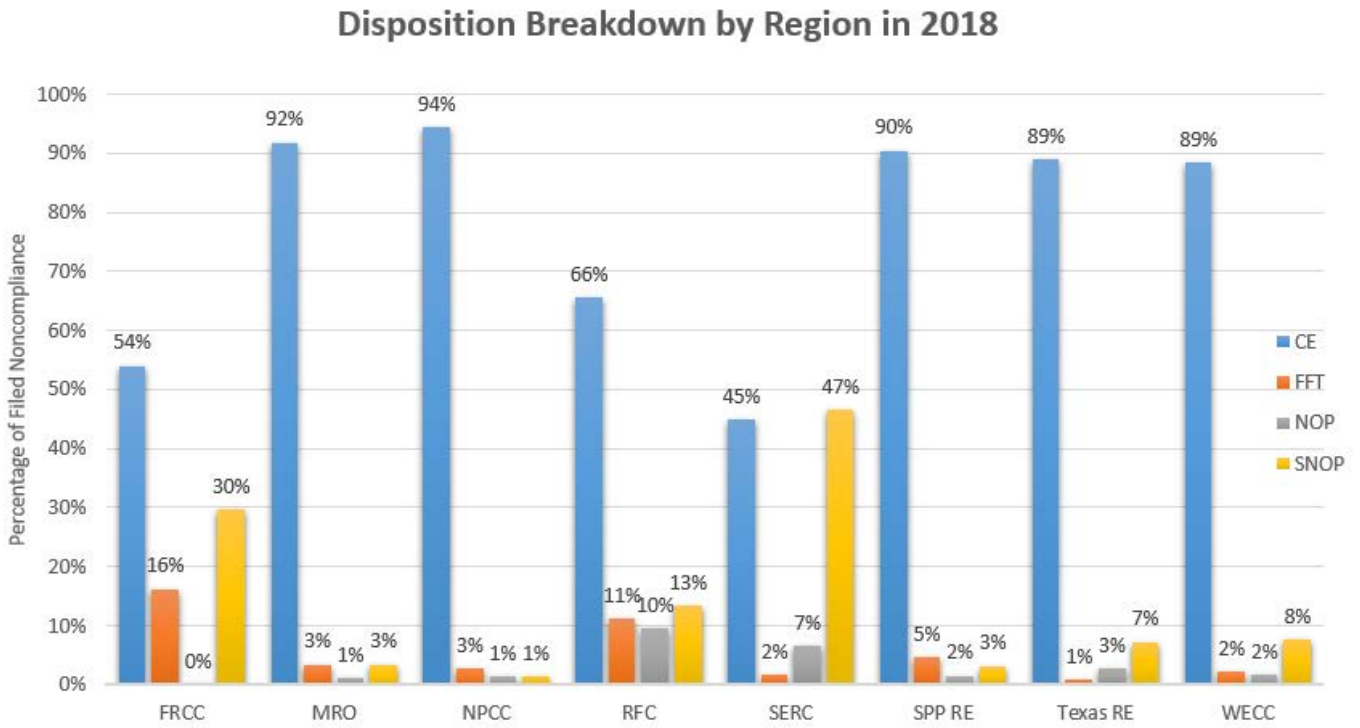


Figure A.5: Disposition Type of Noncompliance Processed in 2018 by RE

Most Violated Standards Filed in 2017-2018

MOD-025 was the most frequently violated Reliability Standard in 2017 and 2018 followed by CIP-007 and CIP-004. The vast majority of these were disposed of as CEs. MOD-025 was the most frequently violated Reliability Standard with minimal risk, CIP-007 was the most frequently violated for moderate risk violations, and CIP-005 was the most frequently violated for serious risk violations. There were three serious CIP-005 violations filed in 2017 and 2018.



Figure A.6: Most Violated Reliability Standards by Risk in 2017-2018

Vegetation Management

There were seven vegetation-related Category 3 outages in Q1 2018 and five in Q2.²² In 2017, the ERO Enterprise received reports of a total of 20 Category 3 outages, 2 Category 1B outages, and 2 Category 4B outages. Registered entities report these outages through Periodic Data Submittals on a quarterly basis as displayed in Figure A.7. The 24 vegetation-related outages reported in 2017 are a reduction from 2016, but there have been six Category 1B outages since 2015, a significant increase over the previous three-year period.

An additional Category 1B outage was reported as part of a Full NOP during Q3, reversing an earlier categorization from a Category 4B in 2017.

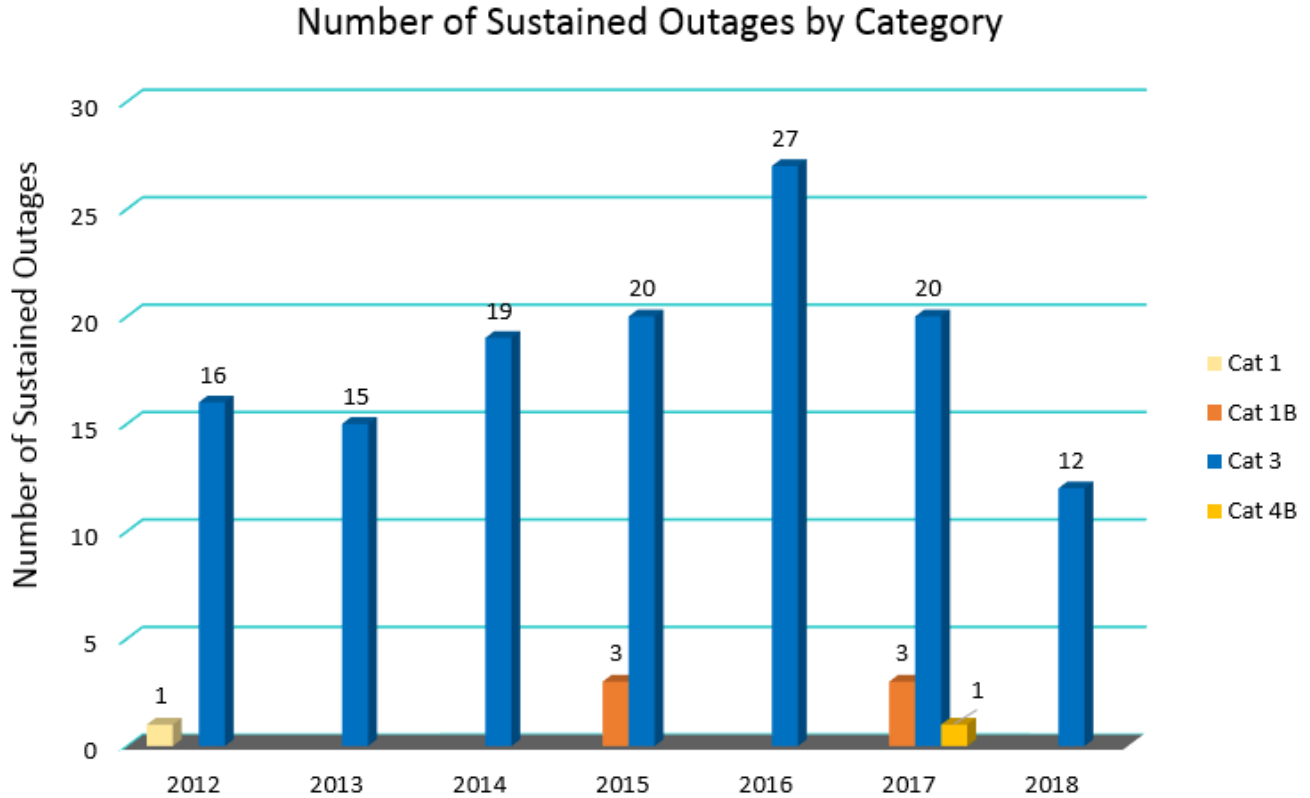


Figure A.7: Vegetation-related Outages by Category

²² Vegetation-related outage information is consolidated on a delayed quarterly basis. Information related to Q3 2018 will be available in Q4 2018.

Violations Posing a Serious Risk

Since 2010, NERC has gathered data and regularly monitored violations posing serious risk to the reliability of the BPS. In Figure A.8, serious risk violations have declined over time, and they continue to account for a small portion of all instances of noncompliance reviewed by the ERO Enterprise. In the first quarter 2018, NERC filed two serious risk violations that occurred in 2016. In the second quarter of 2018, NERC filed two serious risk violations that occurred in Q2 2016 and Q2 2017. In the third quarter, NERC filed two serious risk violations that occurred in Q1 2011 and Q2 2007.

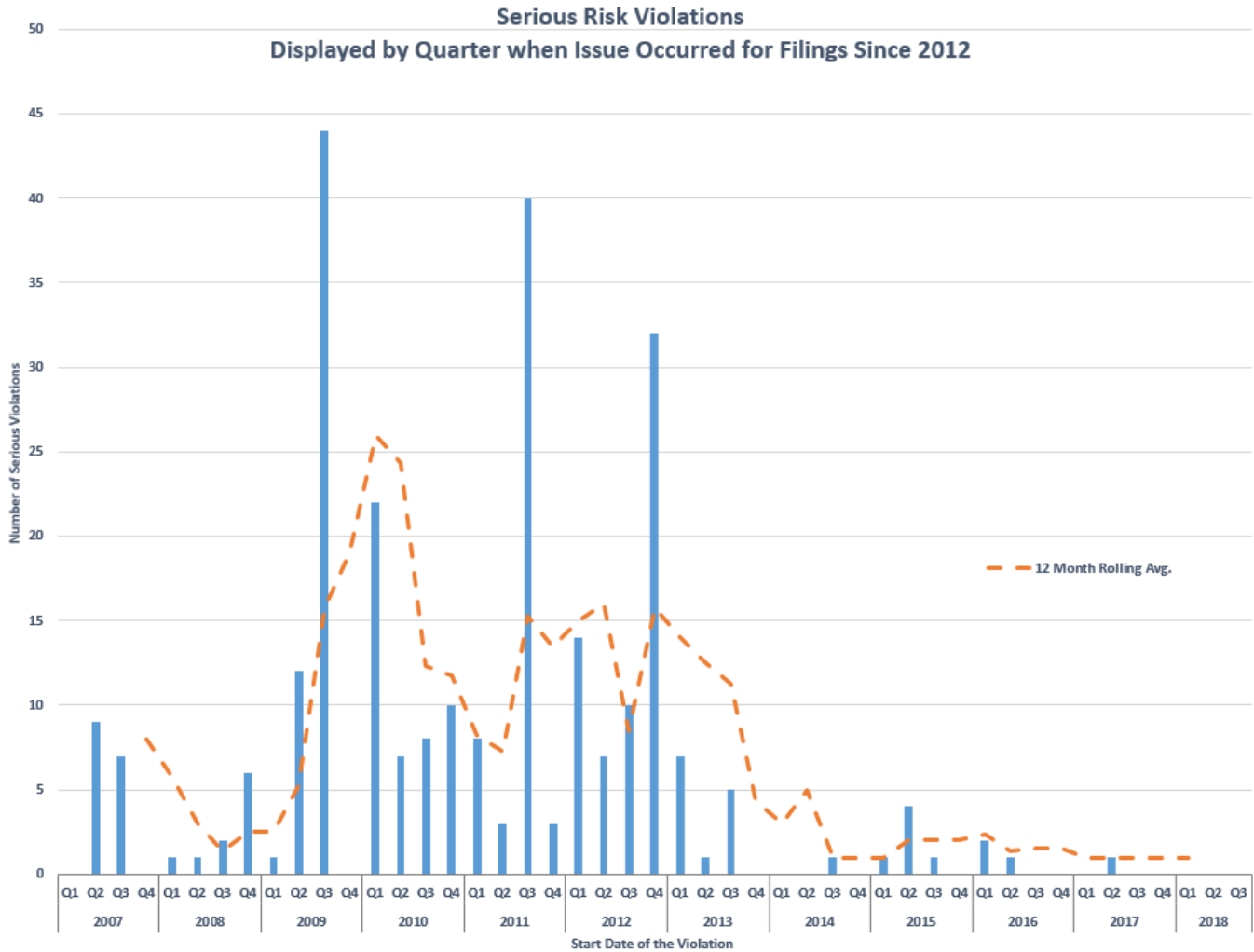


Figure A.8: Serious Risk Violations by Date of Occurrence for Filings Post-2012

Violations with a Measured Reliability Impact

NERC gathers enforcement data using metrics that measure reliability impact to the BPS. Figure A.9 represents the occurrence dates of noncompliance filed since 2014 that had some observed impact on reliability. This is a quarterly count of the number of noncompliance with observed reliability impact, regardless of the risk assessment.²³ The moving averages provide an indicator of the rate of impactful noncompliance. Figure A.9 illustrates that impactful noncompliance appears to be decreasing and is better controlled. The impact chart saw the addition of two instances, one starting in Q2 2007 and another in Q1 2016.

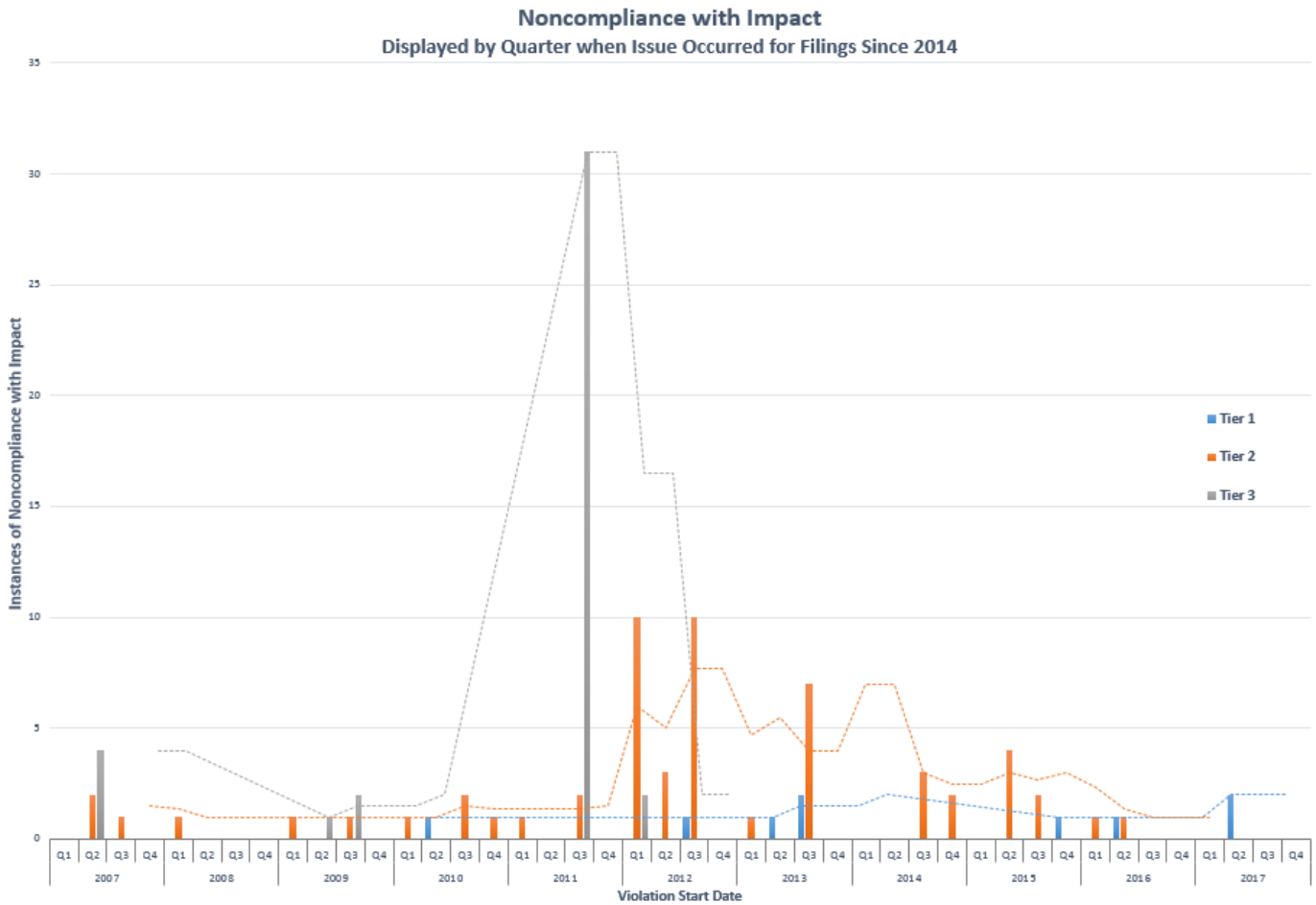


Figure A.9: Noncompliance with Impact by Quarter

²³ Tier 0 observations (no observed impact) are not depicted. Tier 1 violations are minor impacts of lesser magnitude. Tier 2 violations are moderate impact noncompliance, such as Interconnection Reliability Operating Limit exceedances or unexpected BES facility trips. Tier 3 violations caused or contributed to a major BES disturbance. Because of the subjectivity inherent in the definitions of observable impacts and the establishment of the tiers, it is expected that the definitions of the tiers will evolve over time based on experience.

Serious Risk Averages

Figures A.10 and A.11 show the percentage of serious risk violations over a rolling three-year average. The percentages are determined based on the number of serious risk violations compared to the total number of noncompliance filed in a given three-year period. NERC Enforcement has a target of keeping the percentage of serious risk violations for each period below five percent for 2018. Figure A.10 shows the breakdown excluding CIP Version 5 noncompliance, and the following chart includes all CIP Versions. Both fell between Q2 and Q3 and remain below the five percent threshold.

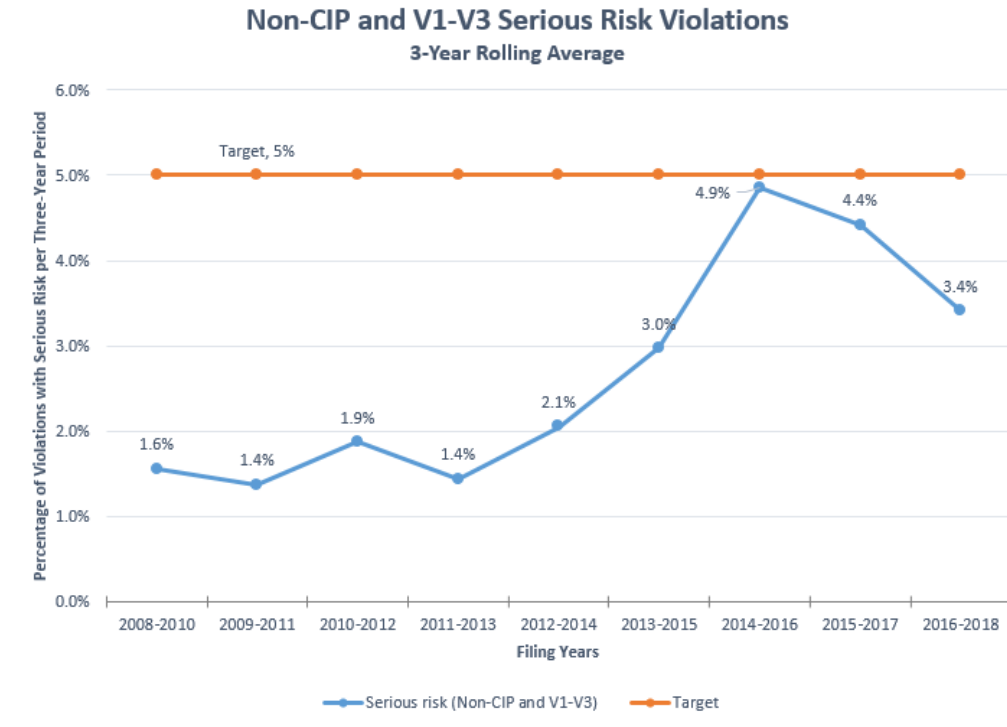


Figure A.10: Rolling Average of Serious Risk Violations (Excluding CIP Version 5)



Figure A.11: Rolling Average of Serious Risk Violations (Including All CIP Versions)

Compliance Severity Risk Index²⁴

Figures A.12 and A.13 show the ERO Enterprise’s Compliance Severity Risk Index. The total value of the stacked columns indicates the index for the ERO Enterprise for a given discovery year; however, more recent years have not yet been fully processed. The dotted line represents the percentage of violations discovered that have been filed or posted and can indicate what percentage may still change and continue to have an impact on a given year’s index. For the non-CIP and CIP V1-V3 (Figure A.12), the threshold was a value chosen that was considered part of a downward trend that was statistically significant. The target was set at 50 percent or less of the 2011 index for the non-CIP and CIP V1-V3. For all CIP violations (Figure A.13), the threshold and target was set at 65 and 55 percent of the 2011 index, respectively.

At the end of 2017, the index for noncompliance discovered in 2015 and 2016 was below the established target ceiling and remains so after the first three quarters of 2018. There are still some instances of noncompliance that have not been processed from 2016 and a smaller number from 2015 that are still outstanding. Since this group of noncompliance does not have a final risk assessment, no risk value could be assigned and no index calculated. Assuming an approximate breakdown in risk based on historical trends, NERC was able to project how the indices for 2015 and 2016 would appear once it filed all noncompliance discovered in those years. Projections indicate remaining below the target for both years.

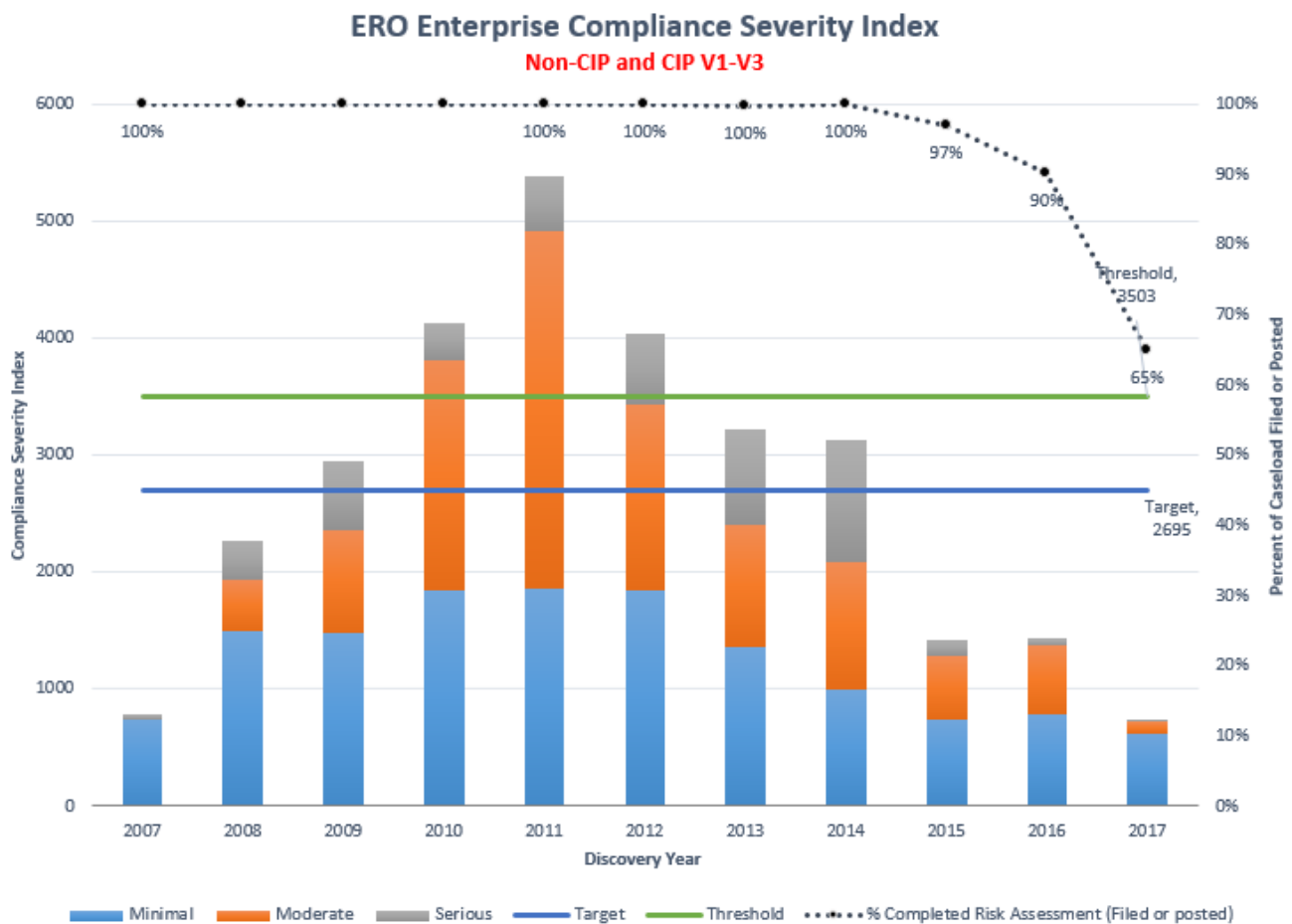


Figure A.12: Compliance Severity Risk Index for non-CIP and CIP V1 through V3

²⁴ https://www.nerc.com/AboutNERC/StrategicDocuments/2018_ERO_Enterprise_Metrics_Approved_by_the_NERC_Board_on_November_9_2017.pdf

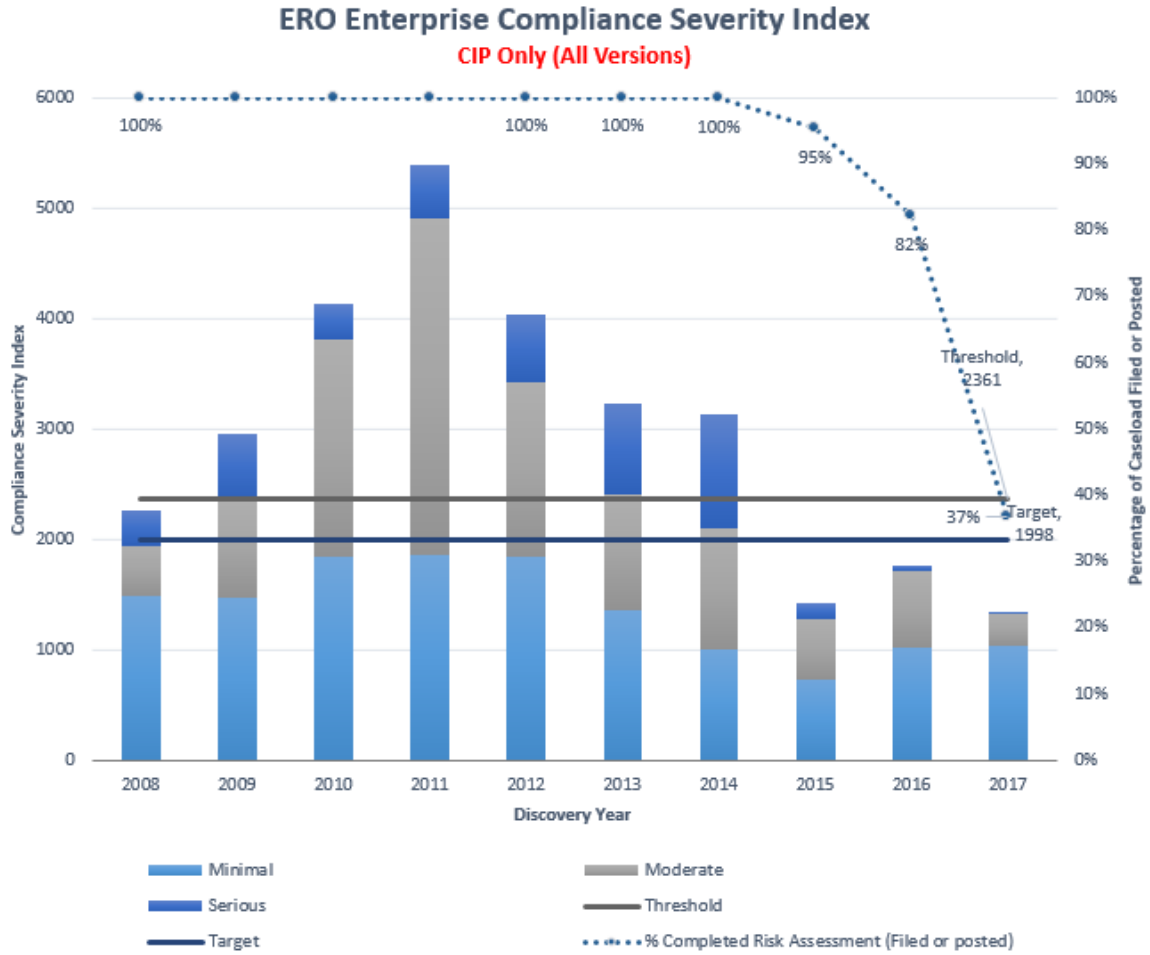


Figure A.13: ERO Enterprise Compliance Severity Risk Index for all CIP Violations

Reduced Repeat Moderate and Serious Risk Violations

The ERO Enterprise monitors compliance history (defined as a prior violation of the same Reliability Standard and requirement) and repeat noncompliance with similar conduct (defined as a prior violation that stemmed from the same actions or conduct) to further explore the relationship of prior mitigation to repeat noncompliance and to identify any additional areas of focus and future actions.

Figure A.14 juxtaposes three categories of moderate and serious risk noncompliance: noncompliance with compliance history (blue columns), noncompliance with compliance history involving similar conduct (orange line), and all filed moderate and serious risk noncompliance (gray line). Noncompliance with similar conduct is a subset of the wider group of repeat noncompliance. The total moderate and serious noncompliance, shown by the gray line, includes both “new” noncompliance and repeat noncompliance. Out of 101 moderate and serious risk violations filed in the first three quarters of 2018, there have been 46 moderate or serious risk violations with compliance history and 22 with similar prior conduct.

Compliance History for Moderate and Serious Risk Noncompliance

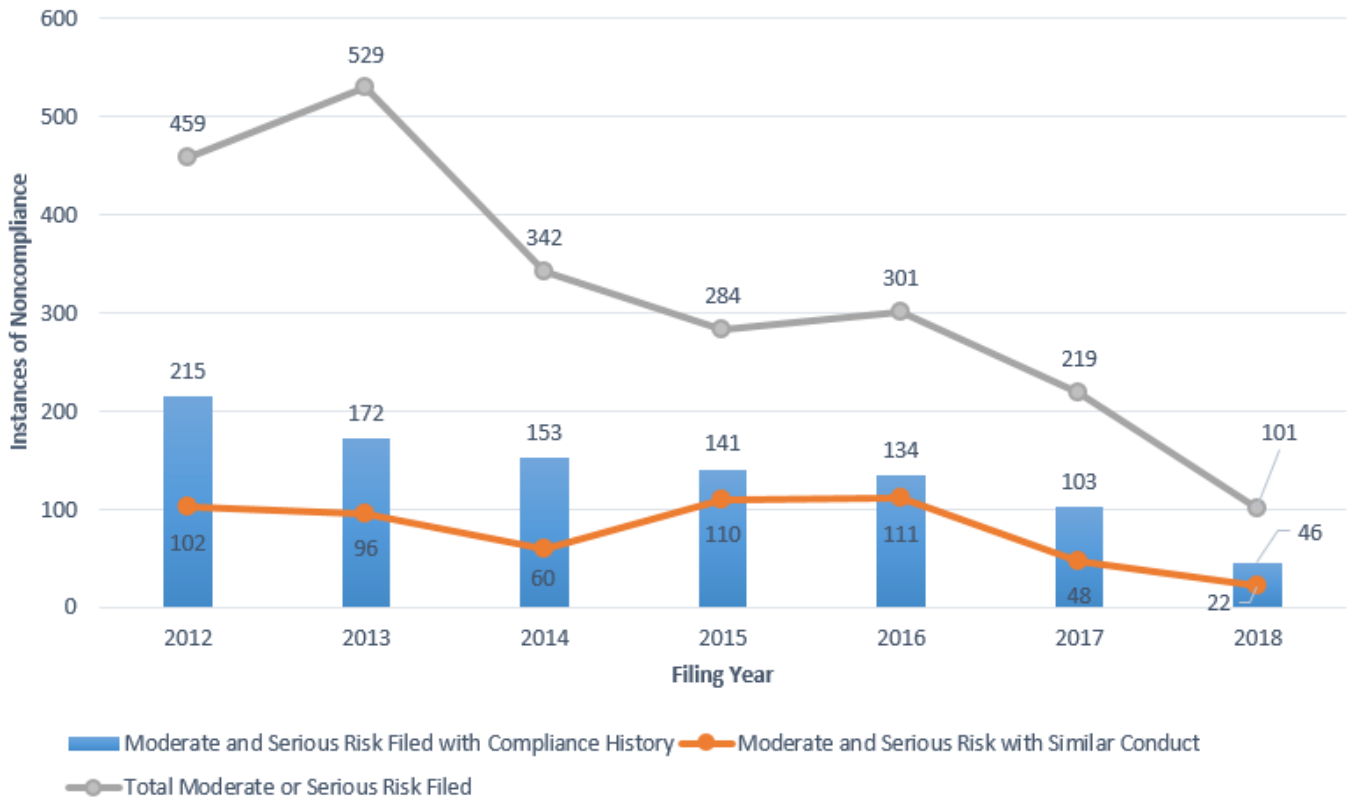


Figure A.14: Compliance History and Similar Conduct for Moderate and Serious Risk Violations

Self-Assessment and Self-Identification of Noncompliance

As part of an effort to reduce risk from noncompliance, the ERO Enterprise is looking beyond the broad categories of internal and external discovery and instead closely monitoring self-reported issues in 2018. Figure A.15 shows the percentage of noncompliance by discovery method. The percentage of noncompliance that has been self-reported has been hovering just below the 80 percent target for most of 2018.

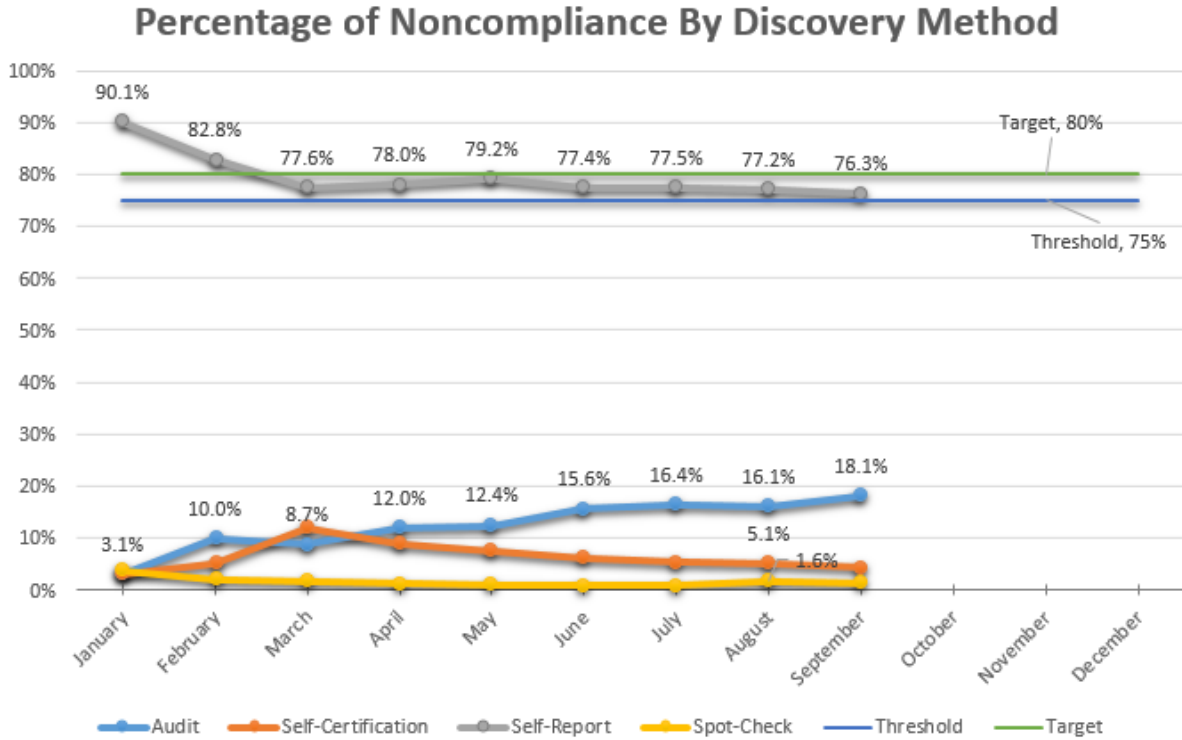


Figure A.15: Percent of Noncompliance by Discovery Method

Appendix B: Compliance Assurance

Coordinated Oversight Program for MRREs

Figure B.1 represents the distribution of the 49 MRRE groups by LRE, comprised of 206 MRREs. Figure B.2 represents the distribution of MRREs by registered function.

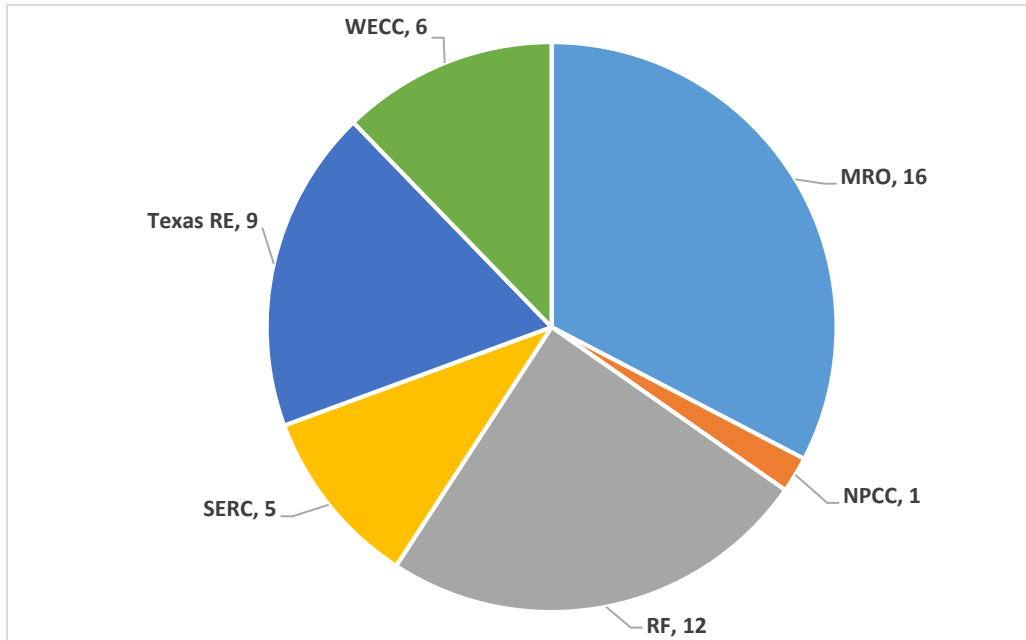


Figure B.1: Distribution of MRREs under Coordinated Oversight by LRE

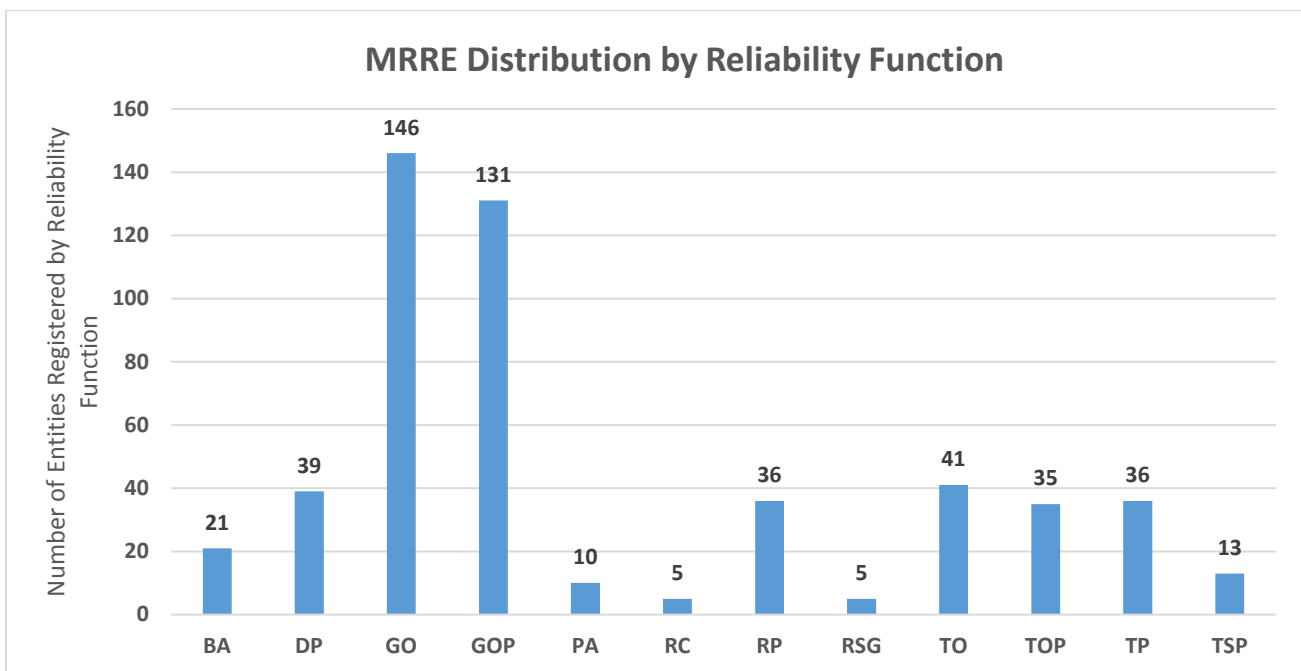


Figure B.2: Coordinated Oversight Distribution by Registered Function

ERO Enterprise Completion of Initial IRAs

Figure B.3 identifies the number of IRAs completed by each RE. As of the end of Q3 2018, the REs have completed 1,200 IRAs for 1,484 registered entities.²⁵ The ERO Enterprise completed IRAs for approximately 81 percent of the total number of registered entities.²⁶ All REs have completed IRAs for all registered entities registered as Reliability Coordinators and Balancing Authorities with two recently registered Transmission Operator entities scheduled for completion in 2018. NERC and the REs anticipate registration changes that will affect overall IRA completion. Therefore, IRA activity prioritization will consider registered functions and registration changes to ensure IRAs are completed.

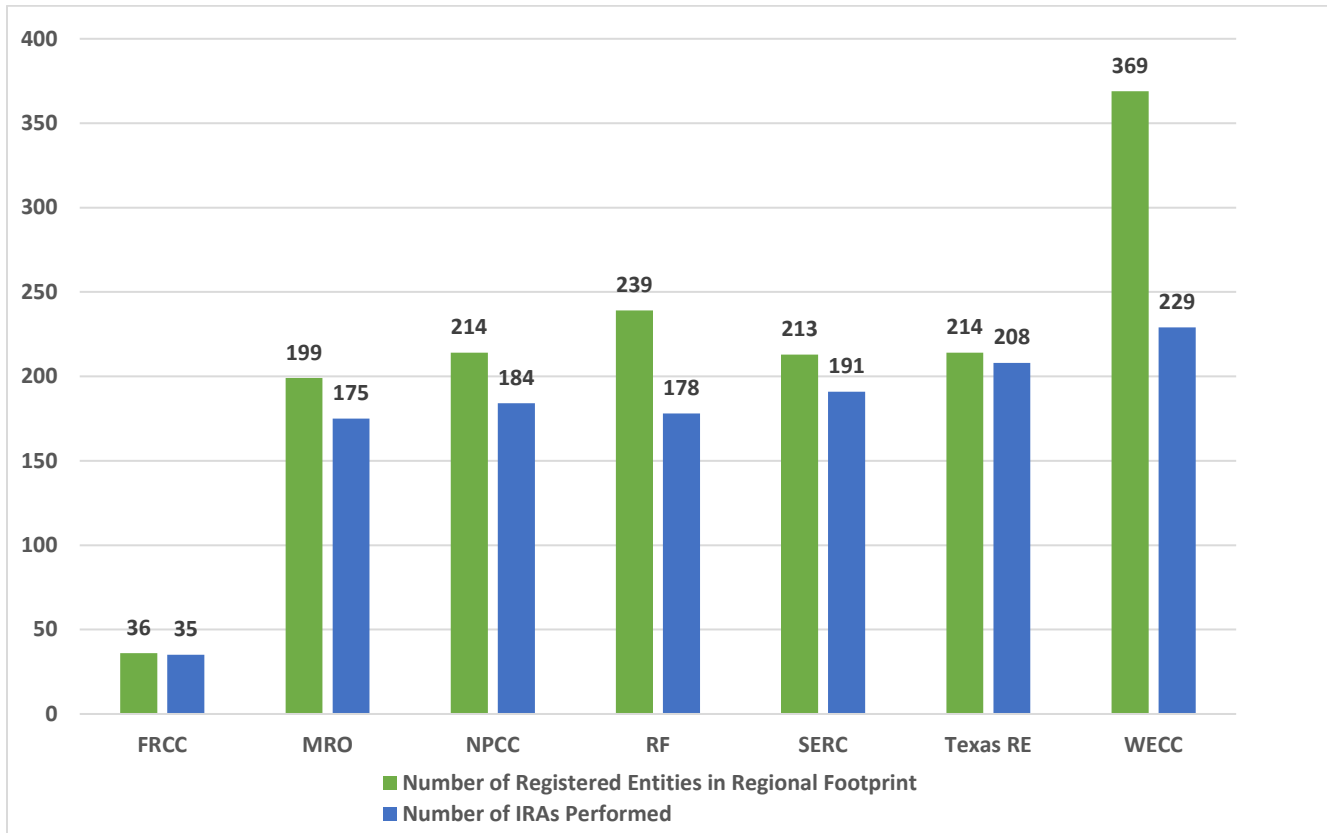


Figure B.3: RE Completion of IRAs

²⁵ NERC bases the number of registered entities on the registration cut-off date in Q3 2018, which includes all newly registered entities. NERC does not include deregistered entities. The chart does not reflect the number of IRAs that have been updated by the Regions.

²⁶ Some of the registered entities are MRREs in the Coordinated Oversight Program. As such, until the LRE completes the IRA for that MRRE Group, the numbers do not update for the AREs. Therefore, some of the REs included in Figure B.3 do not receive credit until their IRAs are completed.

Appendix C: Registration

The following charts depict Q3 2018 registration change activity by function.

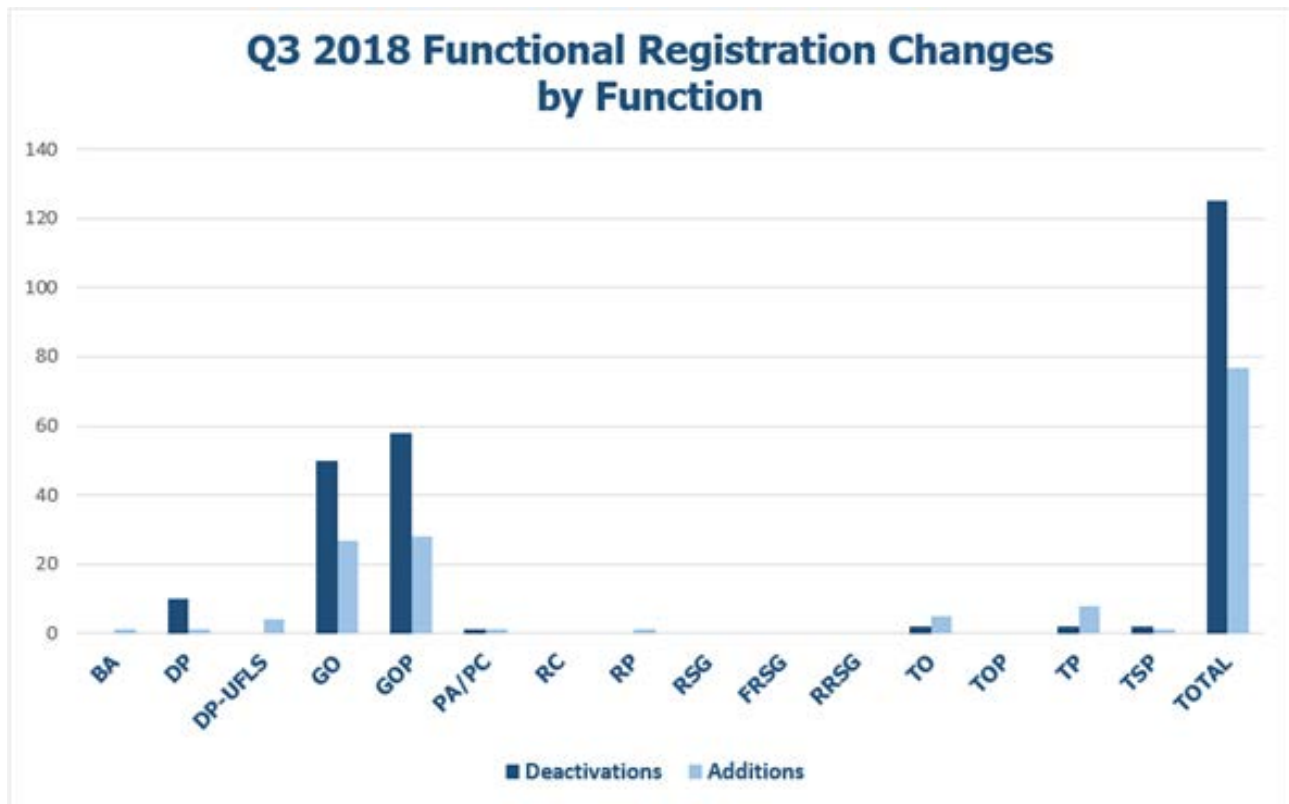


Figure C.1: Q3 2018 Registration Change Activity by Function

| | BA | DP | DP-UFLS | GO | GOP | PA/PC | RC | RP | RSG | FRSG | RRSR | TO | TOP | TP | TSP | TOTAL |
|----------------------|----|----|---------|----|-----|-------|----|----|-----|------|------|----|-----|----|-----|------------|
| Deactivations | 0 | 10 | 0 | 50 | 58 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 125 |
| Activations | 1 | 1 | 4 | 27 | 28 | 1 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 8 | 1 | 77 |

REs provide justification when approving registration change activity. These justifications are reviewed by NERC before processing is completed. Table C.3 reflects the changes that were processed in Q3 2018.

| | |
|--|----|
| BES Exception | 2 |
| Consolidation into Mutually Owned Entity Registration | 84 |
| Determined to be and Registered as DP-UFLS | 4 |
| Determined to no Longer Meet Registration Criteria | 11 |
| Responsibilities Assumed by Another Registered Entity | 3 |
| Shutdown | 6 |
| Sold to Another Registered Entity | 15 |