NERC
NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

2016 ERO Enterprise Compliance Monitoring and Enforcement Program Annual Report

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RELIABILITY | ACCOUNTABILITY

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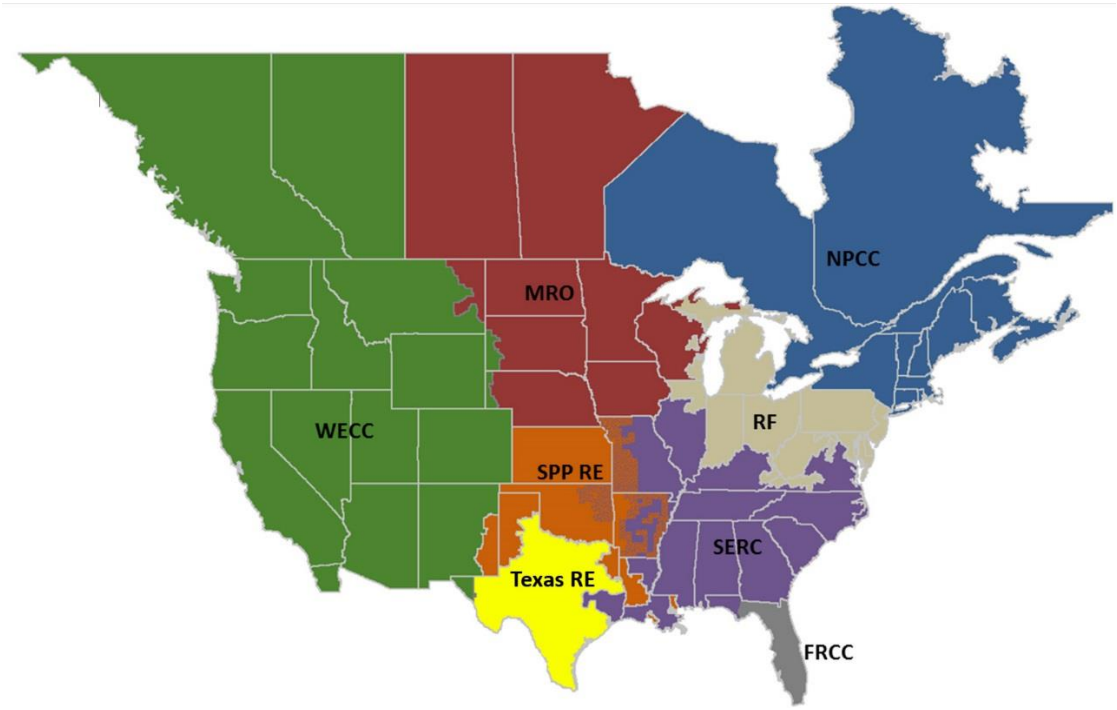
Preface

The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to assure the reliability of the bulk power system (BPS) in North America. NERC develops and enforces Reliability Standards; annually assesses seasonal and long-term reliability; monitors the BPS through system awareness; and educates, trains, and certifies industry personnel. NERC's area of responsibility spans the continental United States, Canada, and the northern portion of Baja California, Mexico. NERC is the Electric Reliability Organization (ERO) for North America, subject to oversight by the Federal Energy Regulatory Commission (FERC) and governmental authorities in Canada. NERC's jurisdiction includes users, owners, and operators of the BPS, which serves more than 334 million people.

The North American BPS is divided into eight Regional Entity (RE) boundaries as shown in the map and corresponding table below.



The North American BPS is divided into eight RE boundaries. The highlighted areas denote overlap as some load-serving registered entities participate in one region while associated transmission owners or operators participate in another.

FRCC	Florida Reliability Coordinating Council
MRO	Midwest Reliability Organization
NPCC	Northeast Power Coordinating Council
RF	ReliabilityFirst Corporation
SERC	SERC Reliability Corporation
SPP RE	Southwest Power Pool Regional Entity
Texas RE	Texas Reliability Entity
WECC	Western Electricity Coordinating Council

Executive Summary

This report highlights key ERO Enterprise[1] Compliance Monitoring and Enforcement Program (CMEP) activities that occurred in 2016, provides information and statistics regarding those activities, and identifies the ERO Enterprise's 2017 CMEP priorities. In 2016, CMEP activities throughout the ERO Enterprise reflected continuing implementation of the risk-based approach introduced in 2013 through the Reliability Assurance Initiative. Most significantly, ERO Enterprise and industry compliance and enforcement resources were focused on risks to the BPS, entity-specific risks, and serious risk noncompliance in 2016. The ERO Enterprise also continued its commitment to align core CMEP activities. The following is a brief overview of these activities, which are discussed in greater detail throughout this report.

Risk-based CMEP Activities

In 2016, the ERO Enterprise reviewed lessons learned from risk-based CMEP implementation and identified opportunities for refinement. In particular, the ERO Enterprise compliance activities focused on aligning Inherent Risk Assessment (IRA) processes across the ERO Enterprise. The IRA is a review of inherent risks posed by an individual registered entity to BPS reliability and is one of the core components of the risk-based CMEP framework. In addition, the ERO Enterprise reviewed opportunities for alignment in approaches to internal controls and Compliance Oversight Plans (COPs). Outputs of these reviews included a refined set of risk factors, the ERO Enterprise Guide for Compliance Monitoring, and the ERO Enterprise Guide for Internal Controls. The results of these efforts represent a significant step toward ensuring consistency in RE processes.

ERO Enterprise enforcement activities in 2016 focused on addressing serious risk issues through enforcement actions and analysis of serious risk noncompliance to identify emerging trends, patterns, and areas of focus.

Oversight Activities

NERC's CMEP oversight in 2016 focused on completion and content review of risk-based CMEP activities. In addition to tracking completion of risk-based CMEP activities, NERC's compliance monitoring oversight included review of select IRAs to determine how REs assessed risk for registered entities. Oversight of enforcement activities included process reviews for the Find, Fix, Track, and Report (FFTs), Compliance Exception (CE), and the Self-logging Programs. NERC also continued its oversight of REs' adherence to the NERC Rules of Procedure (ROP).

Other Key Activities

With the Critical Infrastructure Protection (CIP) Version 5 Reliability Standards becoming enforceable on July 1, 2016, the ERO Enterprise began to perform compliance monitoring and enforcement activities related to these Reliability Standards, in addition to continuing transition outreach to industry. The ERO Enterprise also reviewed industry's implementation of the Physical Security Reliability Standard CIP-014-2.

[1] The "ERO Enterprise" refers to the affiliation between NERC and the eight 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.

Chapter 1: 2016 Accomplishments

In 2016, the ERO Enterprise focused on the use and refinement of risk-based CMEP processes. The ERO Enterprise continues to enhance its understanding of risks to the BPS, through activities such as conducting IRAs, reviewing IRA results, and analyzing dispositions of noncompliance. This chapter highlights significant CMEP activities in 2016 that demonstrate the ERO Enterprise's continued focus on risk to the BPS.

Compliance Monitoring Highlights

NERC and the REs engaged in significant collaboration to refine the IRA process and clarify the use of internal controls in CMEP activities, as well as develop the 2016 ERO Enterprise CMEP Implementation Plan. Through this collaboration, NERC and the REs assessed risk on an entity level as well as across the ERO Enterprise. These activities allowed the ERO Enterprise to develop a deeper and more documented understanding of the BPS and registered entities.

Refined Risk-based Compliance Monitoring Processes

In 2015, the ERO Enterprise identified a need for a mechanism to incorporate lessons learned to enhance risk-based compliance monitoring processes. With this objective in mind, the ERO Enterprise initiated a project to review the IRA and Internal Control Evaluation (ICE) processes for opportunities for refinement. The project team focused on finding key areas for the REs to align their processes. The REs refined their regional processes in Q4 2016 and will begin using them in 2017. NERC also performed oversight visits to each RE to assess the progress of implementation of the refined processes.

IRA Process Refinement

REs perform an IRA to identify areas of focus to monitor compliance with NERC Reliability Standards for a particular registered entity. An IRA considers factors such as assets, systems, geography, interconnectivity, and functions performed. The frequency of updating an IRA may vary based on occurrence of significant changes to reliability risks or emergence of new reliability risks.

The result of the IRA process refinement effort is a common set of 18 risk factors and associated Reliability Standards that create a quantitative starting point for every registered entity across the ERO Enterprise. From there, REs may modify risk determinations based on other entity-specific considerations with a technical justification. These common risk factors help to ensure that REs assess and document risks for every registered entity.

A key deliverable of the project to assess risk-based CMEP refinement opportunities was the ERO Enterprise Guide for Compliance Monitoring.[2] The ERO Enterprise Guide for Compliance Monitoring details the process for IRA and COP development. A component of the IRA process is the risk factor review and assessment criteria used for determinations of high, medium, or low risks. The criteria provided for each risk factor serves as guidelines and help promote a repeatable process for assessing quantitative areas of risk. Additionally, the ERO Enterprise Guide for Compliance Monitoring identifies minimum COP outputs, which include the NERC Reliability Standards for monitoring, the interval of monitoring activities, and the type of CMEP tool used for monitoring. Other considerations that inform COP development include risk elements, entity performance, internal controls, and mitigating activities.

[2] Formerly known as the ERO Enterprise IRA Guide, the ERO Enterprise Guide for Compliance Monitoring incorporated language on COPs and risk elements, in addition to overall enhancements to the IRA process. The ERO Enterprise Guide for Compliance Monitoring is available at http://www.nerc.com/pa/comp/Reliability%20Assurance%20Initiative/ERO%20Enterprise%20Guide%20for%20Compliance%20Monitoring.pdf.

Internal Controls Refinement

During 2016, NERC and the REs reviewed lessons learned from ICE implementation and identified enhancements to the existing ICE process and use of internal controls. The ERO Enterprise clarified how it considers internal controls during ICE and compliance monitoring activities, such as Compliance Audits. The ERO Enterprise also streamlined its testing approach to focus on internal controls design and implementation effectiveness. The ERO Enterprise detailed these enhancements in the ERO Enterprise Guide for Internal Controls.[3] These refinements help the ERO Enterprise and industry to consider internal controls effectively in risk-based compliance monitoring.

2016 ERO Enterprise CMEP Implementation Plan[4]

Part of the risk-based framework is prioritization of continent-wide risks, which results in an annual compilation of risk elements applicable across the ERO Enterprise. Through the identification of risk elements and with input from the REs, NERC associates a preliminary list of applicable NERC Reliability Standards and responsible registration functional categories to the risk elements. REs further consider local risks when developing region-specific risk elements.[5] REs consider the Compliance and Certification Committee (CCC)[6] Criteria on risk elements, which are part of the RE evaluation criteria.[7] This initial association of Reliability Standards to risks provides one input into compliance monitoring determinations. The ERO Enterprise may, however, further refine monitoring determinations based on specific facts and circumstances about the registered entity.

As demonstrated in Table 1.1 below, the 2016 ERO Enterprise risk elements did not change significantly from the 2015 risk elements. Although the ERO Enterprise recognizes that overall risks to the BPS may remain constant from year-to-year, it continues to assess whether new risks arise or areas of focus need to change throughout the year. For instance, in June 2016, NERC added vegetation management as an area of focus under the ERO Enterprise risk element Maintenance and Management of BPS Assets. NERC noted that transmission outages related to inconsistent vegetation management pose an ongoing reliability risk to the BPS. NERC based its assessment on the 2015 Vegetation Report that shows a slight increase in grow-in vegetation-related outages.[8] NERC included FAC-003-3 as an associated Reliability Standard to the vegetation management area of focus to address the risk posed by vegetation growth.

Table 1.1: Comparison of 2015 and 2016 Risk Elements

2015 Risk Elements	2016 Risk Elements
Cyber Security	Critical Infrastructure Protection
Extreme Physical Events	Extreme Physical Events
Infrastructure Maintenance	Maintenance and Management of BPS Assets

[3] Formerly known as the ERO Enterprise ICE Guide, the ERO Enterprise Guide for Internal Controls is available at http://www.nerc.com/pa/comp/Reliability%20Assurance%20Initiative/Guide_for_Internal_Controls_Final12212016.pdf.
[4] 2016 ERO Enterprise CMEP Implementation Plan, available at http://www.nerc.com/pa/comp/Resources/ResourcesDL/2016%20CMEP%20IP_v_2%205_071116_POSTED.pdf.
[5] The 2016 ERO Enterprise Implementation Plan includes further detail on the REs' risk element development process in the RE appendices.
[6] The CCC is a NERC Board-appointed stakeholder committee serving and reporting directly to the NERC Board of Trustees. In accordance with Section 402.1.2 of the NERC ROP, the CCC is responsible for establishing criteria for NERC to use to evaluate annually the goals, tools, and procedures of each RE CMEP to determine the effectiveness of each such program.
[7] Criteria for Annual RE Program Evaluation, CCC Monitoring Program – CCCPP-010-4, October 2016, http://www.nerc.com/comm/CCC/Related%20Files%202013/CCCPP-010-4%20Criteria%20for%20Annual%20Regional%20Entity%20Program%20Evaluation.pdf.
[8] Vegetation-Related Transmission Outages – Annual Report 2015

Table 1.1: Comparison of 2015 and 2016 Risk Elements	
Monitoring and Situational Awareness	Monitoring and Situational Awareness
Protection System Misoperations	Protection System Failures
Uncoordinated Protection Systems	
Long-Term Planning and System Analysis	Event Response and Recovery
	Planning and System Analysis
Human Error	Human Performance
Workforce Capability	Not Applicable for 2016

Enforcement Highlights

In 2016, higher-risk cases continued to be a small percentage of the overall caseload. Generally, the noncompliance posing the greatest level of risk to reliability involved CIP Reliability Standards, vegetation contacts, repeat conduct, and entities undergoing corporate changes. The NERC Board of Trustees Compliance Committee (BOTCC) approved 18 Full Notices of Penalty (Full NOPs) resolving CIP and non-CIP violations throughout 2016. The penalties for these NOPs totaled $4,208,000.

There was no substantive change to the ERO Enterprise's penalty approach in 2016. The ERO Enterprise continued to focus on higher-risk areas by using all existing tools, including appropriate penalties, to encourage desired behavior.

NERC staff also regularly analyzes minimal risk noncompliance that is resolved as CEs (under the Self-Logging Program and otherwise) and FFTs to look for trends and emerging risks and continued to do so in 2016.

Included in Appendix A are enforcement processing goals and metrics and other relevant trends. These metrics indicate that the streamlined CE and FFT disposition methods have allowed the ERO Enterprise to resolve more efficiently minimal or moderate risk noncompliance.

2016 Disposition of Noncompliance

Below are summaries and statistics regarding the four disposition methods used to resolve noncompliance in 2016.

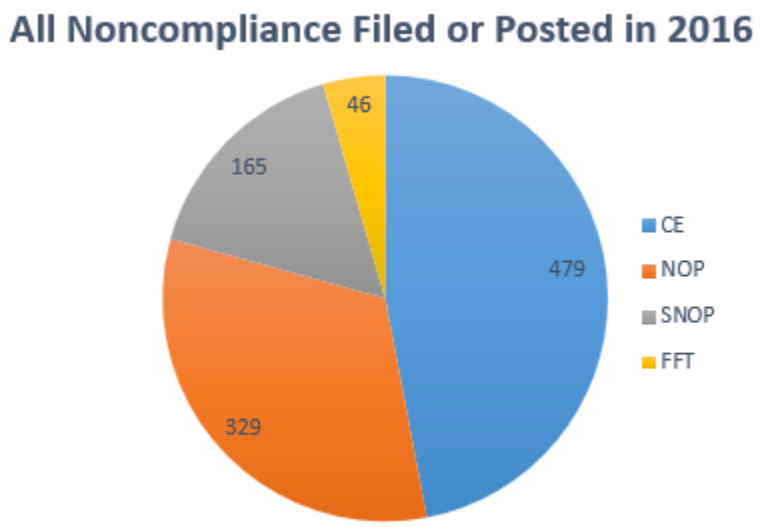


Figure 1.1: All Noncompliance Filed or Posted in 2016

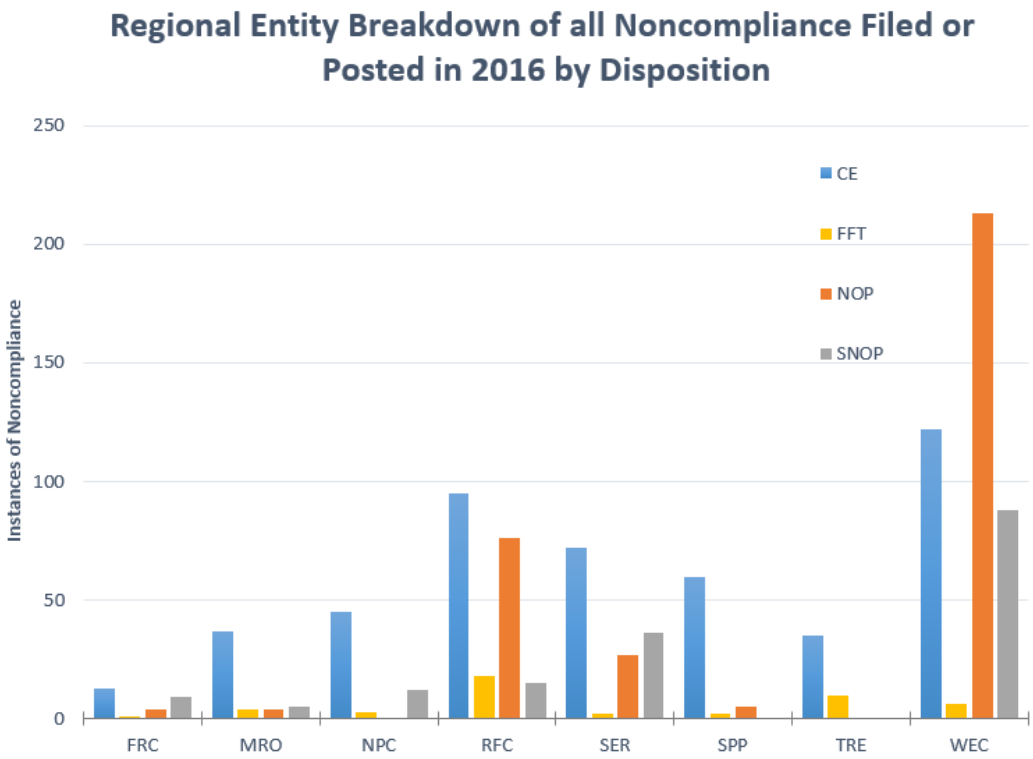


Figure 1.2: RE Breakdown of all Noncompliance Filed or Posted in 2016 by Disposition[9]

Full NOPs

Full NOPs generally include noncompliance that poses a serious or substantial risk to the reliability of the BPS, including those involving extended outages, uncontrolled loss of load, cascading blackouts, vegetation contacts, systemic or significant performance failures, intentional or willful acts or omissions, and gross negligence. Full NOPs may also be appropriate for a registered entity that has a large number of minimal or moderate risk violations that could be indicative of a systemic issue, dispositions involving higher than typical penalty amounts,

[9] In 2016, WECC processed a large number of older cases that were filed as Full NOPs.

or those with extensive mitigation or "above and beyond" actions taken by the registered entity. Full NOPs are approved by NERC and filed with FERC for review and approval. In 2016, out of 1019 instances of noncompliance posing various levels of risk, the ERO Enterprise processed 329 (32.3 percent) of those as Full NOPs.

Focus on Serious Risk Issues

The serious risk issues addressed in Full NOPs in 2016 included the following:

- A lack of commitment to NERC compliance regarding CIP Reliability Standards,
- Vegetation contacts,
- Repeat conduct,
- Ineffective change management, including employee turnover,
- Lack of preparedness for the interconnection of new facilities and the enforceability of new requirements, and
- Inadequate training of personnel on tools and processes.

NERC and RE representatives also analyzed serious risk violations from 2012 through the end of 2015. This analysis noted frequently observed issues from serious risk noncompliance and included associated recommendations that may benefit industry when evaluating risks and assessing their internal controls.

The analysis identified the following common issues involved in serious risk noncompliance that had an observable impact[10] on the reliability of the BPS:

- Less than adequate situational awareness,
- Less than adequate real-time tools or lack of real-time visibility,
- Failure to validate accuracy of BPS operating limits, such as Interconnection Reliability Operating Limits (IROL) and System Operating Limits (SOL),
- Lack of awareness regarding dependencies between redundant systems or between primary and backup systems, as well as an inability to exercise backup systems,
- Failure to disseminate information to applicable entities,
- Failure to issue clear, concise, and definitive Reliability Directives to maintain reliability, and
- Change management practices lacking risk and impact analysis.

Some of the common issues observed in the analysis were also identified as 2016 ERO Enterprise risk elements. To address these common issues, NERC and RE representatives recommended the enhancement of risk management, programs, and practices through conducting the following, among other activities:

- Risk and impact evaluations as part of change management;
- Validation of BPS limits (IROL and SOL) and ensuring the accuracy of other critical data;
- Periodic reviews to assess the sufficiency of existing processes, systems, training, and practices to identify issues early;
- Creating robust processes, tools, training, and programs to maintain system reliability; and
- Reviewing and testing the sufficiency of contingency and recovery plans.

[10] Figure A.14: Noncompliance Posing an Impact to the BES by Quarter, included in Appendix A, provides additional information regarding observable impact.

The ERO Enterprise will continue to monitor areas posing the greatest level of risk to reliability and enforce any noncompliance appropriately.

Spreadsheet Notices of Penalty

Spreadsheet Notices of Penalty (SNOPs) include noncompliance posing a minimal or moderate risk to the reliability of the BPS. Once REs have entered into Settlement Agreements with, or have issued Notices of Confirmed Violations (NOCVs) to, the registered entities, that information is reported to NERC for oversight review and approval. NERC then files that information with FERC in a spreadsheet format for review and approval. The SNOP identifies the following: the RE, the registered entity, disposition as a NOCV or Settlement Agreement, a description of the violation, the appropriate Reliability Standard, Violation Risk Factor and Severity Level, the assessed risk of the violation, total penalty or non-monetary sanction, method of discovery, mitigation activities, mitigation completion date, date RE verified mitigation completion, an admission or no contest to the violation, and other factors affecting the penalty determination, such as compliance history, internal compliance program, and compliance culture. In 2016, out of 946 minimal or moderate risk noncompliance, the ERO Enterprise resolved 164 (17.4 percent) as SNOPs.

Continued Success of the CE Program

As shown in Figure 1.1 above, CEs continue to be the dominant disposition method for noncompliance posing a minimal risk to the reliability of the BPS that does not warrant a penalty. Under this program, the noncompliance is recorded and must be mitigated within 12 months of the time of NERC's public posting of CEs.[11] Because noncompliance with any of the Reliability Standards may be treated as Compliance Exceptions, the exercise of appropriate judgment to process noncompliance as such is informed by the facts and circumstances of the noncompliance, the risk posed by the noncompliance to BPS reliability, and the potential deterrent effect of a penalty, among other things. In 2016, out of 1019 instances of noncompliance posing various levels of risk, the ERO Enterprise processed 479 (47 percent) of those as Compliance Exceptions.

To assess trends and emerging risks, NERC staff reviewed 630 CEs that were processed in 2014 and 2015. Even though these CEs involved a diverse array of underlying conduct, facts, and circumstances, the analysis identified the following primary themes and conclusions:

- Noncompliance consisted of minor mistakes when implementing programs, such as conflicting program requirements or inadequate communication between departments, as opposed to a more widespread failure or lack of mature programs. In other words, the instances of noncompliance were not due to major organizational or programmatic deficiencies.
- Many of the registered entities discovered the noncompliance through strong internal review processes, internal audits, and other detective controls. These instances of noncompliance were not due to fundamental failures in internal controls.
- Noncompliance related to previous noncompliance was not due to a failure in previously implemented mitigation.
- While many of the reviewed CEs included updates to the internal processes combined with internal training in the mitigating activities, the majority of these CEs did not have deficient past training or lack of

[11] On January 13, 2017, FERC issued an Order on NERC's annual report on the FFT and CE Programs filed November 14, 2016. FERC's Order accepted the filing and NERC's request for approval of the adjustment of time for completing mitigation activities for CEs to 12 months from the date of posting of the CE to align the completion activity timeframes with FFTs. The effective date for the new timeframe is January 13, 2017. *North American Electric Reliability Corporation,* Letter Order, Docket No. RC11-6-005 (FERC Jan. 13, 2017). Previously, the accepted timeframe for completing mitigating activities for CEs was 12 months from the time of the notification to the registered entity of CE treatment.

internal processes or procedures. Instead, the nature of the procedural changes and training was aimed at providing clarity and raising overall awareness within relevant departments at the registered entity.

FFT Program

The ERO Enterprise uses the FFT program primarily to resolve moderate risk noncompliance that does not warrant a penalty. Similar to CEs, FFTs mirror the same process of identifying, assessing, and correcting minimal or moderate risk noncompliance. Nonetheless, the ERO Enterprise uses FFTs primarily to resolve moderate risk issues that are suitable for streamlined treatment (as opposed to through a NOP). FFTs also may be used to process minimal risk noncompliance that is related to a moderate risk issue being resolved as an FFT. In addition, as with CEs, FFTs are not subject to penalties. Currently, the only major difference between CEs and FFTs is that, unlike CEs, FFTs become part of a registered entity's compliance history.[12] In 2016, out of 946 instances of minimal or moderate risk noncompliance, the ERO Enterprise processed 46 (5.1 percent) as FFTs.

Self-Logging Use

In 2016, the ERO Enterprise continued to allow eligible registered entities to participate in the Self-Logging Program. After a formal review of internal controls, a registered entity may be approved for the program and may log noncompliance for subsequent review in lieu of submitting a Self-Report. The log is limited to noncompliance posing a minimal risk to the reliability of the BPS. Approved registered entities maintain a log with a detailed description of the noncompliance, the risk determination, and the mitigating activities completed or to be completed. There is a rebuttable presumption that minimal risk noncompliance logged in this manner will be resolved as a CE. The RE reviews the logs and makes the logged noncompliance available for review by NERC and Applicable Governmental Authorities.

There are currently 59 registered entities approved by the REs to self-log as of December 31, 2016.[13]

[12] CEs are not considered part of a registered entity's compliance history except in limited circumstances. North American Electric Reliability Corporation, 150 FERC ¶ 61,108 at P 44 (2015).

[13] The number of registered entities approved by the REs to self-log decreased in Q4 due to three entities that joined a Joint Registration Organization with another entity.

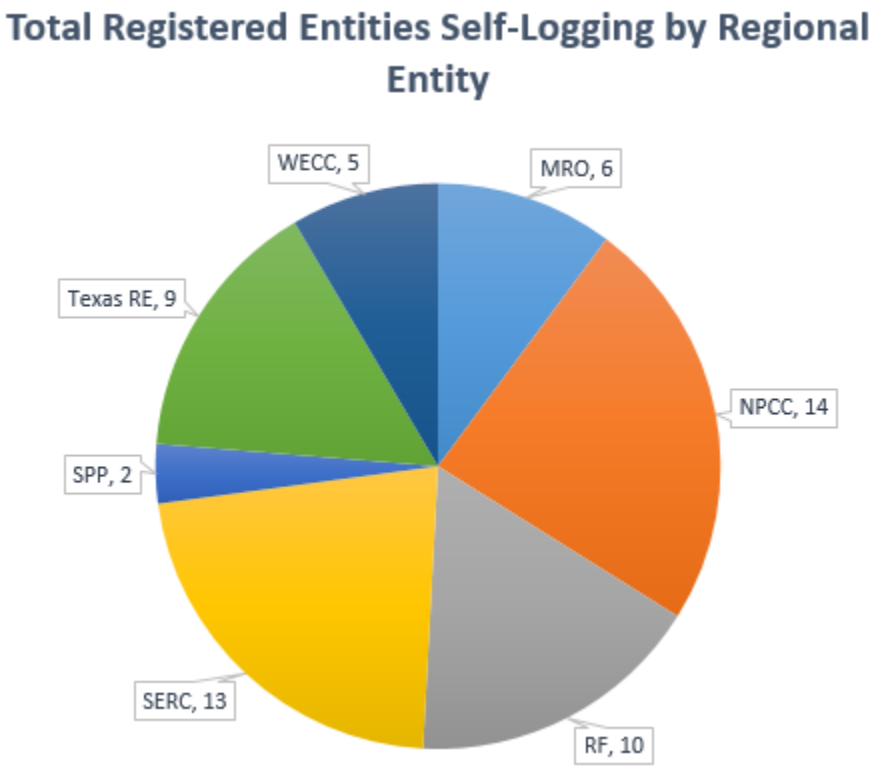


Figure 1.3: Total Registered Entities Self-Logging by RE

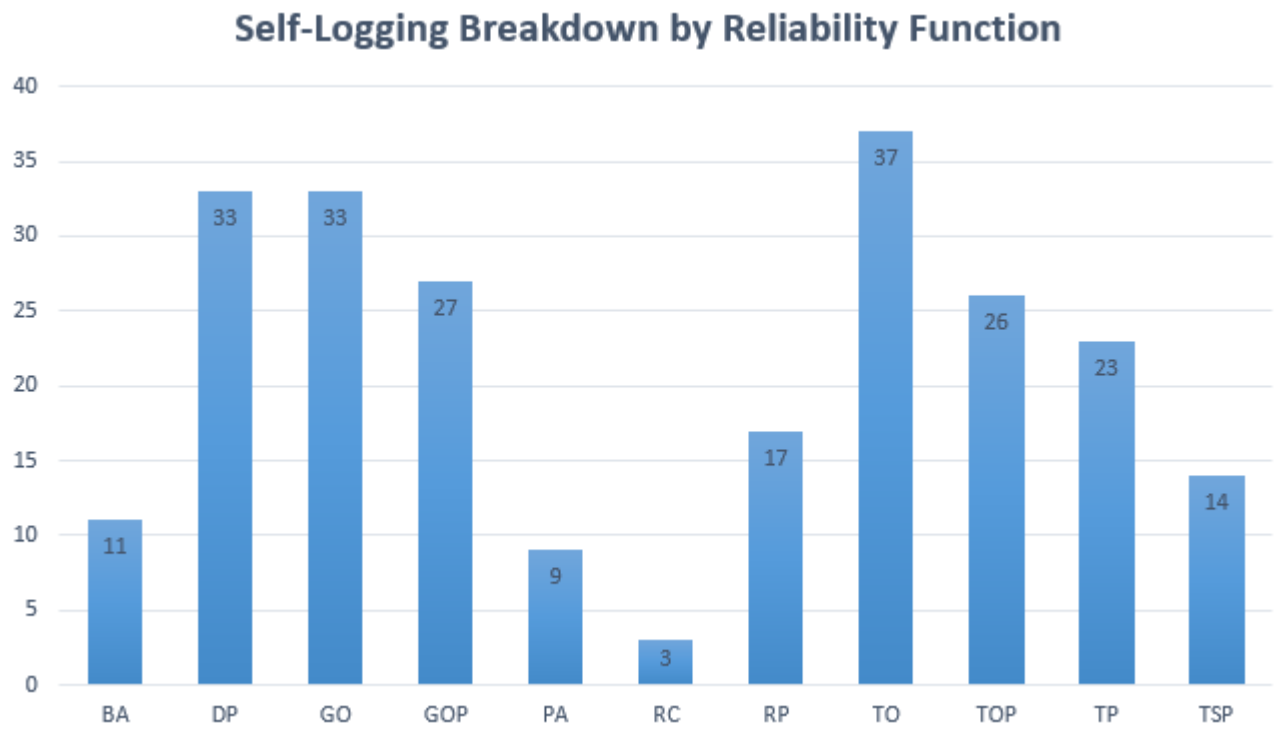


Figure 1.4: Self-Logging Breakdown by Reliability Function

Chapter 2: NERC Oversight of the Regional Entities

NERC performs oversight of REs to ensure that each RE carries out its CMEP in accordance with the NERC ROP and the terms of the delegation agreement. This chapter highlights NERC's 2016 oversight activities.

Compliance Monitoring Oversight

In 2016, NERC focused on reviewing the content of select completed IRAs; enhancing procedures for the Coordinated Oversight of Multi-Region Registered Entities (MRREs); reviewing performance of compliance monitoring activities, including audits; and verifying RE adherence to select ROP provisions. Each of these activities helps to ensure that the ERO Enterprise continuously improves its processes and meets specified criteria, such as ROP requirements or procedures of the Coordinated Oversight Program for MRREs.

Risk-based Compliance Monitoring Activities

In 2015, the ERO Enterprise developed processes to execute risk-based compliance monitoring activities and implemented the processes in 2015 and 2016. Throughout 2016, NERC's oversight focused on reviewing content of select IRAs and tracking completion of IRA and ICE activities.

IRAs

Content Review

NERC continued to review completed IRAs as part of its oversight activities concurrently with the IRA refinement project. NERC selected an IRA sample[14] to review supporting documentation to ensure REs followed ERO Enterprise guidance on justifying and documenting risk determinations. NERC used the CCC Criteria on IRAs to inform its review. In addition, NERC looked for consistent outcomes for similarly situated registered entities and technical justifications for deviations from the risk factor criteria.

Based on its review of supporting documentation, NERC found REs adequately demonstrated risk determination in accordance with the IRA guidance in effect during 2016. Nevertheless, NERC noted documentation enhancement opportunities and recommended improvements to ensure sufficient documentation exists for professional judgment and conclusions reached during IRA and COP development. For example, over-reliance on automation and regional tools may affect the quality of evidence showing RE technical justifications around entity-specific risk areas. REs should ensure tools allow for adjustments and clear methods for IRA risk determinations. Additionally, NERC noted a lack in the quantity of evidence readily available to demonstrate conclusions around IRA results and compliance monitoring decisions. For example, NERC identified a direct link between IRA results and sampled audit scopes; nevertheless, documentation around the basis for CMEP tool selections and final scope of monitoring decisions needs to be refined.

NERC selected a sample of IRAs received from REs and reviewed the registered entity's corresponding audit report or notification letter. NERC reviewed the audit scope to determine whether it covered some of the highest risks identified in the IRA for that registered entity. Of the audit scopes reviewed, NERC found that the majority of Reliability Standards in scope corresponded to a high or medium risk identified in the IRA for that registered entity. Other Reliability Standards were included in scope based on some other entity-specific facts and circumstances, such as the addition of a new registered function. Therefore, NERC observed that REs monitored some of the highest risks for that particular registered entity. In 2017, NERC will continue to review IRAs and compliance monitoring activities to understand how REs address risk, as Compliance Audits are only one method. Nonetheless, the ERO Enterprise took a significant step toward risk-based compliance monitoring by using individual entity IRAs to inform its audit activities.

[14] NERC, in coordination with FERC, sampled IRAs for 2016 non-CIP audits across all eight REs. The sample focused on non-CIP audits due to the transition to CIP Version 5 and the mid-year effective date for CIP Version 5 Reliability Standards.

Completion

In 2016, the ERO Enterprise set a goal of completing IRAs for all Reliability Coordinators (RCs), Balancing Authorities (BAs), and Transmission Operators (TOPs), as well as completing an IRA for every registered entity audited in 2016. As noted above, the completion of IRAs is necessary to help ensure compliance monitoring activities focus on high-risk areas and entity-specific risks. REs developed plans and a schedule for the completion of IRAs for all registered entities within their footprint. Included in Appendix A are further details on each RE's plan.

REs performed IRAs on 97 percent of registered entities on the 2016 audit schedule before the start of each registered entity's audit. For the remaining three percent, WECC scheduled and conducted two Compliance Audits and four Spot Checks scoped using the WECC legacy process of entity risk assessment and Regional Risk Assessment in the 2016 CMEP Regional Implementation Plan.

By the end of 2016, the ERO Enterprise completed IRAs for 62 percent of registered entities.[15] Table 2.1 shows the number of completed IRAs per RE, including IRAs for RCs, BAs, and TOPs. REs have completed IRAs for all entities registered as RCs. There are eight remaining IRAs to be completed for entities registered as BAs and TOPs, including one IRA for an entity in the Coordinated Oversight Program for MRREs.

Table 2.1: ERO Enterprise IRA Completion for Registered Entities

	FRCC	MRO	NPCC	RF	SERC	SPP RE	Texas RE	WECC	Total
IRAs for RCs, BAs, and TOPs	15	28	19	18	31	19	19	51	200
Other IRAs	26	58	182	65	99	77	141	39	687
Total	**41**	**86**	**201**	**83**	**130**	**96**	**160**	**90**	**887**

ICE Completion

In 2016, REs completed an ICE for 22 registered entities. Since initial implementation of risk-based compliance monitoring beginning in 2014, REs conducted ICEs for 61 registered entities.[16] Table 2.2 provides the total number of ICE activities completed by each RE during 2016 and in total since program implementation.

Table 2.2: ERO Enterprise ICE Completion

	FRCC	MRO	NPCC	RF	SERC	SPP RE	Texas RE	WECC	Total
ICEs Completed in 2016	1	2	11	0	0	5	1	2	22

Registered Entity Compliance Audits and Spot Checks

In 2016, REs conducted Compliance Audits and Spot Checks for 201 registered entities. REs performed Compliance Audits for 179 registered entities, Spot Checks for 19 registered entities, and combined Compliance Audits and

[15] This percentage is based on 1,436 registered entities as of June 1, 2016.

[16] Total number of ICEs conducted to date includes ICEs initiated in 2015 and excludes prior ICE-related activities that followed legacy regional processes during 2014 and 2015.

Spot Checks for three registered entities. NERC conducted oversight activities for Compliance Audits and Spot Checks, including observations of select registered entity audits. The following subsections provide highlights of NERC's oversight activities related to registered entity Compliance Audits and Spot Checks.

Compliance Audit Observations

NERC sampled a selection of RE audits of registered entities to observe and review. Through audit observations, NERC both monitors the audit process, including audit-scoping determinations, and assesses the REs' evaluations of registered entity compliance with NERC Reliability Standards. Further, audit observations help NERC to assess the overall implementation of ERO Enterprise activities, such as risk-based compliance monitoring, CIP Version 5 transition, Physical Security Reliability Standard implementation, and the Coordinated Oversight Program, and to identify program development needs, training, and outreach. In 2016, NERC observed a total of 19 audits with audit scopes including both CIP and non-CIP Reliability Standards and with registered entities within the Coordinated Oversight Program. NERC identified positive observations and opportunities for improvements to compliance monitoring as follows:

- REs followed the processes within the CMEP, ROP Appendix 4C for Compliance Audits, and the processes and procedures within the ERO Enterprise Auditor Handbook and Checklist.
- Audit teams provided transparency and discussion opportunities with the registered entities in instances of possible findings of noncompliance.
- Audit teams made effective use of off-site pre-audit reviews by collecting and testing evidence before any on-site activities.

NERC also observed REs taking a risk-informed approach to sample and visit substations in an effort to focus resources to test compliance within high-risk areas. For example, to test facility ratings, audit teams toured substations to determine that all visible and applicable components (such as transformers and jumpers) were correctly accounted for in the facility ratings documentation. To test completion of relay populations, audit team members also confirmed that relay panels are accounted for, and they inspected a sample of panels to ensure that all relays on them are accounted for in the relay population. NERC considers this testing approach an ERO Enterprise best practice when warranted by risk. This approach provides additional assurance of the accuracy of provided populations for certain higher risk areas and helps ensure the overall reliability of the BPS.

NERC observed improvement opportunities for audit teams to understand better the registered entity's existing internal controls that support compliance with the Reliability Standards and an opportunity for improvement in overall documentation of professional judgment and analysis to determine compliance. ERO Enterprise staff training in 2017 will focuse on understanding a registered entity's internal controls related to Reliability Standards and documenting decisions around compliance and internal controls during compliance monitoring activities.

Areas of Concern and Recommendations Review

NERC receives registered entity Compliance Audit and Spot Check reports from REs. While NERC publicly posts audit reports, the RE redacts non-public information, including areas of concern, and NERC does not post the reports until disposition of open enforcement actions. NERC reviewed a sample of audit reports it received in 2016 to identify themes noted in areas of concern and recommendations. An area of concern relates to a situation or area that is not a violation of a Reliability Standard or requirement but could become a violation based on the observed circumstances. Recommendations consist of areas or situations in which an opportunity may exist for improving compliance-related processes, procedures, or tools. Included in Appendix A are summaries of some of the areas of concern and recommendations from non-CIP and CIP audit reports reviewed by NERC in 2016.

Review of Registered Entity Post-audit Feedback Surveys

Following every Compliance Audit, registered entities have an opportunity to complete post-audit feedback surveys. Both NERC and the REs review registered entity feedback to help enhance risk-based compliance

monitoring activities. Post-audit feedback surveys aim to provide a feedback loop to NERC and the REs by identifying successes and opportunities for program development, as well as possible education and training opportunities for ERO Enterprise staff.

In 2016, NERC and the REs collected 66 post-audit feedback surveys, which is a response rate of about 33 percent of the total number of entities that had Compliance Audits in 2016. Overall, survey responses indicated continued support by registered entities of the risk-based compliance monitoring approach, noting that most Compliance Audits had a clear focus of monitoring efforts on reliability risk. Further, registered entities noted their appreciation for the audit team's flexibility in audit scheduling, clear and transparent communication during the audit, and the professional demeanor of the audit team. Registered entities also commended the audit teams' review of large volumes of work during the off-site pre-audit portion that resulted in over 77 percent of responses saying compliance monitoring activities caused little to moderate disruption of operations. Additionally, feedback surveys indicated an opportunity for the ERO Enterprise to improve communication regarding the audit notification package, IRA and ICE results, and the impact of those results on determining monitoring scope and method.

Coordinated Oversight of MRREs

The ERO Enterprise continues to collaborate toward effective, consistent, and efficient implementation of coordinated oversight for MRREs in the Coordinated Oversight Program. To that end, in 2016 the Coordinated Oversight Task Force (COTF) was formed to assist the ERO Enterprise with, among other things, developing common procedures, identifying process improvement needs, and obtaining input from MRREs participating in coordinated oversight.

The COTF surveyed current MRRE groups participating in the Coordinated Oversight Program and found that 97 percent of the MRREs support continued participation in the program, while 89 percent contend that the program fulfills its objectives. From the survey results, the COTF identified enhancement opportunities, particularly in the areas of IRAs, Technical Feasibility Exceptions (TFEs), and data submittals. The ERO Enterprise will address lessons learned through oversight and training.

During 2016, 35 additional registered entities opted in to the Coordinated Oversight Program, taking the total count of registered entity participation to 213.[17] The ERO Enterprise continued to consider opportunities to refine the Coordinated Oversight Program and to improve associated efficiency and consistency while also fulfilling obligations for implementation of the CMEP. Included in Appendix A are additional supporting details on the Coordinated Oversight Program.[18]

ROP Adherence Verification

Each year, NERC focuses its oversight on certain provisions of the ROP. In 2016, NERC conducted a review of training completed by CMEP staff that participate in audits; verified that REs conduct an on-site audit every three years for RCs, BAs, and TOPs; and confirmed that REs completed monitoring activities in the 2016 ERO Enterprise CMEP Implementation Plan.

Other Oversight Activities

NERC continuously reviews RE activities for opportunities for consistency. NERC and the REs noted an opportunity for alignment in updating templates used by the REs. For instance, NERC and the REs revised the audit report template, and they will use the updated report for 2017 Compliance Audits. In addition, NERC and the REs will

[17] This report reflects the total number of registered entities participating in the program regardless of whether the NERC Compliance Registry number is unique or identical across the REs.

[18] Information on the Coordinated Oversight of MRREs Program is available at: http://www.nerc.com/pa/comp/Reliability%20Assurance%20Initiative/MRRE%20FAQ%20with%20Notice%201-12-15.pdf.

review the 90-day notification letters for Compliance Audits to develop a common template. Throughout revision of the templates, the ERO Enterprise employed the CCC Criteria to manage scope and content of the review.

Enforcement Oversight

NERC's enforcement oversight in 2016 focused on the following key areas: process reviews, risk determinations, and settlements and penalty determinations.

Process Reviews

As part of its oversight role, NERC staff routinely evaluates each RE's enforcement program, as well as samples of specific cases.

CE and FFT Programs Review Results

In 2016, NERC staff, along with FERC staff, completed an annual process review of the CE and FFT programs. This combined review evaluated RE implementation of the CE and FFT programs to ensure alignment with applicable ERO Enterprise program documents and guidance.

The review[19] found that the REs appropriately included the sampled noncompliance in the FFT and CE programs and that the registered entities adequately mitigated all 132 instances of noncompliance, including 11 self-logged CEs (approximately 10ten percent of the CEs reviewed).

NERC staff also agreed with the final risk determinations for all CEs and FFTs sampled, and noted with the REs significant improvement in the clear identification of root cause in all samples posted after the feedback calls from the previous year's survey. FERC staff also concurred with NERC that the FFT and CE programs are meeting expectations.

The results of the 2015 annual review show a consistent improvement in program implementation. They indicate, among other things, that most registered entities, in coordination with their respective RE, are able to identify, mitigate, and remediate minimal – as well as certain moderate – risk noncompliance. They also show significant alignment across the ERO Enterprise, including the understanding of risk associated with individual noncompliance.

NERC submitted an annual report on the FFT and CE Programs to FERC in November 2016.[20] NERC and FERC staff have already begun working on the 2016 annual FFT and CE program sampling for the 2017 process review.

Self-Logging Program Process Review

In 2016, NERC conducted a Self-Logging Program process review, as well as surveyed the REs to assess the overall program implementation and identify any barriers to increased levels of participation in the program, given the moderate expansion of the program since 2015.

NERC's review confirmed that the majority of REs are consistently implementing the Self-Logging Program. NERC found that self-logging noncompliance reduces processing times by two-thirds when compared with Self-Reports. Self-logged noncompliance was accurately assessed and had a low instance of dismissal. Communication between the registered entity and RE increased. In addition, the ERO Enterprise has a more thorough understanding of the risk posed by noncompliance across the BPS because of active participants in the program.

[19] For FFTs, the program year was October 1, 2014, through September 30, 2015. For CEs, the review period was May 1, 2014, through September 30, 2015.

[20] Annual Report on the FFT and CE Programs, available at http://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/FinalFiled_2016%20Annual%20FFT%20and%20CE%20Report_11-14-16.pdf.

Many REs are conducting successful outreach to their registered entities on the benefits of self-logging. Nevertheless, NERC and the REs have observed that many registered entities are not fully aware of the benefits of the Self-Logging Program and are hesitant to seek eligibility for the program because of a perceived lack of incentives.

Based on the findings from the Self-Logging Program process review, NERC will propose to provide CEs identified through self-logging to FERC on a non-public basis. NERC determined that the non-public posting of logged CEs would encourage self-logging participation and realign the focus of the public on higher risk issues by eliminating public notice of registered entity noncompliance without any identified negative impacts to the BPS. Further, making self-logs non-public would distinguish the program from the publicly posted CEs identified through other discovery methods.

This revision to the program would reflect the original tenets of self-logging: presumption of CE treatment and self-logged items that are subject to periodic regional review and treated in a non-public manner.

Determinations of Risk Associated with Specific Noncompliance

In 2016, NERC and RE staff participated in two face-to-face risk calibration training sessions. These sessions included open discussions, as well as exercises to facilitate targeted dialogue. The exercises used case studies and fact patterns developed from actual cases.

The results of these exercises demonstrated considerable alignment across the ERO Enterprise in determining the risk associated with specific noncompliance.

Exercises like these also provide for continuous development as ERO Enterprise enforcement staff engage in shared learning and incorporate this knowledge into day-to-day activities.

Settlement and Penalty Determinations

NERC regularly oversees RE enforcement activities to evaluate the appropriateness of disposition methods, including assessment of a penalty or sanction. Similar to the risk calibration exercises, NERC found alignment of penalty determinations throughout the ERO Enterprise.

The BOTCC considers the recommendations of NERC staff regarding approval of Full NOPs and monitors the handling of noncompliance through the streamlined disposition methods of CEs, FFTs, and SNOPs.

Chapter 3: ERO Enterprise CMEP Training, Education, and Outreach

ERO Enterprise Training and Education

The ERO Enterprise recognizes that continuing training and education for its CMEP staff promotes consistency and competency in conducting CMEP activities. Therefore, the ERO Enterprise provides training and education for its staff every year that focuses on the necessary skills and knowledge relevant to perform their jobs.

NERC conducted a workshop for CMEP staff in April 2016. Approximately 114 RE staff attended the workshop in person, and approximately 40 attended remotely. The workshop theme was "cross-functional collaboration," and participants could select courses on risk and penalty determinations in enforcement actions, power system frequency, and system protection. In addition, participants attended sessions on either CIP or non-CIP topics, including some sessions involving standard drafting team members from industry.

NERC staff also provided a webinar in the summer of 2016 geared toward RE staff new to the ERO Enterprise. The webinar reviewed the basics of various enforcement disposition methods, templates, and required documents for filing to aid in consistency of processes.

In October 2016, NERC and the REs held conferences for approximately 115 ERO Enterprise staff that perform compliance monitoring activities. The purpose of these conferences was to encourage cross-regional collaboration and discussion on various activities within compliance monitoring, including topics such as updates to ERO Enterprise guidance and skills used during CMEP activities.

NERC and RE enforcement staff developed and distributed an Enforcement Capabilities and Competency Guide. This guide is designed to provide a practical, hands-on resource for NERC and RE staff in identifying the combination of skills, attributes, and behaviors that are necessary for the successful performance of various enforcement roles.

In addition to the workshop, webinar, and conferences, NERC and the REs hold two sessions a year on audit team leader skills. This course ensures that audit team leaders and certification team leaders possess the requisite skills to lead a Compliance Audit or certification team. NERC also offered a course on communication skills. Finally, NERC and the REs have access to computer-based training on a learning management system.

Industry Education and Outreach

NERC held a Standards and Compliance Workshop in July 2016 in St. Louis, Missouri. NERC and RE staff covered CMEP topics such as internal controls, updates on implementation of risk-based CMEP, and the Compliance Guidance Policy. Approximately 200 participants attended the two-day workshop.

REs provided outreach through workshops, monthly newsletters, assist visit programs, and other events with industry stakeholders. In addition, NERC coordinated with RE staff on internal controls presentations at RE workshops. A majority of outreach focused on risk-based CMEP topics, particularly IRAs, although some REs anticipate a shift in the focus of outreach after 2016. For instance, Texas RE began focusing on trends in risks identified during IRAs as part of its outreach rather than simply the fundamentals of conducting IRAs. Although general outreach will shift as more registered entities gain experience with risk-based CMEP activities, some REs, such as WECC and FRCC, noted that they incorporate outreach into each IRA development process by providing walk-throughs or conversations on IRAs with registered entities. RF also met with registered entities to discuss internal controls.

Finally, NERC and the REs provided industry education on all Reliability Standards approved by FERC in 2016. Table 3.1 lists the topics covered for 2016.

Table 3.1: Education on Newly-approved Reliability Standards

Standard	Outreach
CIP-003-6, CIP-004-6, CIP-006-6, CIP-007-6, CIP-009-6, CIP-010-2, and CIP-011-2	Technical Conference
MOD-031-2	Webinar
PRC-026-1	Webinar
FAC-003-4	NERC Standards and Compliance Workshop
IRO-018-1	Webinar
TOP-010-1	Webinar
TPL-007-1	Webinar
COM-001-3	Webinar

Coordination with CCC

NERC and the REs collaborated with the CCC throughout 2016 to promote consistency across the ERO Enterprise through revisions to the CCC Monitoring Program Procedure CCCPP-010-4: Criteria for Annual RE Program Evaluation.[21] NERC consults these criteria during its oversight activities to increase alignment, and the collaboration between the CCC and the ERO Enterprise enhances the effectiveness of the criteria. The CCC members also provided input from the first year of implementation of the risk-based CMEP. That discussion highlighted a further need to explore areas where issues of consistency could be brought to the attention of the ERO Enterprise. As a result, the CCC held a roundtable discussion focused on handling consistency issues. A small group of CCC members and NERC staff discussed how NERC could collect information on consistency, review the information, and prioritize action. The recommendations or actions resulting from this discussion will be presented to the BOTCC in February 2017.

[21] http://www.nerc.com/comm/CCC/Related%20Files%202013/CCCPP-010-4%20Criteria%20for%20Annual%20Regional%20Entity%20Program%20Evaluation.pdf.

Chapter 4: Other Significant 2016 Activities

Compliance Guidance

In November 2015, the NERC Board of Trustees approved the Compliance Guidance Policy.[22] The policy outlined two types of Compliance Guidance: Implementation Guidance and CMEP Practice Guides. Implementation Guidance is developed by industry stakeholder groups and provides examples of compliance approaches for Reliability Standards. CMEP Practice Guides provide direction to CMEP staff on approaches to execute compliance monitoring and enforcement activities. CMEP Practice Guides are developed by the ERO Enterprise and do not address activities specific to one Reliability Standard unless developed in conjunction with industry stakeholders.

One recommendation from the Compliance Guidance Policy was to develop a CMEP Practice Guide that addresses deference to Implementation Guidance. In March 2016, the ERO Enterprise developed guidance on how ERO Enterprise CMEP staff provides deference to ERO Enterprise-endorsed Implementation Guidance. Under the Compliance Guidance Policy, the CMEP Practice Guide was posted on the NERC website for transparency to industry.[23]

Industry stakeholders submitted 26 documents as proposed Implementation Guidance. The ERO Enterprise developed and implemented a process to evaluate and potentially endorse the Implementation Guidance. In addition, the ERO Enterprise developed a category for Implementation Guidance that is endorsed for Inactive Reliability Standards. The ERO Enterprise determined that industry might still benefit from guidance for past standards versions during the implementation of current versions. Included in Appendix A is a table that provides detail on the documents submitted for endorsement.

CIP Version 5 Transition and Enforceability

In 2016, the ERO Enterprise concluded transition activities and began enforcing the CIP Version 5 Reliability Standards. On January 21, 2016, FERC issued an Order on the revised CIP Reliability Standards. In its Order, FERC approved seven CIP Standards (CIP-003-6, CIP-004-6, CIP-006-6, CIP-007-6, CIP-009-6, CIP-010-2, and CIP-011-2). FERC also approved the Implementation Plan, Violation Risk Factor assignments, Violation Severity Level assignments, and the revised NERC Glossary of Terms. Based on the date of the Order, its publication in the Federal Register, and the Implementation Plan approved by FERC, the compliance date for the revised CIP Version 5 Reliability Standards became July 1, 2016. FERC also issued an Order that granted an extension for compliance with the remaining CIP Version 5 Standards until July 1, 2016.

Due to the extension of the compliance date to July 1, 2016, the ERO Enterprise continued transition outreach activities, particularly for registered entities with high and medium impact BES Cyber Systems, through Q1 and Q2 of 2016. Outreach during this period was led by RE compliance monitoring staff. Regional compliance workshops often included speakers from NERC staff. Transition outreach was also the focus of engagements with registered entities that were originally scheduled for an audit to the CIP Version 5 Reliability Standards during the period; audit staff instead provided feedback to registered entities about progress toward compliance.

In addition to RE-led outreach, NERC hosted Small Group Advisory Sessions in September that focused on registered entities with low impact BES Cyber Systems. Representatives from 20 registered entities met with staff from NERC and the REs to discuss CIP Version 5 Reliability Standards implementation. Concurrent with the Small Group Advisory Sessions, the ERO Enterprise held a workshop and webinar on low impact BES Cyber Systems.

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[22] Compliance Guidance Policy available at http://www.nerc.com/pa/comp/Resources/ResourcesDL/Compliance_Guidance_Policy_FINAL_Board_Accepted_Nov_5_2015.pdf.

[23] CMEP Practice Guide available at http://www.nerc.com/pa/comp/guidance/CMEPPracticeGuidesDL/CMEP_Practice_Guide_Deference_for_Implementation_Guidance.pdf

After the July 1, 2016, enforceable date, NERC and the REs monitored and enforced the CIP Version 5 Standards. The ERO Enterprise developed an initial compliance monitoring plan that focused on key aspects of the CIP Version 5 Standards. While the monitoring scope of each registered entity may be modified based on its identified risks, the ERO Enterprise established a preliminary focus on CIP-002-5.1 and related Reliability Standards in the 2016 ERO Enterprise CMEP Implementation Plan, in addition to lessons learned from transition activities. For all registered entities, the ERO Enterprise coordinated an RE-executed self-certification related to the identification of assets with high, medium, and low impact BES Cyber Systems under CIP-002-5.1. After July 1, 2016, the REs audited 72 registered entities on the CIP Standards. FERC also coordinated with NERC and the REs on FERC-led audits of select registered entities.

Based on outreach and monitoring activities in 2016, the ERO Enterprise observed initial trends in how some organizations treat security controls. The ERO Enterprise noted several instances of registered entity performance that was considered a moderate or significant risk to the BPS because of organizational alignment, such as the compliance department operating independently from operations departments, operational expertise not reflected in procedures, subject matter experts unaware of compliance procedures, or insufficient executive leadership engagement. The ERO Enterprise will consider actions in 2017 to mitigate the risk to the BPS of less than adequate security controls.

The ERO Enterprise observed a decrease in the number of TFEs filed for Version 5 versus Version 3 CIP Reliability Standards. The ERO Enterprise will review the current TFEs during 2017 to understand better the change.[24]

Throughout 2016, NERC worked with the REs to conduct a comprehensive study that identifies the strength of the CIP Version 5 remote access controls, the risks posed by remote access-related threats and vulnerabilities, and appropriate mitigating controls as directed by FERC in Order No. 822. NERC will file observations or conclusions from the study with FERC in 2017.

NERC and the REs will continue to support the transition of stakeholders to CIP Version 5, particularly for registered entities with assets containing low impact BES Cyber Systems and for requirements that become effective in 2017. The compliance monitoring processes will include a technical excellence component by increasing the emphasis on the better use of tools to assess complex networks, technical (hands-on) training for CIP auditors, and enhanced consistency with additional training on the Evidence Request Spreadsheet. The ERO Enterprise will continue to collaborate with the industry to provide feedback to Reliability Standards development activities. For example, the industry and the ERO Enterprise provided feedback to the Standards Drafting Team to help address refinements based on the Lessons Learned and FAQ documents from the transition program[25] and from implementation.

Physical Security Implementation

In 2016, the ERO Enterprise focused on assessing the implementation progress of registered entities in complying with CIP-014-2. The ERO Enterprise employed two methods for determining the status of registered entities in implementation: self-certifications and voluntary outreach through on-site visits. On March 15, 2016, the REs issued a CIP-014-2 self-certification request that focused on Requirements R1, R2, and R3. To assist industry with completing the self-certification, NERC conducted a CIP-014-2 self-certification webinar that was attended by over 200 participants.

[24] NERC provides analysis on TFEs in a report annually filed with FERC. The report covering data from July 1, 2015 through June 30, 2016 is available at http://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/TFE_Annual_Report-2016_09282016.pdf.
[25] In 2014, NERC initiated a program to help industry transition directly from the currently enforceable CIP Version 3 Standards to CIP Version 5. Additional information on the program is available at http://www.nerc.com/pa/CI/Pages/Transition-Program.aspx.

The ERO Enterprise also conducted outreach through on-site engagements with 19 registered entities in six RE footprints. These site visits have provided opportunities for meaningful dialogue regarding security measures and challenges for the implementation of CIP-014-2. A primary focus was to understand how industry stakeholders have developed security plans to mitigate risks of specific threats. These outreach visits have revealed progress in the industry's implementation of CIP-014-2. Going forward, NERC and the REs will consider data collected through other methods, including Compliance Audits and other compliance monitoring activities, to gain a greater understanding of implementation.

Consolidated Hearing Process

Throughout 2016, NERC and RE legal staff collaborated to develop a Consolidated Hearing Process that would allow REs the option to select the existing RE hearing process or allow NERC to manage the hearing process. One of the key benefits of the Consolidated Hearing Process is to increase efficiency. The NERC Board of Trustees approved revisions to the ROP in November 2016 that provide for the Consolidated Hearing Process. In December 2016, NERC filed the proposed revisions to the ROP with FERC for approval and provided notice to the Applicable Governmental Authorities.

Chapter 5: Looking Ahead to 2017

To guide compliance monitoring and enforcement activities in 2017, NERC has identified the following priorities for the ERO Enterprise:

- Develop and implement compliance oversight plans for registered entities focusing on relevant risks, including consideration of inherent risk assessments and internal control evaluations;
- Implement compliance monitoring and enforcement timely and transparently, using a consistent framework;
- Enhance and implement training for ERO Enterprise CMEP staff;
- Reduce repeat noncompliance through rigorous assessment of registered entities' plans to mitigate noncompliance;
- Evaluate the existing compliance, reporting, and analysis tracking system and other compliance tools to support risk-based activities that meet the needs of the CMEP; and
- Provide guidance and outreach to registered entities, including the review of Implementation Guidance for endorsement.

Appendix A

Appendix A includes additional details on some activities described in the 2016 CMEP Annual Report. This appendix will cover RE IRA completion, areas of concern and recommendations highlights, coordinated oversight for MRREs, compliance guidance, and enforcement metrics highlights.

Compliance Monitoring

IRA Completion

This section highlights each RE's plan for completion of initial IRAs for all registered entities.[26] Completion plans may be modified due to emerging risks, changes in resources, or other relevant considerations. The plans consider initial IRAs only and not activity regarding revised or refreshed IRAs. In addition, the ERO Enterprise expects Affected Regional Entities (AREs) to provide appropriate inputs to Lead Regional Entities (LREs) for those MRREs in the Coordinated Oversight Program to create a comprehensive IRA. Therefore, the numbers below only capture an IRA completed in the LRE, but the IRA incorporates risks from all AREs.

FRCC

FRCC completed IRAs for all entities registered as BAs and TOPs in its region. There are no RCs registered in FRCC.[27] FRCC completed initial IRAs for 41 registered entities by the end of 2016 and has six registered entities remaining.

MRO

MRO planned to complete IRAs for all registered entities within its footprint by the end of 2016. MRO has completed IRAs for entities registered as RCs, BAs, and TOPs and has only eight remaining registered entities to complete. MRO is ARE for the remaining registered entities.

NPCC

NPCC completed IRAs for 201 out of 213 registered entities within its footprint by the end of 2016. Of the remaining IRAs, NPCC is the ARE for eight of the registered entities, and three are Canadian registered entities for which IRAs are not needed.

RF

RF has completed 83 IRAs out of the 231 registered entities under its footprint. RF completed IRAs for 18 entities registered as RCs, BAs, and TOPs within its footprint by the end of 2016, with an additional four IRAs pending approval under the Coordinated Oversight Program for RCs, BAs, or TOPs. RF projects completion of initial IRAs for its remaining 148 registered entities by the end of 2019. RF will prioritize the remaining entities by those on the compliance monitoring schedule each year, then by risk associated with a particular registered entity or grouping of functions.

SERC

SERC plans to complete IRAs for all of its 196 registered entities by the end of 2017. By the end of 2016, SERC completed IRAs for 31 RCs, BAs, and TOPs registered within its footprint, as well as the IRAs for entities originally scheduled on its 2016 through 2019 compliance monitoring schedules. SERC plans to complete the remaining IRAs for registered entities by the end of 2017. SERC's plan for completion considers the review of its annual RE risk assessment, then reviewing or updating completed IRAs based on newly identified risks.

SPP RE

SPP RE completed IRAs for 96 registered entities within its footprint by the end of 2016.

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[26] The registered entities considered were the 1,436 registered entities as of June 1, 2016.

[27] FRCC is the RC for registered entities within its regional footprint and does not have other entities registered for that function. FRCC is registered as an RC in SERC.

Texas RE

Texas RE plans to complete IRAs for all registered entities by the end of 2017. By the end of 2016, Texas RE completed IRAs for over 160 registered entities, including all RCs, BAs, and TOPs in its footprint. In addition to the RC, BA, and TOP registrations, Texas RE has completed initial IRAs for all Transmission Planners, the Resource Planner, and the Transmission Service Provider in its footprint. Over 70 percent of initial IRAs for Generator Owners, Generator Operators, and Distribution Providers have been completed. Over 90 percent of initial IRAs for Transmission Owners have been completed. Texas RE plans to complete IRAs for the remaining registered entities by the end of 2017. Texas RE prioritizes IRAs based on registration and its RE risk assessment. For example, during 2016, Texas RE focused IRA activities on its TOPs and higher-risk entities.

WECC

WECC plans to complete initial IRA activities for all 355 registered entities by the end of 2018. By the end of 2016, WECC completed IRAs for 90 registered entities within its footprint, including those completed in 2014 and 2015. WECC completed most of the IRAs for entities registered as RCs, BAs, and TOPs. By the end of 2016, WECC completed 51 IRAs for entities registered as RCs, BAs, and TOPs. WECC expects to complete the remaining BA and TOP IRAs by the end of Q2 2017. WECC will revise its plan to account for any new registrations that occurred after December 1, 2016.

Areas of Concern and Recommendations Highlights

This section includes highlights of areas of concern and recommendations from RE audit reports.

In the non-CIP reports NERC reviewed, REs identified the greatest number of areas of concern and recommendations regarding the PRC-005 and FAC-008-3 Reliability Standards:

- PRC-005: REs often noted a need for improved documentation and retention of test records that accurately outline the maintenance activities to be completed to help ensure registered entities do not miss maintenance or testing activities.
- PRC-005: REs noted a need for alignment of the registered entity's documented Protection System Maintenance and Testing Program with the maintenance tables in PRC-005 to help ensure registered entities do not test outside of allowable intervals.
- PRC-005: REs recommended documentation enhancements to improve completeness and consistency, such as ensuring all business units use a standardized form to document maintenance activities and capture information in a consistent and reliable fashion. Additionally the recommendations for PRC-005 included improvements to document tracking and verification or automation of such processes for completed maintenance activities.
- FAC-008: REs observed that registered entities had errors between the equipment identified in the Facility Rating documentation and actual equipment present in the field despite having the correct overall Facility Ratings or following the Facility Ratings methods correctly. While in these instances the errors did not affect the most limiting element, had equipment been replaced that resulted in a new most limiting element, it may not have been identified. This may cause the entity to operate outside of the Facility Rating, which can result in damage to or loss of useful life for equipment.
- FAC-008: RE recommendations indicated a need for improved methodology documentation to provide additional clarity on rating practices and for registered entities to review existing Facility Rating processes to ensure the methods clearly address ownership responsibilities of assets.

CIP audits during 2016 did not have an extensive focus on the requirements from Version 3 of the CIP Reliability Standards, but instead were based on the Version 5 Standards that became effective on July 1, 2016. In the first half of the year, Compliance Audits were an opportunity to evaluate a registered entity's preparedness for

implementation of Version 5; after the July 1 enforcement date, findings from a Compliance Audit could result in possible violations.

There were many areas of concern and recommendations regarding Version 5 issues that the RE auditors cited during the year. The following are some examples:

- Documentation needs to reflect terms from the Version 5 Standards (e.g., “Critical Cyber Asset” would no longer be accurate).
- Using consistent terms: for example, timeframes can be more clearly stated as "calendar months" or "calendar days" rather than “months,” “days,” or even “annual.”
- Verify that documents reflect actual procedures, including procedures that are performed occasionally (e.g., lost keycards).
- CIP-002-5.1: The BES Cyber System Assessment process should clearly indicate that all systems and facilities critical to system restoration are included (i.e., blackstart resources, Cranking Paths and initial switching requirements, and Special Protection Systems).
- CIP-002-5.1: Electronic Access Control or Monitoring Systems devices located outside the Physical Security Perimeter need to be included as Cyber Assets in the list provided to auditors.
- CIP-004-6: If a Social Security Number check is not possible, a secondary process for verifying identity, such as comparing identification documentation, could be used.
- CIP-005-5: Firewall configuration procedures should include the periodic review of firewall rule sets that will verify that all documented reasons or justifications are accounted for, and that the justifications remain valid and current.
- CIP-005-5: Firewall rules must be specific to allow only those ports that are truly needed, with adequate descriptions available to explain the business need or justification for each rule.
- CIP-006-6: Where physical keys are used as an additional security measure, consider a restricted key system to limit and control the number of keys held by individuals.
- CIP-007-6: Mitigation plans for patches that have not yet been installed must address the specific vulnerabilities the patch is designed to address, such as modifying system settings or temporarily disabling an affected service.
- CIP-009-6: Include roles and responsibilities in the Master Recovery plan or Operational Level Agreements or both.

Coordinated Oversight Program for MRREs

Table A.1 below provides the number of registered entities in the Coordinated Oversight Program for MRREs per RE.

Table A.1: Registered Entities in Coordinated Oversight Program

Lead Regional Entity	Number of Registered Entities in Coordinated Oversight Program
MRO	25
NPCC	2
RF	70

Table A.1: Registered Entities in Coordinated Oversight Program	
SERC	25
SPP RE	22
Texas RE	57
WECC	12
Total	**213**

Figure A.1 below provides the percentage of the 213 registered entities in the Coordinated Oversight Program for which each RE is the LRE.

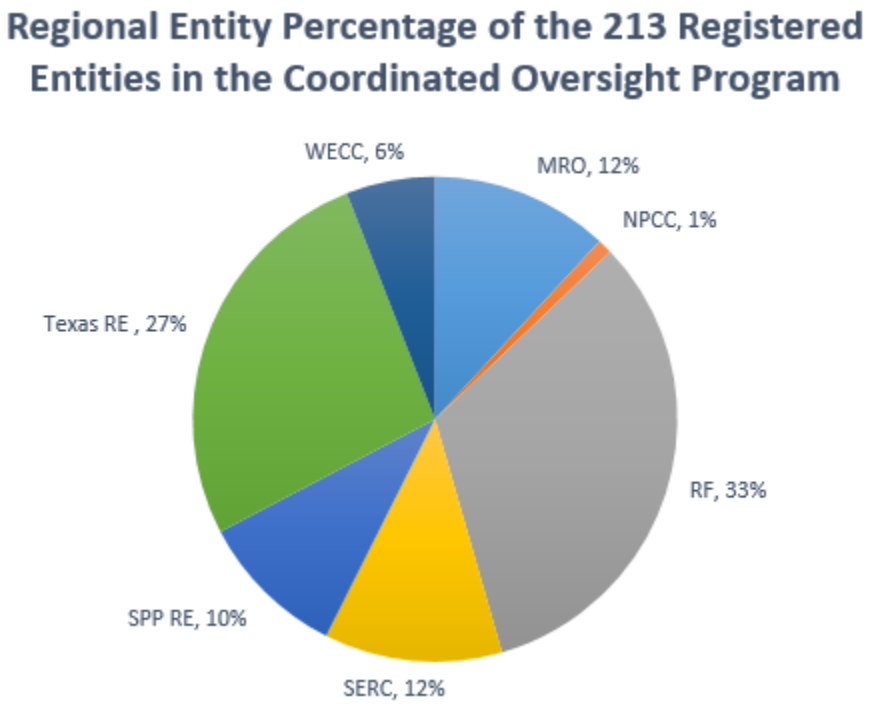


Figure A.1: RE Percentage of the 213 Registered Entities in the Coordinated Oversight Program

Compliance Guidance

Table A.2 provides a list of the documents submitted for ERO Enterprise endorsement as Implementation Guidance.

Table A.2: Implementation Guidance Submittals		
Document Title	**Submitter**	**Status**
CIP-002-5.1: Bulk Electric System (BES) Cyber Assets Lesson Learned	Compliance Guidance Policy Team	Endorsed

Table A.2: Implementation Guidance Submittals		
CIP-002-5.1: Generation Segmentation Lesson Learned	Compliance Guidance Policy Team	Endorsed
CIP-002-5.1: Far-end Relay Lesson Learned	Compliance Guidance Policy Team	Endorsed
CIP Version 5 Frequently Asked Questions	Compliance Guidance Policy Team	Endorsed
CIP-002-5.1: Communications and Networking Cyber Assets	Compliance Guidance Policy Team	Endorsed
External Routable Connectivity Lesson Learned	Compliance Guidance Policy Team	Endorsed
CIP-002-5.1: Generation Interconnection Lesson Learned	Compliance Guidance Policy Team	Endorsed
Mixed Trust EACMS Authentication Lesson Learned	Compliance Guidance Policy Team	Endorsed
CIP-002-5.1: Grouping of BES Cyber Systems Lesson Learned	Compliance Guidance Policy Team	Endorsed
Vendor Access Management Lesson Learned	Compliance Guidance Policy Team	Endorsed
TPL-007-1: Transformer Thermal Impact Assessment	CCC Compliance Guidance Task Force	Endorsed
FAC-003-3 Standard Application Guide	MRO Standards Committee	Endorsed
CIP-002-5.1 Standard Application Guide	MRO Standards Committee	Endorsed
CIP-014-1 Requirement R1 Guideline	Compliance Guidance Policy Team	Endorsed for Inactive Reliability Standard
TOP-001-3: System Operating Limit Definition and Exceedance Clarification	CCC Compliance Guidance Task Force	Pending
FAC-008-3 Standard Application Guide	MRO Standards Committee	Pending
PER-005 Standard Application Guide	MRO Standards Committee	Declined Endorsement

Table A.2: Implementation Guidance Submittals		
Draft Reliability Standard Compliance Guidance for PER-005-2	CCC Compliance Guidance Task Force	Declined Endorsement
PRC-005-6 Standard Application Guide	MRO Standards Committee	Pending
PER-005 System Personnel Training Reference Document	MRO Standards Committee	Declined Endorsement
PRC-023: Determination and Application of Practical Relaying Loadability Ratings	Compliance Guidance Policy Team	Declined Endorsement
TPL-001-4 Standard Application Guide	MRO Standards Committee	Pending
Screening Criterion for Thermal Impact Assessment White Paper	CCC Compliance Guidance Task Force	Declined Endorsement
PRC-004-5(i) Standard Application Guide	MRO Standards Committee	Pending
TPL-001-4 Modeling Reference Document	North American Transmission Forum (NATF)	Pending
Transient Voltage Criteria Reference Document	NATF	Pending

Enforcement Metrics Highlights

Enforcement's 2016 goal to have more than 70 percent of issues of noncompliance be self-identified was met in 2016. The self-assessment and identification of noncompliance metric is used to compare the number of noncompliance discovered internally versus externally to promote self-assessment and internal identification of noncompliance. For self-identification of noncompliance in 2016, the threshold is 70 percent and the target is 75 percent. Enforcement met the threshold and target for this goal, closing the year at an 87 percent self-identification rate.

The ERO Enterprise has continued to promote timely mitigation of noncompliance with over 99 percent of noncompliance discovered before 2013 having completed Mitigation Plans or mitigating activities, reducing risk to the BPS. The ERO Enterprise successfully met its mitigation targets for noncompliance discovered in 2014 and 2015 by ensuring at least 90 percent of noncompliance discovered in 2014 and 75 percent of noncompliance discovered in 2015 have been mitigated. Significantly, these target goals were both exceeded, with almost 99 percent of 2014 noncompliance and 90 percent of 2015 noncompliance being mitigated. Enforcement also met its goal of having 100 percent of Notices of Penalty approved by FERC.

Mitigation Completion

- Ninety-nine percent of violations discovered before 2015 have completed Mitigation Plans or mitigating activities. There are 66 violations discovered in 2014 and earlier with ongoing Mitigation Plans or

mitigating activities with estimated completion dates in 2017. This represents about 0.7 percent of the total violations discovered in 2014 and earlier.

Caseload

- In the second half of 2016, there has been a substantial increase in the number of violations discovered. This is likely due to new Reliability Standards that became enforceable on July 1, 2016. The increase is largely made up of CIP Version 5, MOD-025-2, and PRC-019-2 noncompliance. Of the 1,181 noncompliance discovered in 2016, there were 487 violations of requirements that were newly enforceable in July 2016. Noncompliance in the second half of the year was double the number of violations reported in the first half. The increase has shown no signs of abatement and may continue in the first half of 2017.
- The ongoing use of CEs throughout the ERO Enterprise, combined with the influx of noncompliance discovered in the second half of 2016, has contributed to the average age of noncompliance in Q4 2016 dropping to less than 8 months. The average age has not been this low since 2013. Typically, noncompliance has a relatively consistent average age in the ERO Enterprise inventory of approximately 10 to 11 months.
- Eighty-one percent of the ERO Enterprise noncompliance inventory is less than one year old, and only seven percent is over two years old.
- FRCC, NPCC, RF, and Texas RE have completed processing of all violations with discovery dates before 2014.
- There are 49 pre-2014 violations remaining to be processed across MRO, SERC, SPP RE, and WECC. Seventeen of these violations are from federal entities.
- At the beginning of 2016, there were 368 federal entity violations that were on hold pending the result of a case before the DC Circuit Court of Appeals. Federal violations have been prioritized in 2016, and there are only 17 still needing to be processed, less than five percent of the initial total.

Self-Assessment and Self-Identification of Noncompliance

- Registered entities self-identified, on average, approximately 87 percent of new instances of noncompliance in 2016.[28]

Vegetation-Related Transmission Outages

The ERO Enterprise monitors all categories of vegetation-related outages that could pose a risk to the reliability of the transmission system and, although the overall number of vegetation contacts remains small, there has been an increase in the number of contacts. The ERO Enterprise will continue to monitor these matters and enforce any noncompliance appropriately. Data regarding vegetation-related outages in 2015 is available in the 2015 Annual Vegetation-Related Transmission Outage Report.

In Q2 2016, the REs reported ten vegetation-related outages to NERC, all of which were Category 3[29] contacts, which is an increase of three from the previously reported quarter. All but one of the outages occurred on 230 kV lines. In nine of the outages, trees fell into transmission lines during severe weather conditions. The remaining

[28] Self-identification includes noncompliance discovered through Self-Reports, Self-Certifications, and Periodic Data Reporting. The percentage does not include self-identification before a Compliance Audit or Spot Check.
[29] Category 3 — Fall-ins: Sustained Outages caused by vegetation falling into applicable lines from outside the ROW.

outage involved a dead tree located outside of the right-of-way (ROW) falling into the line. There has been no Category 1A[30] or 1B[31] grow-in outages in 2016. For more information, see Figure A.12.

Enforcement Metrics – Additional Information

Mitigation Completion Status

The mitigation of the oldest violations (dating from 2013 and earlier) is over 99 percent complete. NERC enforcement discusses the progress on the outstanding noncompliance with the REs on a semi-monthly basis, continues to monitor these violations, and makes them a priority for mitigation completion. Additionally, registered entities continue to mitigate noncompliance discovered in 2014 and 2015 at a satisfactory rate. NERC enforcement has accomplished both targets in 2016.

Table A.3: Mitigation Completion Status

Timeframe	Required Mitigation	Ongoing	Progress Toward Goal	Threshold	Target	Progress Since Last Quarter
2013 and Older	8544	56	99.34%	100%	100%	0.14%
2014	964	10	98.96%	85%	90%	1.86%
2015	728	66	90.93%	70%	75%	8.49%

Age of Noncompliance in ERO Inventory

This graph shows the age of noncompliance from all non-federal entities and only federal entities beyond the November 2014 cutoff.[32] There has been almost no change in the distribution of the percentages from the prior quarter.

[30] Category 1A — Grow-ins: Sustained Outages caused by vegetation growing into applicable lines, that are identified as an element of an IROL or Major WECC Transfer Path, by vegetation inside or outside of the ROW.

[31] Category 1B — Grow-ins: Sustained Outages caused by vegetation growing into applicable lines, but are not identified as an element of an IROL or Major WECC Transfer Path, by vegetation inside or outside of the ROW.

[32] The U.S. Court of Appeals for the District of Columbia Circuit ruled 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.

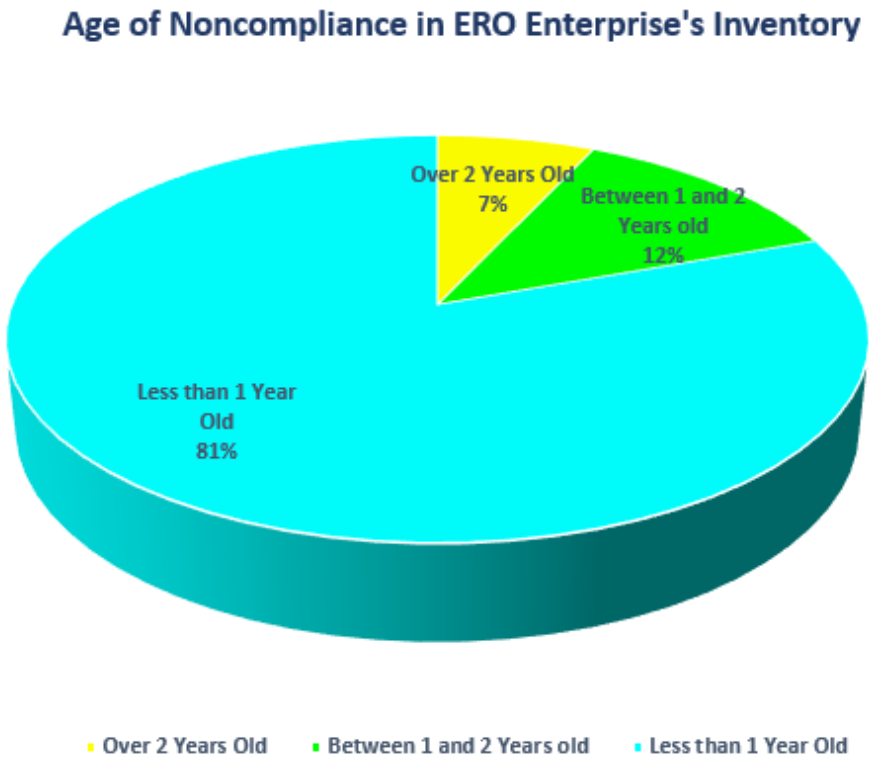


Figure A.2: Age of Noncompliance in the ERO Enterprise Inventory

Average Age of Noncompliance in the ERO Enterprise Inventory

As mentioned previously, the average age of noncompliance continues to lower for two reasons. The first is the increase in discovered and submitted violations. Newly enforceable Reliability Standards that have gone into effect as of July 1, 2016, have resulted in a substantial increase in noncompliance discovered and submitted to NERC as registered entities attempt to comply. The second reason is that the average age of noncompliance is also being affected by the increased usage of CEs as a disposition method. CEs represent approximately half of all noncompliance processed in 2016, and their processing periods tend to be shorter.

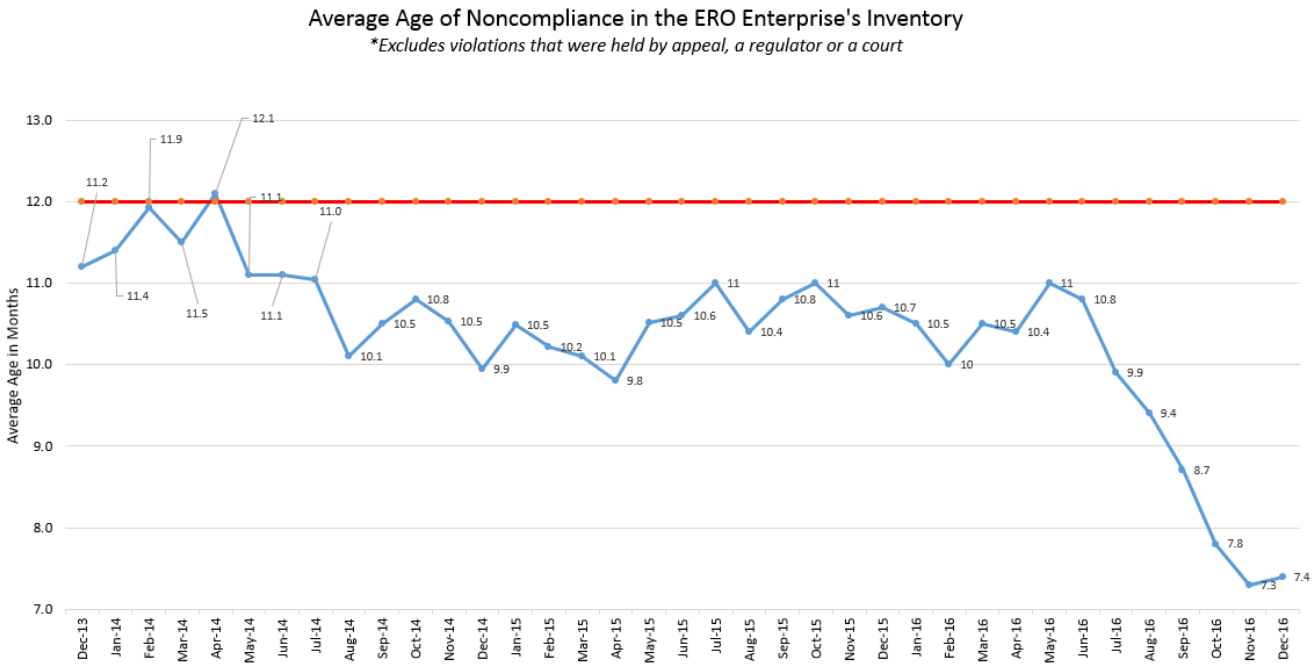


Figure A.3: Average Age of Noncompliance in the ERO Enterprise Inventory

Number of New Noncompliance Discovered in 2016

The number of new noncompliance continued to increase in Q4 2016. This increase in new noncompliance is due to the July 1, 2016, enforceable date for several new Reliability Standards. Approximately 41 percent of the new violations discovered in 2016 were from these Reliability Standards. There were 238 new noncompliance that fell under CIP Version 5. There were 103 newly reported noncompliance with MOD-025-2, 74 of PRC-024-2, and 61 of PRC-019-2—each of these Reliability Standards also went into effect July 1, 2016.

Table A.4: Noncompliance Discovered in 2016

Discovery Month	FRCC	MRO	NPCC	RF	SERC	SPP RE	Texas RE	WECC	Total
January		1	3	16	7	4	9	8	**48**
February		5	4	19	29	2	7	10	**76**
March		3	7	11	5	4	4	12	**46**
April	1	1	8	14	21	8	4	9	**66**
May	1	1	5	15	2	9	40	9	**82**
June		4	3	10	7	6	11	15	**56**
July	3	8	4	30	17	18	7	20	**107**
August	4	4	2	28	38	9	8	20	**113**
September	4	6	4	12	34	94	12	29	**195**
October	2	3	12	74	25	5	9	43	**173**
November	3		6	19	23	2	29	30	**112**
December			1	22	34	1	5	51	**114**
Total	**18**	**36**	**59**	**270**	**242**	**162**	**145**	**256**	**1188**

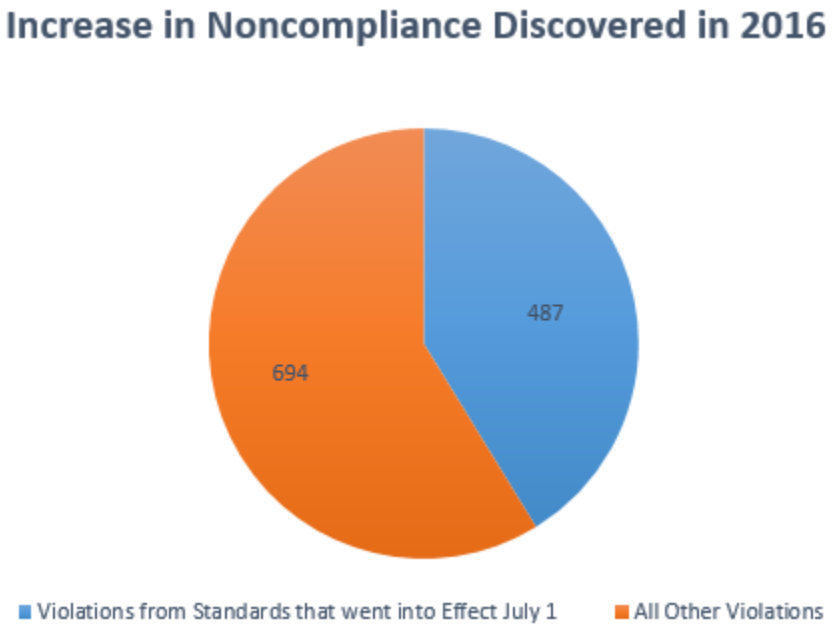


Figure A.4: Percentage of 2016 Newly Discovered Noncompliance with a July 1, 2016, Enforceable Date

Number of Instances of Noncompliance Discovered Internally Versus Externally

The percentage of internally discovered noncompliance has increased over the last several years. Q4 2016 has returned to the long-term average of internally discovered noncompliance over externally discovered. Figure A.5 breaks down internal and external discovery method by year—Figure A.6 over the last six quarters.

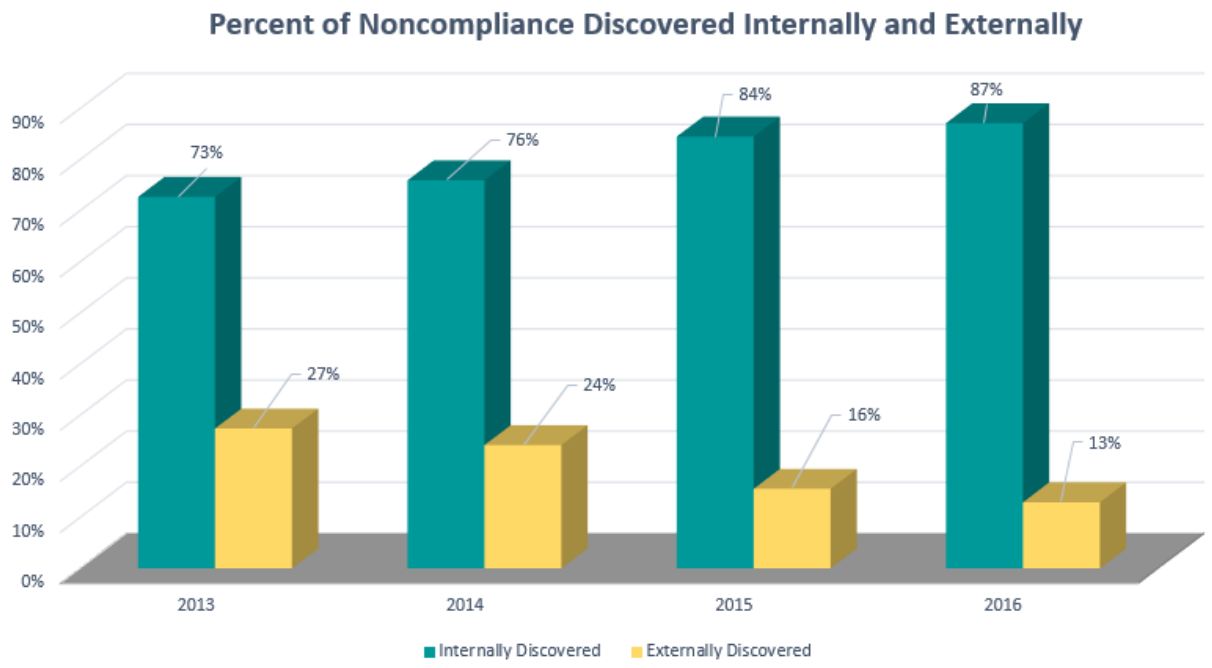


Figure A.5: Percentage of Noncompliance Discovered Internally and Externally by Year

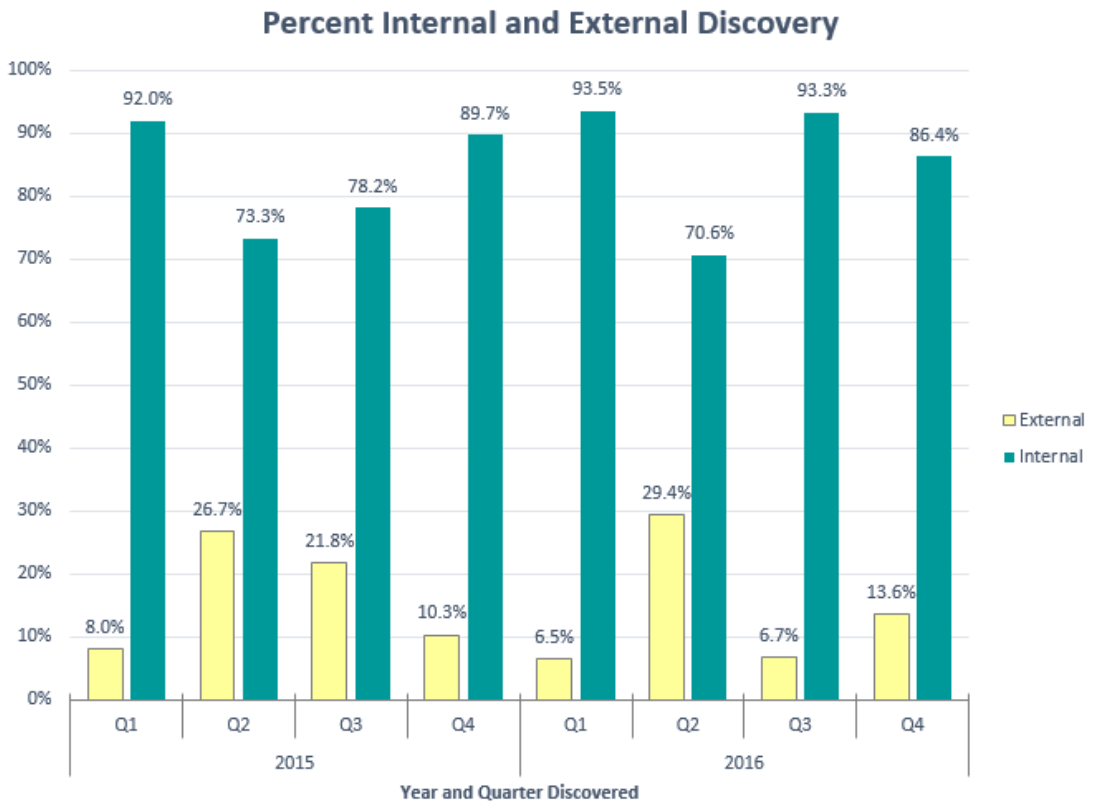


Figure A.6: Percentage of Noncompliance Discovered Internally and Externally by Quarter

Contribution of the Self-Logging Program to Posted CEs

In Q4 2016, the percentage of self-logged CEs continues to hold steady at 13 percent, consistent with Q3 2016.

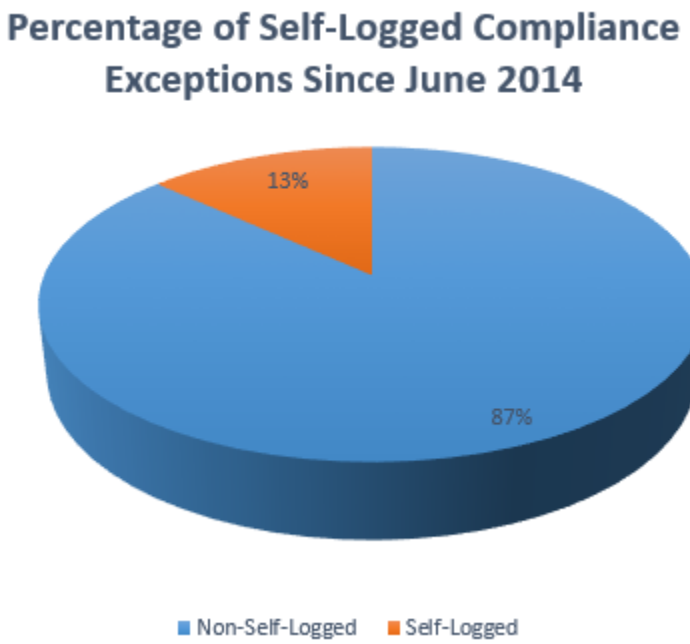


Figure A.7: Percentage of Self-Logged CEs since June 2014

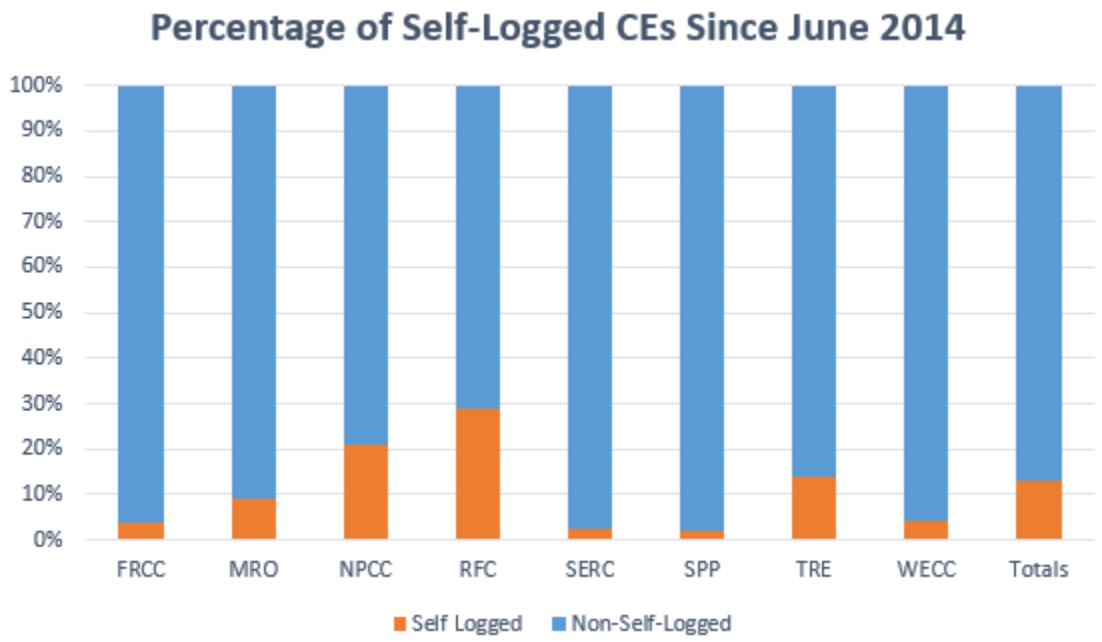


Figure A.8: Percentage of Self-Logged CEs since June 2014 by RE

Use of CEs for Minimal Risk Issues

The ERO Enterprise continues to use CEs successfully to process a majority of minimal risk noncompliance efficiently. In Q4 2016, the REs used the program to provide 62 percent of their minimal risk noncompliance to NERC as CEs.

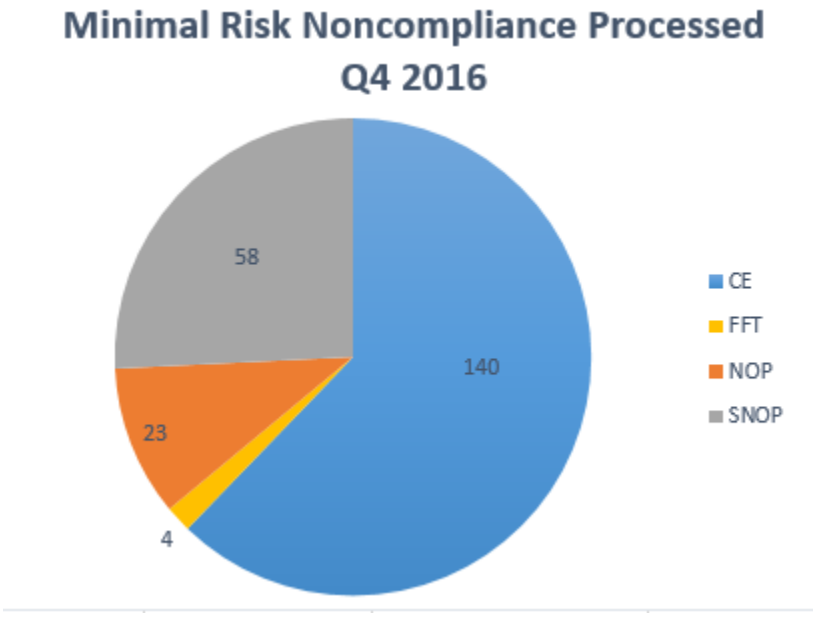


Figure A.9: Minimal Risk Noncompliance Processed in Q4 2016

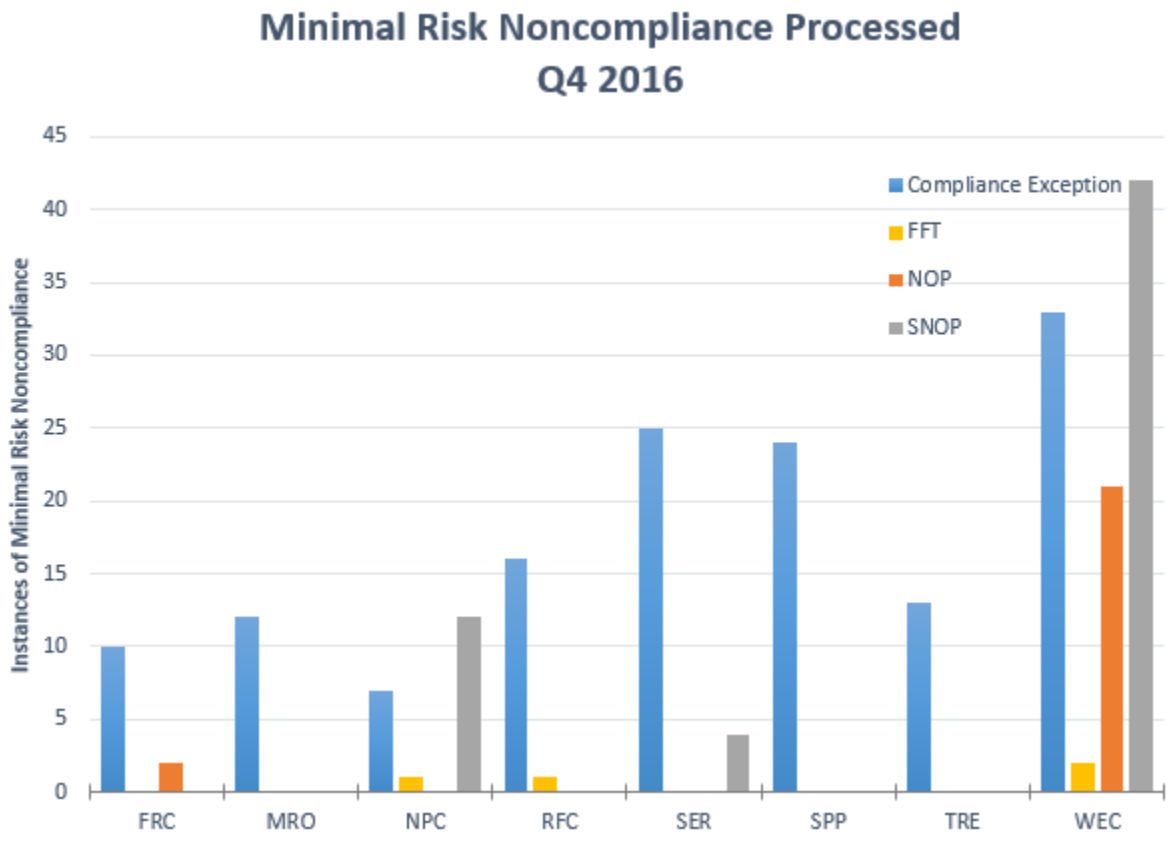


Figure A.10: Minimal Risk Noncompliance Processed in Q4 2016 by Region

Most Violated Reliability Standards Discovered in 2016

In addition to having the highest frequency of noncompliance in 2016, CIP-004, CIP-005, CIP-006, and CIP-007 are also among the most violated historically. PRC-005, FAC-008, and VAR-002 are also commonly violated. Several new Reliability Standards have joined the list in Q4 2016, MOD-025, PRC-024, and PRC-019, as a result of newly enforceable Reliability Standards in 2016.

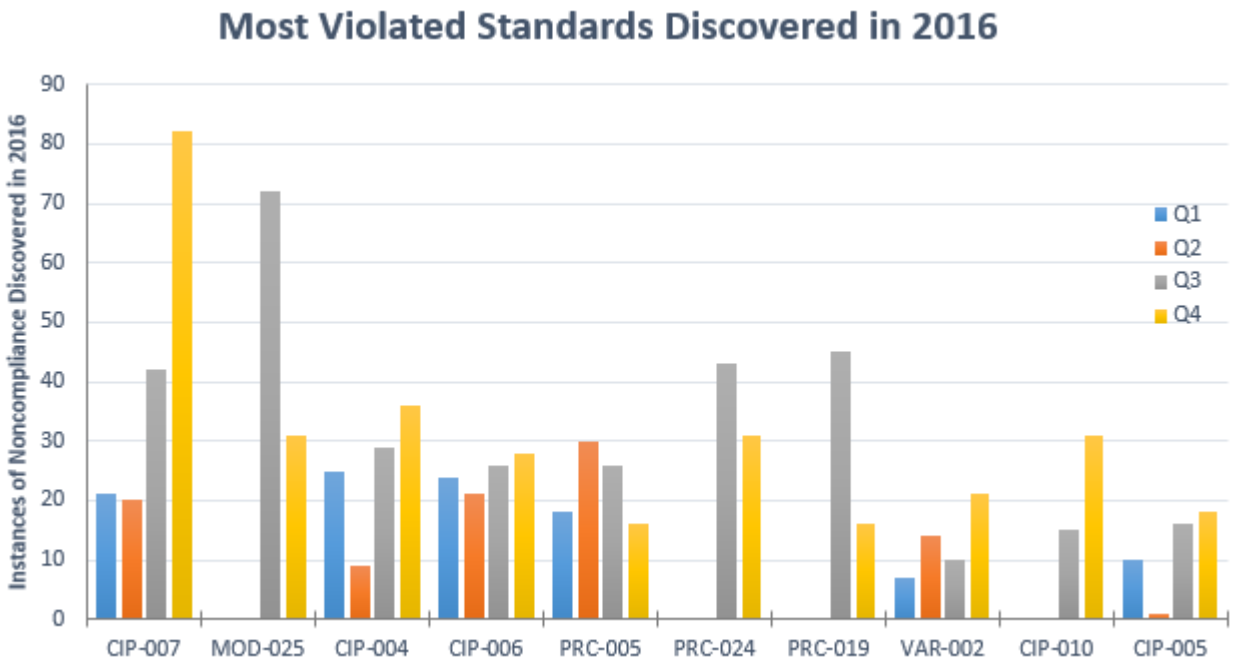


Figure A.11: Most Violated Reliability Standards Discovered in 2016 by Quarter

Vegetation Management

The number of outages caused by vegetation rose in 2016. In the first three quarters of 2016, there were 26 outages due to vegetation contacts. Though the number of outages was higher than 2015 (23), there were no Category 1 or 1B outages in 2016. All of the vegetation contacts in 2016 were Category 3 outages.

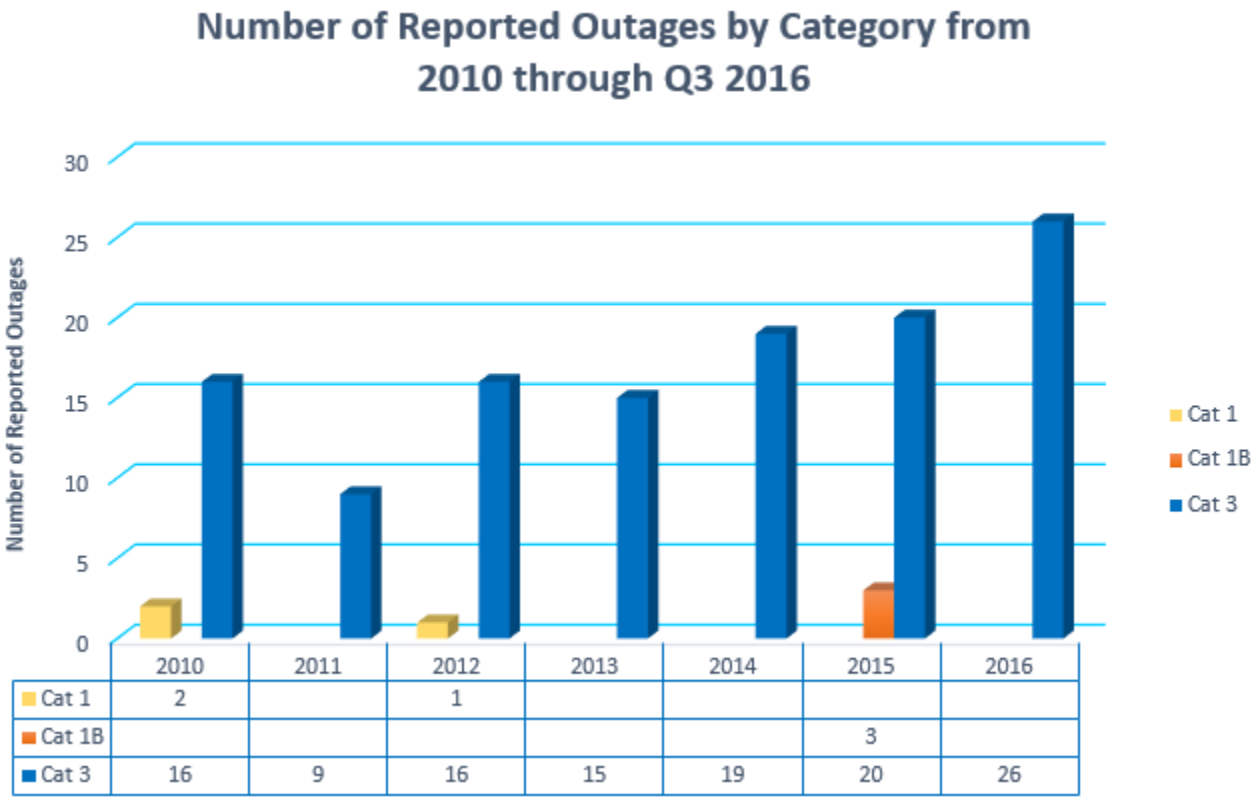


Figure A.12: Vegetation-Related Outages by Category from 2010 through Q3 2016

Serious Risk Violations

Since 2010, NERC has gathered data on and regularly monitored violations posing a serious risk to the reliability of the BPS. Noncompliance posing a serious or substantial risk to the BPS is not considered a Confirmed Violation until filed with FERC. The risk determination is not final until review and approval by NERC. Therefore, Figure A.13 reflects violations that have been NERC-approved and filed with FERC. As shown in Figure A.13, serious risk violations have declined over time and continue to account for a small portion of all instances of noncompliance reviewed by the ERO Enterprise.

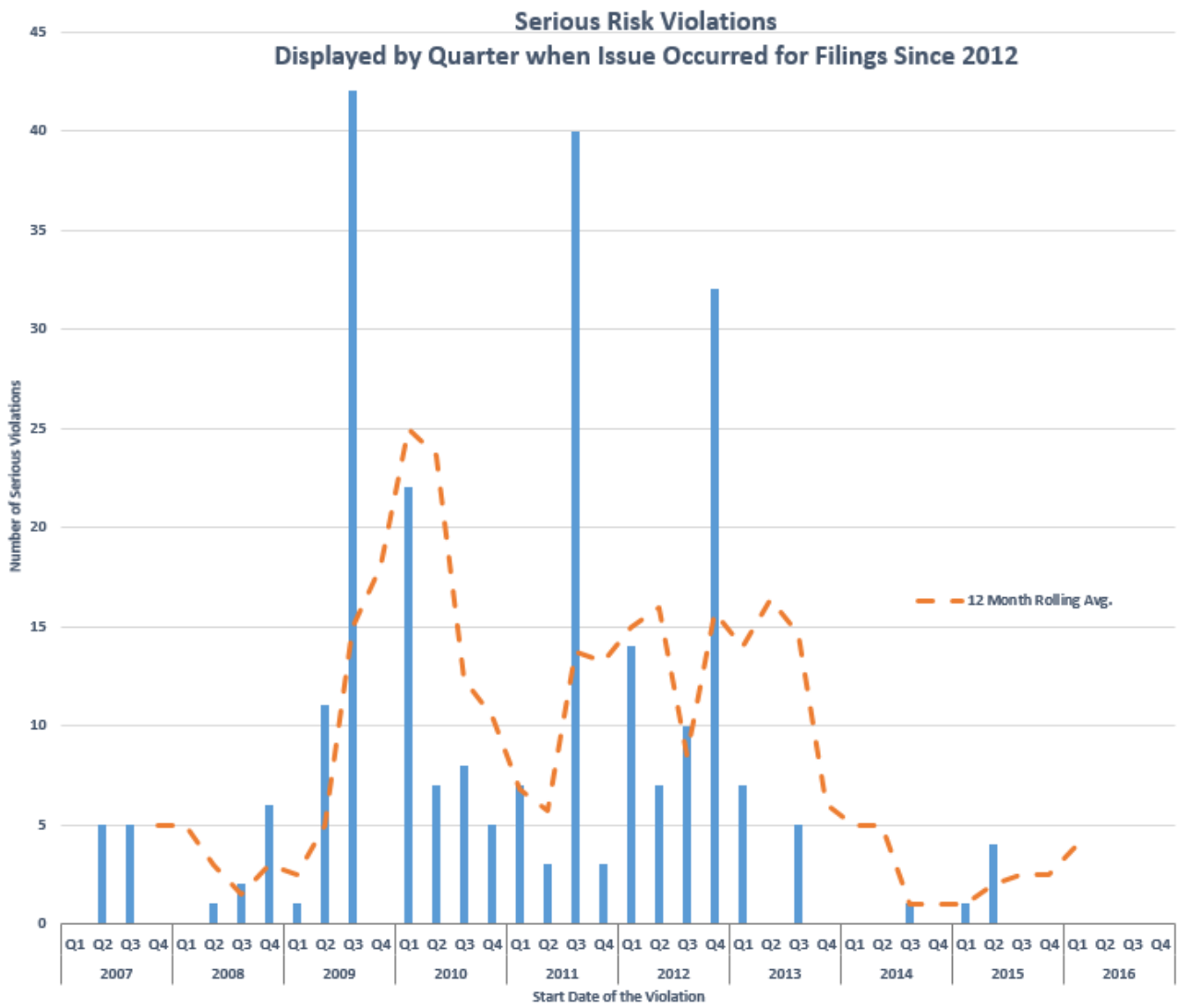


Figure A.13: Serious Risk Violations by Start Date

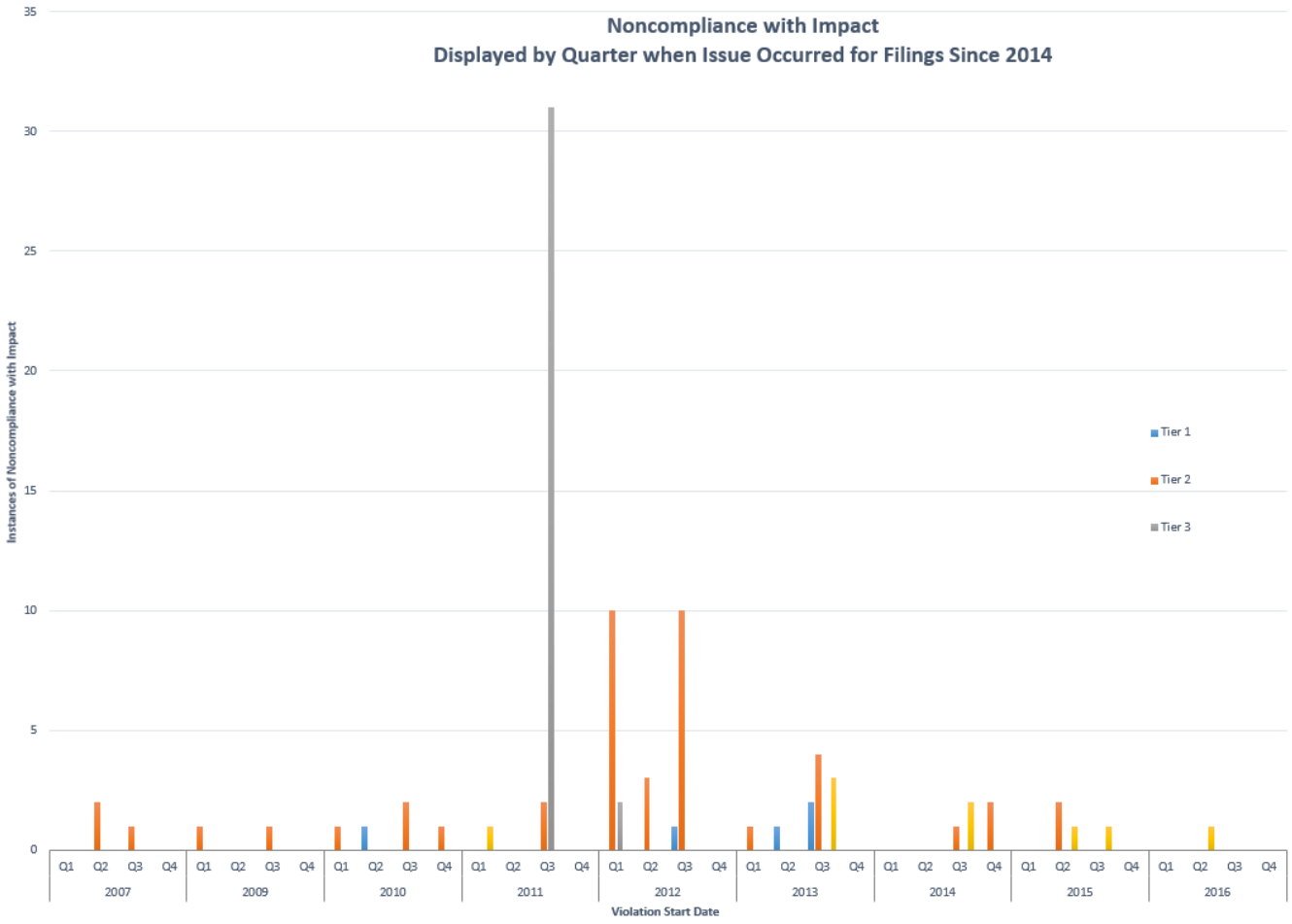


Figure A.14: Noncompliance Posing an Impact to the BES by Quarter

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Compliance Monitoring and Enforcement Program Annual Report

Sonia Mendonça, Vice President of Enforcement, Deputy General Counsel
Andrea Koch, Senior Director of Reliability Assurance

Board of Trustees Compliance Committee

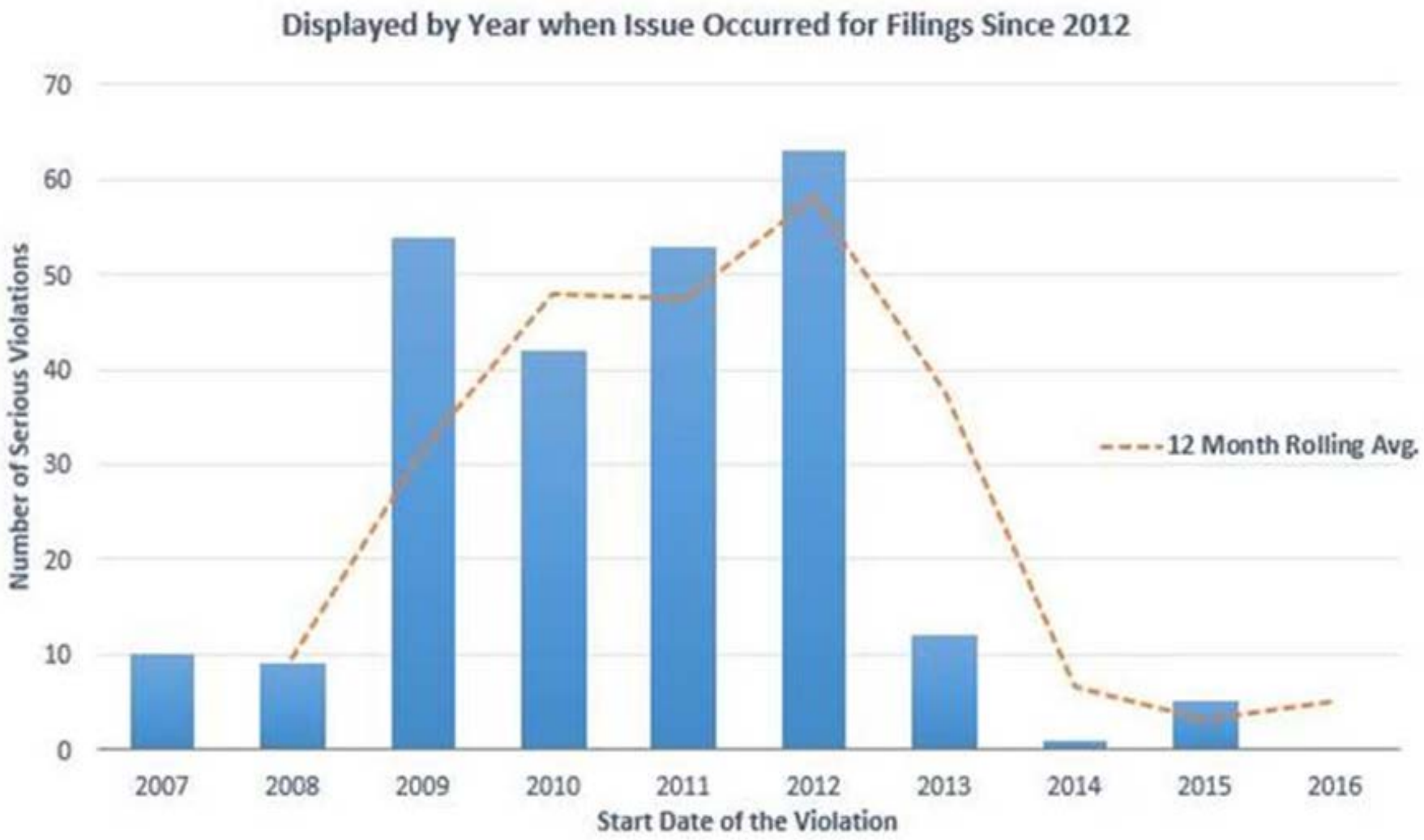
February 8, 2017

RELIABILITY | ACCOUNTABILITY

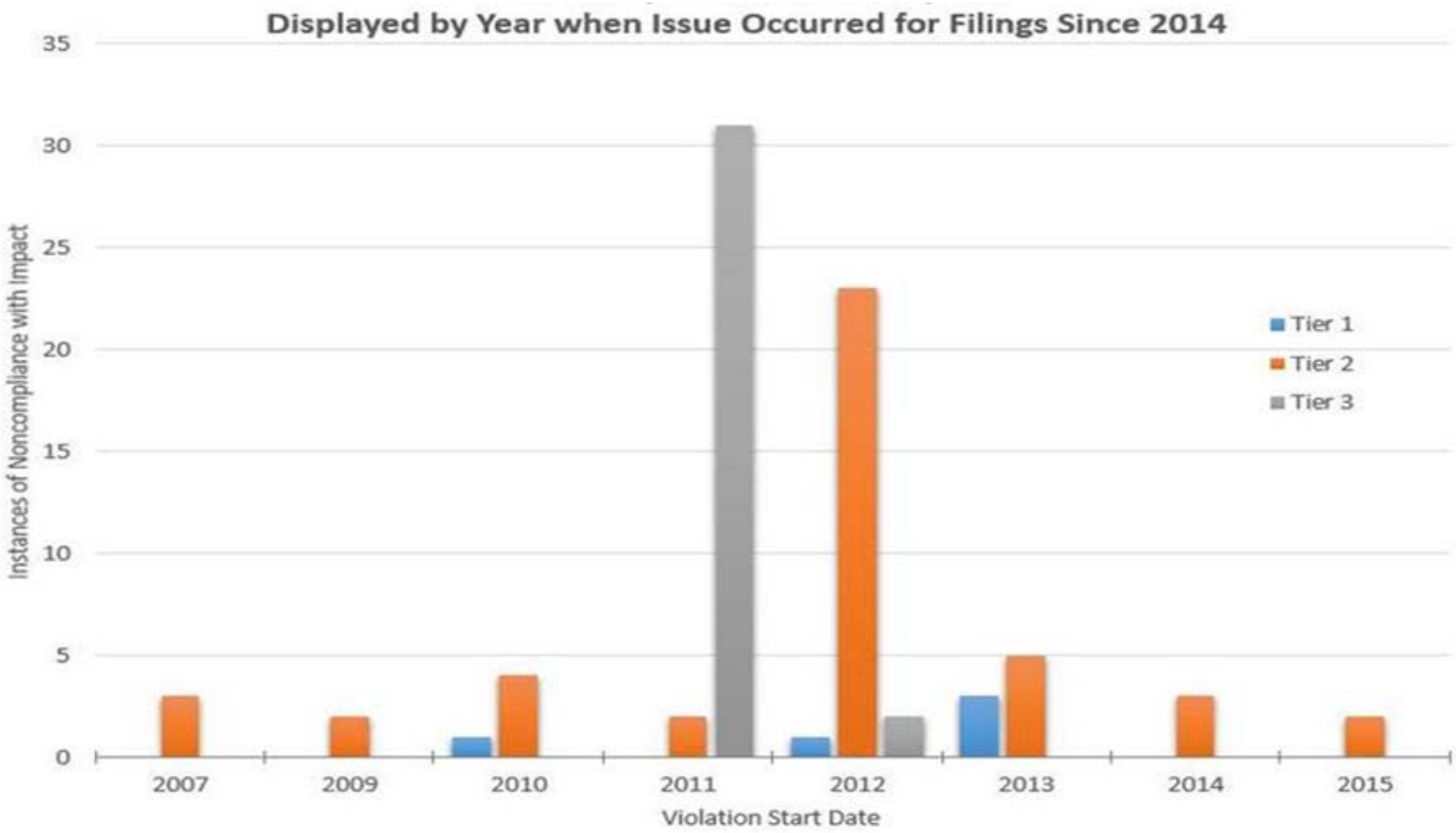
2016 Enforcement Highlights

- Higher-risk cases continue to be a small percentage of overall caseload. Higher-risk cases included violations indicating the following:
  - Lack of commitment to compliance with CIP standards,
  - Vegetation contacts,
  - Repeat conduct,
  - Ineffective change management, including employee turnover,
  - Lack of preparedness for interconnection of new facilities and the enforceability of new requirements, and
  - Inadequate training of personnel on tools and processes.
- 2016 reviews of Self-Logging and Compliance Exception (CE) programs indicate sustained progress and opportunities for improvement.

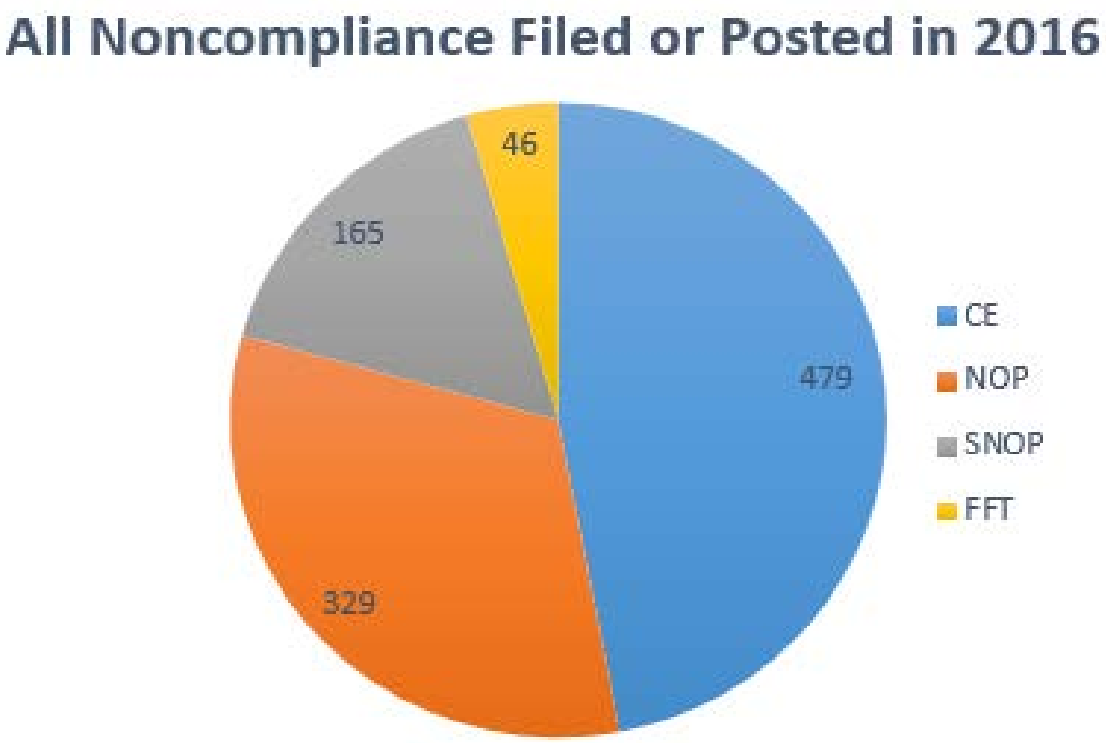
Serious Risk Violations



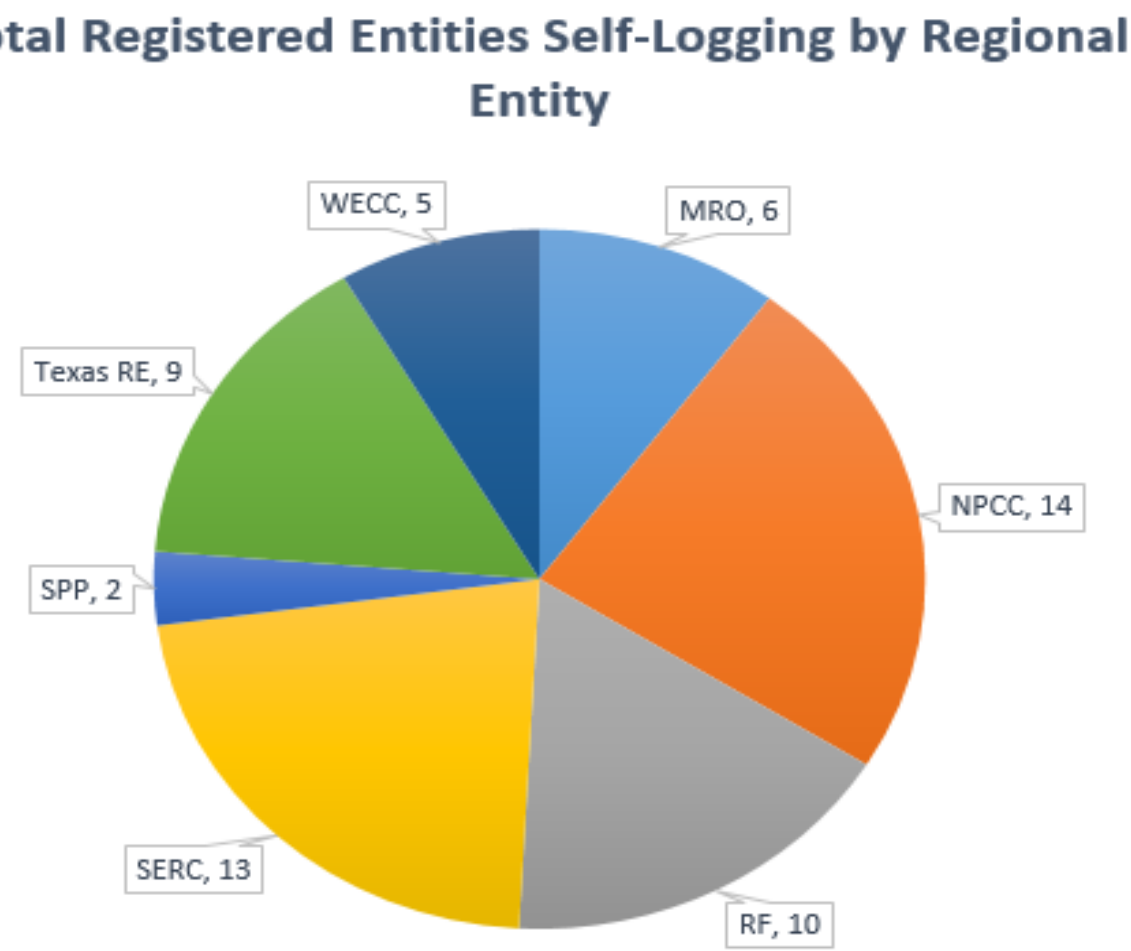
Noncompliance with Impact



Compliance Exceptions in 2016



Self-Logging in 2016



Other Metrics

- Increase in number of noncompliance discovered, compared to 2015; likely due to new Reliability Standards (or new versions of Reliability Standards) becoming effective on July 1, 2016.
- 87 percent of noncompliance discovered in 2016 was self-identified by registered entities.
- 99 percent of noncompliance discovered before 2015 have completed mitigation.
- 81 percent of the noncompliance inventory is less than one year old.

IRA Processing

- Inherent Risk Assessment (IRA) Completion:
  - IRAs are complete for all Reliability Coordinators.
  - IRAs for 15 entities registered as Balancing Authorities and Transmission Operators are in progress.
  - Regional Entities (REs) completed IRAs for 62% of all registered entities.
- IRA results informed 2016 compliance monitoring activities.

ERO Enterprise Guidance Enhancements

- Guide for Compliance Monitoring
  - Developed common risk factor and assessment criteria
  - Development of Compliance Oversight Plans (COPs)
- Guide for Internal Controls
  - Streamlined testing approach for internal controls
  - Clarified how Electric Reliability Organization (ERO) Enterprise considers internal controls during Internal Controls Evaluation (ICE) and other CMEP activities

Compliance Guidance

- Implementation Guidance
  - 14 Endorsed, 5 Rejected, 7 Open
- Compliance Monitoring and Enforcement Program (CMEP) Practice Guides
  - Deference to Implementation Guidance

CIP V5 Transition

- Effectiveness of outreach during transition
  - Implementation Study
  - Lessons learned and frequently asked questions
  - Small group advisory session
- Fewer noncompliance during first six months
- High percentage of noncompliance self-identified

Questions and Answers