

## Agenda

# Compliance Committee

August 9, 2017 | 11:15 a.m. – 12:30 p.m. Eastern

(Please note the Schedule may be adjusted real-time should meetings conclude early and/or extend past their scheduled end time.)

The Westin Ottawa  
11 Colonel By Drive  
Ottawa, ON K1N 9H4  
Canada

Room Name: Confederation II/III – 4th Floor

### Introduction and Chair's Remarks

### NERC Antitrust Compliance Guidelines

### Agenda Items

1. **Minutes\* – Approve**
  - a. Meeting of May 10, 2017
2. **Follow-up Regarding Action Items from Prior Meeting – Discussion**
3. **ERO Enterprise Program Alignment Efforts\* – Discussion**
4. **Critical Infrastructure Protection Version 5\* – Update**
5. **Compliance Monitoring and Enforcement Program Quarterly Report\* – Update**
6. **Adjournment**

\*Background materials included.

# NERC Antitrust Compliance Guidelines

## General

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

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

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

## Prohibited Activities

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

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

## Activities That Are Permitted

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

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

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

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

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

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

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

# **DRAFT Meeting Minutes**

## **Compliance Committee**

May 10, 2017 | 9:45 a.m. – 10:45 a.m. Central

The Ritz-Carlton, St. Louis  
100 Carondelet Plaza  
St. Louis, MO 63105

Janice B. Case, Chair, called to order the duly noticed meeting of the Board of Trustees Compliance Committee (BOTCC) of the North American Electric Reliability Corporation (NERC) on May 10, 2017, at approximately 9:45 a.m. Central, and a quorum was declared present.

Present at the meeting were:

### **Committee Members**

Janice B. Case, Chair  
Frederick W. Gorbet  
David Goulding  
Jan Schori  
Roy Thilly

### **Board of Trustees Members**

Gerry W. Cauley, President and Chief Executive Officer  
Robert G. Clarke  
Kenneth W. DeFontes, Jr.  
George S. Hawkins  
Deborah S. Parker  
Kenneth G. Peterson

### **NERC Staff**

Charles A. Berardesco, Senior Vice President, General Counsel, and Corporate Secretary  
Tina Buzzard, Associate Director to Office of the Chief Executive Officer  
Andrea Koch, Senior Director of Reliability Assurance  
Ken McIntyre, Vice President and Director of Standards and Compliance  
Sonia Mendonça, Vice President, Deputy General Counsel, and Director of Enforcement

### **Introduction and Chair's Remarks**

Ms. Case reported on the March 23, 2017, and May 9, 2017, Executive Sessions. She highlighted the BOTCC's approval of several Notices of Penalty in the March meeting and an update from NERC staff on ERO Enterprise penalty alignment efforts in the May meeting.

### **NERC Antitrust Compliance Guidelines**

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

### **Minutes**

Upon motion duly made and seconded, the February 8, 2017, meeting minutes were approved as presented.

### **Follow-up Regarding Action Items from Prior Meeting**

Ms. Case described a framework to address ERO Enterprise consistency issues in a structured manner. She noted that Ms. Mendonça would provide an update on ERO Enterprise consistency efforts at the BOTCC's Open meeting in August.

### **Compliance Monitoring and Enforcement Program Quarterly Report**

Ms. Mendonça and Ms. Koch discussed highlights regarding first quarter Compliance Monitoring and Enforcement Program (CMEP) activities. Ms. Mendonça updated the BOTCC on the progress of various enforcement metrics. She noted that mitigation is complete for over 99 percent of violations discovered prior to 2014. She also discussed NERC staff's continued oversight of the Self-logging; Find, Fix, Track, and Report; and Compliance Exception programs through process reviews.

Ms. Koch reported that the Regional Entities completed Inherent Risk Assessments for all remaining Reliability Coordinator, Balancing Authority, and Transmission Operator registered entities.

Ms. Koch also updated the BOTCC on various NERC compliance activities. She noted the Compliance and Certification Committee approved the Nuclear Energy Institute application to become a pre-qualified organization for the purpose of vetting and proposing industry-developed Implementation Guidance.

### **Adjournment**

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

Submitted by,



Charles A. Berardesco  
Corporate Secretary

## **ERO Enterprise Program Alignment Efforts**

### **Action**

Discussion

### **Introduction**

At the NERC Board of Trustees Compliance Committee (BOTCC) meeting in August, representatives of NERC, the Regional Entities (REs), and the Compliance and Certification Committee (CCC) will discuss the Electric Reliability Organization (ERO) Enterprise's Program Alignment, a program to address alignment in the execution by the ERO Enterprise of both the Compliance Monitoring and Enforcement Program (CMEP) and the Organization Registration and Certification Program (ORCP). This program was previously referred to as the Consistency Framework, but has since been renamed to more accurately represent the scope of the efforts of the ERO Enterprise. The discussion will cover the program's design and examples of alignment activities both completed and ongoing.

### **Background**

With CMEP and ORCP responsibilities delegated across the eight REs, differences in philosophies, processes, and the physical network topology and operating environments can create, or appear to create, inconsistencies. Greater alignment across the ERO Enterprise using uniform practices in the monitoring and enforcement of compliance with NERC Reliability Standards will ensure that the ERO Enterprise and stakeholders focus on the most significant risks to reliability rather than administrative inefficiencies.

The implementation of the risk-based CMEP and related oversight activities have promoted a greater degree of alignment in enforcement and compliance monitoring activities. As part of its oversight, NERC reviews the reasonableness of penalties and other determinations as well as alignment in various processes across the ERO Enterprise. NERC also works with the REs to develop and document guidance on enforcement and compliance monitoring processes and activities. Recent areas of increased alignment resulting from these efforts include the risk determination of individual violations, the allocation of credits against monetary penalties, and the assessment of a registered entity's inherent risk, among others.

The Program Alignment is intended to build on and enhance these efforts to identify, prioritize, and resolve alignment issues. As such, the Program Alignment will strengthen and become an integral part of program improvements.

The Program Alignment was developed in collaboration with the REs and discussed with the NERC Board of Trustees from March 2017 to May 2017. The CCC has been tasked with assisting in the outreach to industry. A number of important process steps of the Program Alignment are under development, as noted below.

Table 1: Anticipated Process Steps		
	Activity	Estimated Completion
Consolidate Sources of Information on Alignment Issues	Transition of Regional Consistency Tool to NERC	Completed
	ERO Enterprise and CCC process for industry reporting of alignment issues and ERO Enterprise analysis	CCC Consistency Working Group established with scope and process May 2017 (attached)  Regional Consistency Tool transitioned to NERC July 2017
	Collection of information obtained through NERC Oversight activities	Ongoing
	ERO Enterprise Reporting Dashboard	Q4 2017
Identify, Track, Triage, and Prioritize Alignment Issues	Development of process for classification of alignment issues and criteria for materiality	Completed July 2017
	Development of process for consolidation of issues and development of tracking tool	Completed July 2017
Resolution of Alignment Issues and Reporting/Feedback	Development of ERO Enterprise process for resolution	Completed July 2017
	Development of process for reporting and providing feedback to the BOTCC and stakeholders	Q4 2017

## Program Details

### *Identify and Prioritize Sources of Information and Identification of Alignment Issues*

Alignment issues will continue to be identified through many different sources for review by the ERO Enterprise. Regardless of the source, issues will be added to the tracking tool referenced below and follow the same process for resolution.

The following are potential sources of information regarding alignment issues:

- Alignment issues are identified as a result of ongoing NERC oversight and other ERO Enterprise activities.
- NERC contracted with the third-party provider EthicsPoint to implement the Consistency Reporting Tool (Reporting Tool).<sup>1</sup> Reports of perceived inconsistency are entered and submitted directly on the EthicsPoint secure server. Reports can be submitted

<sup>1</sup> Available at <https://secure.ethicspoint.com/domain/media/en/gui/51749/index.html>.

anonymously, or the submitter may provide their name and contact information. NERC administrators are notified when a report is submitted for processing.

- The CCC is a resource for the ERO Enterprise to frame the extent and condition of the alignment issue and provide suggested resolutions for ERO Enterprise consideration. Outside of these requests, the CCC will continue to be a resource for identifying and reporting misalignments to the ERO Enterprise. The CCC is also a critical resource for prioritizing, from a stakeholder perspective, any identified misalignments.
- Information is transmitted directly to ERO Enterprise staff by registered entities or as the result of observations by ERO Enterprise staff.
- Current observations by ERO Enterprise staff could provide the starting point for discussions by the ERO Enterprise working groups.

### ***Tracking, Triage, and Analysis of Alignment Issues***

Identified issues will be tracked by NERC in a single system, the Alignment Tracking Tool (Tracking Tool). The ERO Enterprise will establish a process for classifying issues into each of the categories below:

- **Material:** This category includes issues that may pose a risk to the bulk power system, risk-based CMEP, or other programs; have the potential for resulting in discriminatory treatment of registered entities; or have a significant negative impact on the ERO Enterprise's or registered entities' effectiveness. Those issues will be identified as priority items for resolution, initially through ERO Enterprise working groups, under the oversight of the ERO Executive Management Group and BOTCC.
  - Examples of issues in this category include variances in the use of the Internal Controls Evaluation process outside of the approved guidelines, inconsistencies in the assessment of inherent risks, and variances in the level of review of certain types of noncompliance.
  - Certain issues that are not deemed material may nevertheless be identified for resolution if resolution is relatively simple and may provide benefits to the ERO Enterprise or registered entities.
- **Non-Material:** This could include practices or processes not determined as material but that could be aligned by the working groups or through future activities such as the CMEP technology project. Although these are not the priority items for the working groups, it is possible that some of them may have relatively simple means of resolution, in which case they would be addressed in parallel with the priority items noted above. It is also possible that the accumulation of some of these items could lead to the type of risk associated with the first category of issues in which the issues would be prioritized as well.
  - Examples of issues in this category include data collection processes and timing of certain notifications not specifically defined in the NERC Rules of Procedure.

### ***Resolution and Reporting of Alignment Issues***

Specific processes for the resolution of alignment issues may vary depending on the nature of the issue, but may include working group discussions, calibration exercises, and development of common tools and templates. Examples of ongoing work to address alignment issues being undertaken by these groups include the alignment of penalty processes and philosophy and the alignment of inherent risk assessments.

Progress will be reported on a quarterly basis. A public progress report will be developed for inclusion in NERC's public quarterly CMEP update to the BOTCC. To the extent that issues were identified by individual registered entities through the ERO Enterprise and CCC process, direct feedback to the registered entity and CCC will be provided.

Resolution of alignment issues may consist of the alignment of practices and processes or, as appropriate, a determination by the ERO Enterprise that the level of variance is justified based on the particular circumstance. The resolution will be communicated to interested parties through the reports referenced above.

Once the ERO Enterprise has acquired additional experience working under this program, enhancements may be made and specific metrics developed to measure the effectiveness of the program.

To facilitate communication regarding the Program Alignment, the ERO Enterprise Program Alignment web page was developed to inform stakeholders of identified potential misalignment issues that have been reported along with the resolution or recommendations of those issues.<sup>2</sup>

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<sup>2</sup> Available at <http://www.nerc.com/pa/comp/Pages/EROEnterProAlign.aspx>.

# NERC CCC Consistency Working Group Scope

CCC Approved: May 17, 2017

## Purpose

The North American Electric Reliability Corporation (NERC) Compliance and Certification Committee (CCC) has a role in implementing the process for evaluating consistency of Electric Reliability Organization (ERO) Enterprise Programs. The NERC CCC Consistency Working Group (CWG) will execute the CCC role within the process to address potential concerns with consistent implementation of the Compliance Monitoring and Enforcement Program (CMEP) and Organization Registration and Certification Program (ORCP).

## Roles and Activities

The *Process Flow for Evaluating Consistency of ERO Enterprise Programs* (Attachment 1) identifies the CCC role, which includes aiding in the screening of information, supporting further investigation of a potential concern (as requested by NERC), and providing suggested resolutions.

The CCC delegates its role and responsibilities to the CWG in an effort to carry out activities more effectively and efficiently. The CWG reports its work and deliverables to the CCC, and the CCC maintains ultimate responsibility for decision-making and providing recommendations to NERC.

The CWG follows these steps to research and frame the possible consistency issue and provide suggested resolutions to NERC:

1. Gather information on the requested consistency issue:
  - Identify support needs and use CCC subcommittees or individual members that have the expertise to review the issue;
  - Perform analytical and qualitative review of the issue; and
  - Poll or survey, if needed, sources inside and outside the CCC (e.g., other NERC technical committees) to collect input on issue for possible resolution.
2. Evaluate the consistency issue:
  - Determine the nature and extent of the issue and determine whether it is a systemic issue. For example, determine whether the issue is regional, limited to a segment, or limited to a particular program area; and
  - Identify possible risk to the success of the CMEP and ORCP and whether the issue poses a risk to the Bulk Electric System if not resolved.
3. Develop a suggested resolution of the issue, and
4. Present the suggested resolution to the CCC for review and endorsement.

## Membership

The CCC Chair and NERC will annually appoint the members of the CWG responsible for carrying out the scope of work. Membership in the CWG is primarily determined by subject matter expertise related to CMEP and ORCP processes.

- Composition
  - CCC Appointed Members - Five (5)
  - CCC Chair
  - CCC Vice Chair
  - NERC – Two (2)
- Leadership
  - CWG leadership consists of two Co-Chairs, one Co-Chair from the CCC, and one Co-Chair from NERC.
- Observers
  - The CWG Co-Chairs may invite observers to participate in meetings, which may include additional NERC or Regional Entity staff, as well as other CCC members (e.g., CCC subcommittee representatives). Observer participation is limited to observing the process and providing additional information, when requested, and participation will not be part of the deliberation process.

## Meetings

The CWG shall meet based on workload, as determined by the Co-Chairs, but will meet at least quarterly by conference call or in person. Meetings may also occur in conjunction with the regular CCC meetings. The CWG shall meet in closed session given the sensitive nature of the materials discussed.

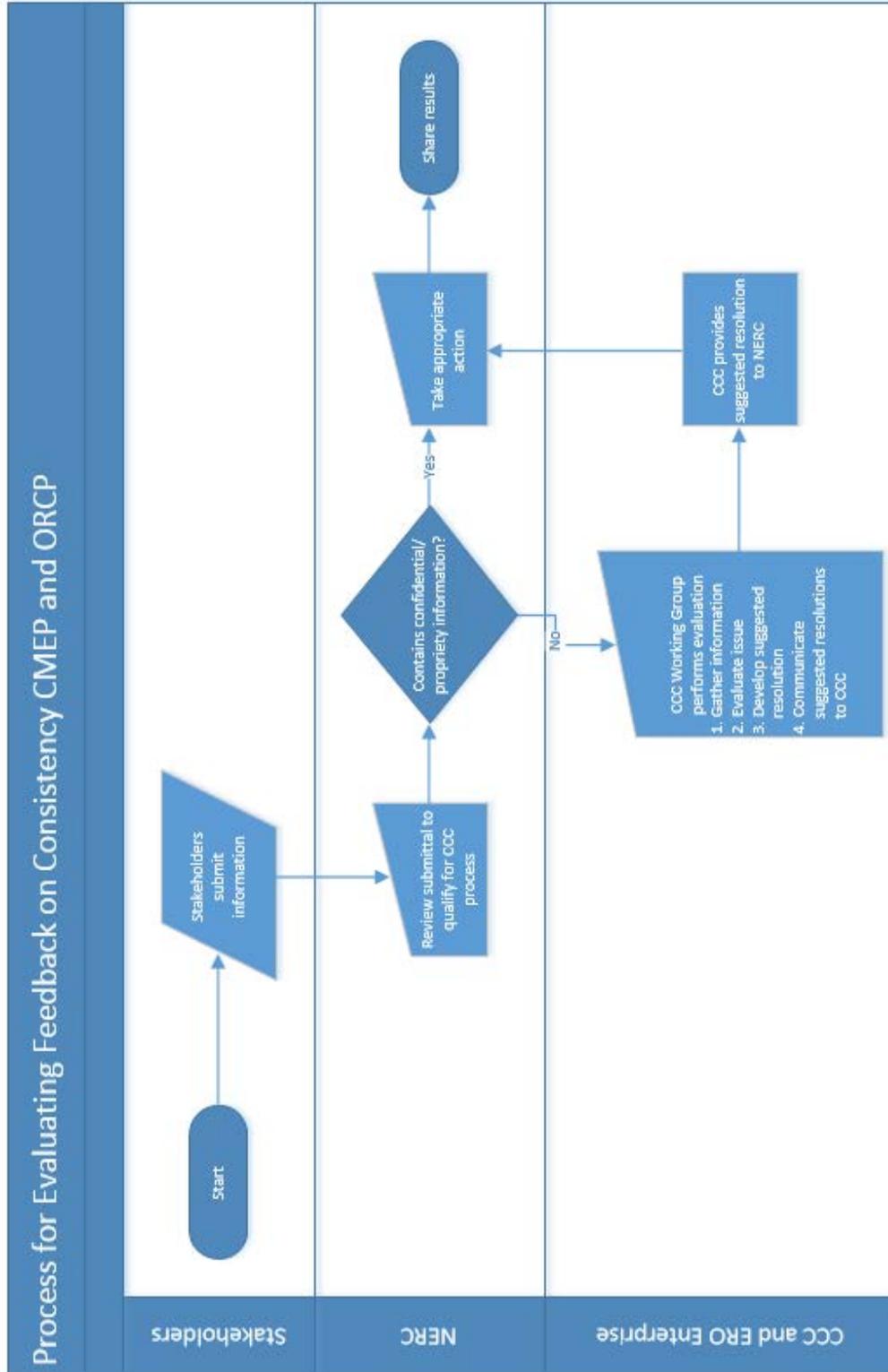
## Voting

The CWG recommendations will be consensus-based. If consensus cannot be reached, the CWG will provide a recommendation to the CCC with a brief explanation of the majority and dissenting position(s) for final determination by the CCC.

## Deliverables

The CWG is responsible for communicating suggested resolutions of consistency issues to the CCC who will then communicate recommendations to NERC. The CWG Co-Chairs will provide a quarterly report of activities to the CCC at its regularly scheduled meeting.

## Attachment 1: Process Flow for Evaluating Feedback on Consistency in CMEP and ORCP



## Critical Infrastructure Protection Version 5

### Action

Update

### Background

Since the Critical Infrastructure Protection (CIP) Version 5 Reliability Standards became effective on July 1, 2016, NERC and the Regional Entities (REs) have been focusing Compliance Monitoring and Enforcement Program (CMEP) activities on key aspects of the CIP Version 5 Reliability Standards, including CIP-005-5 and remote access controls. NERC worked with the REs to conduct a comprehensive study that identified the strength of the CIP Version 5 remote access controls, the risks posed by remote access-related threats and vulnerabilities, and appropriate mitigating controls consistent with the Federal Energy Regulatory Commission's (FERC's) directive in Order No. 822. The conclusions from the study were filed with FERC on June 30, 2017. The resulting report summarizes the findings from the Remote Access Study.

NERC identified 19 areas for continued focus. These areas were categorized in the following manner:

- **Effective Mitigating Practices:** Refers to security and operational practices implemented by registered entities that were particularly effective at mitigating risks and represent opportunities for outreach and information sharing to further their use throughout the industry.
- **Areas for Further Analysis:** Refers to areas for additional research, potential standards modifications, or technical guidance to more accurately address remote access-related threats and vulnerabilities.
- **Enhancement Opportunities:** Refers to areas where NERC and the REs, collectively the Electric Reliability Organization (ERO) Enterprise, can help facilitate the use of industry best practices within the confines of the CIP Reliability Standards.
- **Training and Awareness:** Refers to those security controls, best practices, and other methods to demonstrate compliance that may not be well understood by registered entities and may require training, outreach, or guidance to improve industry awareness on controls that can be used to mitigate the risks associated with remote access.

In addition to cyber security, compliance audits addressed physical security plans, measures, and challenges for implementation of CIP-014-2. One of the main focus areas for physical security is to understand how industry stakeholders have developed security plans to mitigate risks of specific threats. NERC is currently assessing whether high-impact Control Centers are addressed by the Reliability Standard, the quality of planned or implemented physical security controls, and the timelines used for implementing the security and resiliency measures consistent with FERC's directive in Order No. 802.

**Summary**

The presentation will discuss the activities and observations to date of the ERO Enterprise's implementation of the new cyber security and physical security standards, and discuss areas for consideration in the 2018 CIP monitoring and outreach program.

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Agenda Item 5

# Compliance Monitoring and Enforcement Program Quarterly Report

Q2 2017

August 9, 2017

**RELIABILITY | ACCOUNTABILITY**



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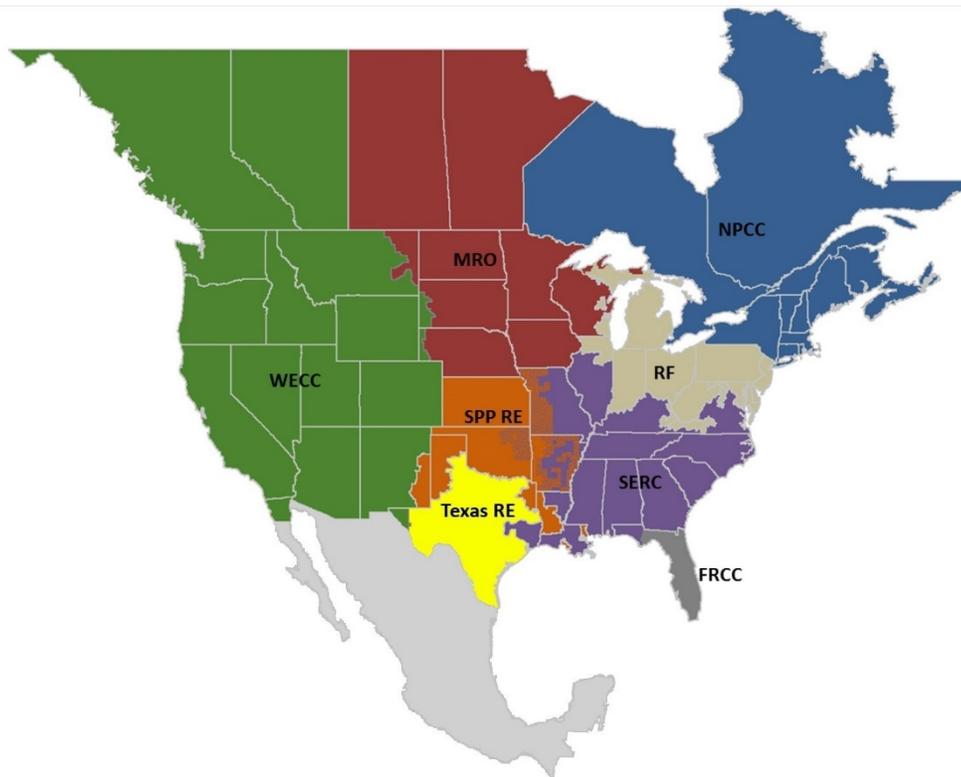
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## Preface

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The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to assure the reliability and security 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 entities participate in one RE while associated transmission owners/operators participate in another.*

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

# Introduction

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To supplement its annual Compliance Monitoring and Enforcement Program (CMEP) report,<sup>1</sup> NERC provides the Board of Trustees Compliance Committee with quarterly reports that track a number of metrics and provide additional information on NERC's ongoing oversight of the REs to evaluate the progress in implementing the risk-based CMEP and identify any needed improvements.

In Q2 2017, NERC continued its qualitative reviews of various aspects of the risk-based CMEP to evaluate the effectiveness of CMEP strategies and the consistency of program execution across the ERO Enterprise. NERC also continued to focus its enforcement and compliance resources on serious risk noncompliance and entity-specific risks.

The average age of noncompliance in the ERO Enterprise inventory continues to be less than eight months. Compliance Exceptions (CEs) continue to be the dominant disposition method for noncompliance posing a minimal risk to the reliability of the BPS. Lastly, REs continue to conduct risk-based CMEP activities, such as Inherent Risk Assessments (IRAs) and Internal Control Evaluations (ICEs). NERC will continue to track and report on these metrics and activities, among others, throughout 2017.

## Highlights from Q2 2017

### **CMEP Activities**

#### *Program Alignment*

The ERO Enterprise has developed a program to identify, prioritize, and resolve alignment issues in the execution of the CMEP and the Organization Registration and Certification Program (ORCP) in a structured manner. The program facilitates the communication of the results of those issues to interested parties.<sup>2</sup>

During Q1 and Q2 2017, NERC and the REs coordinated with the Compliance and Certification Committee (CCC) to begin designing approaches and processes to support the program. At the close of Q2 2017, activities continued to develop processes to execute all components of the program, as well as develop ERO Enterprise reporting for greater transparency and reporting of alignment issue resolutions. NERC completed the transfer of the Regional Consistency Tool from the REs to NERC. The Regional Consistency Tool is the current tool for industry to submit consistency concerns anonymously.

#### *CCC Self-Certification*

On a triennial basis, the CCC audits NERC's adherence to the NERC Rules of Procedure (ROP), CMEP, ORCP, and Standard Processes Manual. During the remaining two years between audits, NERC self-certifies its adherence to these guiding documents. During Q2 2017, NERC's CMEP and ORCP staff provided responses to the CCC self-certification to NERC's Internal Audit department for review. The responses address questions about activities performed by the ERO Enterprise<sup>3</sup> relating to the CMEP and ORCP.

#### *CMEP Technology Program*

In Q2 2017, the proposed CMEP Technology Program began Phase 1 of its development. The CMEP Technology Program would leverage the experience of CMEP subject matter experts (SMEs) from the REs and NERC to create a new set of ERO Enterprise support tools and facilitate their implementation. This would be a strategic opportunity to improve the efficiency and effectiveness of the ERO Enterprise, and provide benefits to registered

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<sup>1</sup> <http://www.nerc.com/pa/comp/Pages/AnnualReports.aspx>.

<sup>2</sup> The program was previously referred to as the Consistency Framework.

<sup>3</sup> For those activities the REs perform in accordance with their Regional Delegation Agreements (RDAs), the REs provided relevant responses and evidence to NERC. The RE RDAs are available here: <http://www.nerc.com/AboutNERC/Pages/Regional-Entity-Delegation-Agreements.aspx>.

entities, REs, and NERC. Outreach regarding the program has been conducted to the CCC Organization Registration and Certification Subcommittee (ORCS) as well as at various RE and NERC workshops. In July 2017, NERC provided a CMEP Technology Project Stakeholder Webinar. Similar outreach opportunities would continue throughout the project duration.

### ***CMEP Process Review***

In fulfilling its obligations to oversee and monitor RE adherence to the CMEP and NERC ROP, NERC staff perform periodic process reviews to assess RE implementation of various CMEP programs, evaluate the effectiveness and value of particular CMEP programs, and identify areas to improve or enhance those programs. In Q2 2017, NERC Compliance and Enforcement staff started planning the next CMEP process review covering Mitigation Plans and mitigating activities.

### **Enforcement**

In Q2 2017, NERC staff completed its joint annual review of the Find, Fix, Track, and Report (FFT) and CE Programs with FERC staff. On June 27, 2017, FERC staff issued its 2017 Statement on its Review of FFTs and CEs, noting the continued effectiveness of the programs. In addition, FERC staff noted the REs' progress in providing all of the information necessary to understand the noncompliance, especially identification of the root cause.

NERC Enforcement staff continued to work in Q2 2017 to identify a metric regarding the effect of the CMEP on reducing the risk of repeat noncompliance. FERC and NERC consider repeat noncompliance as a “key indicator” of the effectiveness of the CMEP in recognizing, mitigating, and preventing noncompliance.<sup>4</sup> In Q2 2017, NERC staff shared some of its early analyses with the REs. NERC staff are incorporating feedback into the analyses.

During Q2 2017, ERO Enterprise Enforcement and Compliance staff began reviewing and updating the [ERO Enterprise Self-Report User Guide](#) and the [ERO Enterprise Mitigation Plan Guide](#).

NERC filed one Full Notice of Penalty (NOP)<sup>5</sup> in Q2 2017 covering two moderate risk violations with a total penalty amount of two hundred one thousand dollars (\$201,000).

On May 30, 2017, NERC posted its Q1 2017 [Vegetation Management Report](#).

Finally, NERC enforcement is continuing to oversee the implementation of the risk-based CMEP and is meeting related goals, as shown in Appendix A.

### **Compliance Assurance**

The ERO Enterprise, in coordination with the CCC, is enhancing the ERO Enterprise Guide for Internal Controls. The revised guide will incorporate principles for how the use of internal controls supports the reliability and security of the BPS, clarifying expectations around registered entity internal control documentation, and how the ERO Enterprise provides feedback to registered entities on internal controls.

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<sup>4</sup> “[W]e direct NERC to include an analysis of repeat violations in its next Performance Assessment that will allow NERC, the REs, and FERC to evaluate whether NERC’s compliance and enforcement efforts have been effective in improving registered entities’ compliance and overall reliability.” North American Electric Reliability Corporation, Order on the ERO’s Five-year Performance Assessment, 149 FERC ¶ 61,141 at P 39 (2014) (“Five-Year Order”).

<sup>5</sup> 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, 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.

During Q2 2017, the ERO Enterprise reviewed and endorsed the following three [Implementation Guidance](#) documents:

- CIP-013-1 Cyber Security Supply Chain Risk Management Plans,<sup>6</sup>
- CIP-014-2 R1 Physical Security, and
- FAC-008-3 Facility Ratings.

The ERO Enterprise also supported the Compliance Guidance Program by conducting an [industry webinar](#) on May 31, 2017. There were 303 industry participants on the webinar.

### ***Emerging Technology Roundtable***

NERC hosted its second Emerging Technology Roundtable, a two-day event with in-depth discussions about the integration of technologies to improve the reliable operation of the Bulk Electric System (BES) while addressing and mitigating cyber and physical security risks. The roundtable was held from June 7 through June 8, 2017, in San Diego, California. Vendor and industry presenters discussed Cloud Computing and Internet of Things security threats to weigh the reliability benefits, business case matters, cyber and technology risks, and regulatory implications. The objective was to make participants aware of strategies and considerations related to technology integration that could be used to improve operations and reliability in a secure manner that supports compliance with the NERC Reliability Standards.

### **CIP Standards Effectiveness Assessment**

#### ***Remote Access Study***

In June 2017, NERC filed with FERC the results of its study on the remote access protections in NERC's Critical Infrastructure Protection (CIP) Reliability Standards ([Remote Access Study](#)). NERC performed the Remote Access Study consistent with FERC's directive in Order No. 822 to assess the effectiveness of the controls in the CIP Reliability Standards to mitigate known remote access vulnerabilities, the risks posed by remote access-related threats and vulnerabilities, and appropriate mitigating controls for any identified risks.<sup>7</sup>

### **Certification and Registration**

#### ***Certification***

In Q2 2017, the ERO Enterprise began analyzing program performance data to evaluate certification processes and identify trends and significant or emerging risks (corporate and BES reliability) affecting certification performance.

#### ***Registration***

During Q2 2017, the NERC-led Review Panel rendered three decisions regarding the materiality of certain entities to the reliability of the BES.

Other registration activities for Q2 2017 included continuing research on how Coordinated Functional Registrations are handled and maintained, identifying possible revisions to the NERC ROP, coordinating with the industry ORCS of the NERC CCC on various topics, and supporting the entity registration centralized database effort (xRM Entity Registration). Outreach and training on the xRM Entity Registration efforts will continue throughout the duration of 2017.

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<sup>6</sup> Endorsement for this implementation guidance is based on the language of "draft 2" of the CIP-013-1 Reliability Standard dated April 2017. Any changes to the Reliability Standard before the final ballot will require a reevaluation of the implementation guidance for continued endorsement.

<sup>7</sup> *Revised CIP Reliability Standards*, Order No. 822, 81 Fed. Reg. 4177 (January 26, 2016), 154 FERC ¶ 61,037 at P 64 (2016) (approving Reliability Standards CIP-003-6, CIP-004-6, CIP-006-6, CIP-007-6, CIP-009-6, CIP-010-2 and CIP-011-2).

# Chapter 1: CMEP Activities

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## Program Alignment

Greater alignment across the ERO Enterprise can help maintain focus on the most significant risks to reliability through the use of aligned practices in the monitoring and enforcement of compliance with the Reliability Standards. The Program Alignment – formerly known as the Consistency Framework – is an opportunity to improve alignment throughout the ERO Enterprise by identifying new approaches to consistency and leveraging ongoing efforts across the ERO Enterprise. The NERC CCC also has a role to identify potential misalignments and frame issues for the ERO Enterprise to consider when planning its program alignment activities. In Q2 2017, these activities included developing processes for issue classification and tracking; identifying roles and responsibilities of NERC, the REs, and industry stakeholders such as the CCC; and continuing to consolidate various information sources from across the ERO Enterprise. Among other activities in Q2 2017, the CCC formally established a CCC Consistency Working Group responsible for executing the CCC’s role within the process to address potential concerns with consistent implementation of the CMEP and ORCP. These issues stem from stakeholder reporting and survey responses, regional input, and areas identified through NERC’s oversight activities. The CCC Consistency Working Group will support the ERO Enterprise in executing certain components of the program alignment.

The Program Alignment consists of the following:

- Track: Identify and capture issues;
- Triage: Classify, analyze, and prioritize; and
- Transparent: Post and report.

The overall elements of success of the program are capturing and centralizing all reported issues, encouraging industry participation to help define the issues with real examples, responding in a timely manner, and providing the appropriate level of transparency to the industry. The ERO Enterprise plans to implement this program through documented processes owned and facilitated by NERC.

## CCC Self-Certification

On March 31, 2017, the CCC issued a Self-Certification request to NERC that focused on activities performed by the ERO Enterprise relating to the CMEP and ORCP. In Q2 2017, NERC Compliance, Enforcement, Registration, and Certification submitted responses to the NERC Internal Audit group for review. NERC will provide additional details in Q3 2017 after NERC Internal Audit and the CCC have reviewed the completed Self-Certifications.

## CMEP Technology Program

The proposed CMEP Technology Program is one of four strategic vision and technology programs within the broader ERO Enterprise Systems Initiative. The possible scope of the CMEP Technology Program includes projects to support a common ERO Enterprise-level CMEP system built from aligned business processes and data integration. As specific projects may be launched, the detailed scope, budget, and resources for those projects would be defined and approved in separate business cases and project charters. The program would ensure alignment with the needs of the larger ERO Enterprise, and would provide services that span functional areas and regional boundaries. This effort would also help ensure information is shared in a manner that would both increase efficiency and help accomplish the ERO’s reliability mission.

The first major phase of this effort is the migration to a centralized Entity Registration process. This has begun with work to address Coordinated Functional Registrations (CFRs). The project objective is to provide registered entities, the REs, and NERC with the ability to systematically submit and manage CFR requests in one system.

During Q2 2017, initial surveys were issued to CMEP SMEs across the ERO Enterprise to gather input on the current state of CMEP processes and the desired future state of requirements for the CMEP Technology Program. In Q3 2017, ERO Enterprise Compliance and Enforcement staff will participate in a series of workshops to identify the requirements for the new CMEP tools.

### **Mitigation Plan Process Review**

In Q2 2017, NERC Enforcement, in conjunction with NERC Compliance CIP and non-CIP SMEs, and after input from FERC staff, initiated planning of a Mitigation Plan process review. In its oversight capacity, NERC Compliance and Enforcement staff ensure that the REs' evaluation of proposed mitigation is technically sound and follows established processes. The review is designed, among other things, to assess the level of technical review performed by REs for Mitigation Plans and activities. NERC staff is in the planning phase of the process review, which will cover the effectiveness and use of Mitigation Plans and activities. The focus of the review is divided into technical and procedural components.

The technical review will focus on root cause identification and scope of the noncompliance being mitigated. In addition, NERC will review whether mitigation would likely prevent recurrence and future risk to the reliability to the BPS and how REs consider a registered entity's internal controls as a part of their verification of completion. The procedural review will focus on minimum required contents, timing of review and approval by the RE, tracking of extensions, completion dates, and notifications to NERC.

Based on the results of the process review, NERC Compliance and Enforcement staff will consider whether additional changes to the existing oversight processes are needed to strengthen oversight and monitoring of the REs, overall quality of Mitigation Plans development and assessment, and root cause identification. NERC staff anticipates launching this process review in July 2017.

## Chapter 2: Enforcement Oversight

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### 2017 Risk-Based CMEP Process Reviews

#### Annual FFT and CE Programs Review

In Q2 2017, NERC and FERC staff completed the annual review of the FFT and CE programs. NERC and FERC determined that the program is functioning as intended. NERC and FERC staff sampled 23 FFTs and 100 CEs to collect data on the effectiveness and efficiency of the FFT and CE programs and to assess the REs' adherence to the risk-based CMEP, various FERC Orders, and NERC- and FERC-issued guidance.

Both FERC and NERC staff's review determined that all 123 instances of noncompliance had been adequately remediated and that the REs had provided sufficient documentation. In cases where the posted issues did not address the root cause in the posting, the review found evidence that it was addressed in the review documents that were submitted for the process review. In its Notice of Staff Review issued June 27, 2017, FERC staff noted significant improvements over the past three years in the FFT and CE program postings' inclusion of information requested in NERC's Guidance for Self-Reports, such as start and end dates and root causes. Specifically, identification of root causes increased from 62 percent to over 98 percent.

In Q2, NERC Enforcement staff provided initial feedback to the REs that summarized individual results. NERC staff revised the letters based on feedback from the REs and issued finalized letters in July 2017.

### Quarterly Enforcement Metrics Highlights

The following quarterly enforcement metrics updates are current as of the end of Q2 2017 (June 30, 2017):<sup>8</sup>

#### Mitigation Completion

There are 28 instances of noncompliance discovered in 2014 and earlier with Mitigation Plans or mitigating activities that are not fully completed. This represents less than one percent of the total noncompliance discovered in 2014 and earlier. Twenty of these noncompliance are on hold due to a registration litigation, and one is for a federal entity that is contesting the violation. Five of the remaining noncompliance relate to federal entities and the remaining two are in the final stages of review before the entities certify completion.

There are 46 instances of noncompliance with Mitigation Plans or mitigating activities that have passed their completion dates without the registered entities certifying completion, or have overdue mitigation with discovery dates in 2015 or earlier. These represent approximately 3.6 percent of open Mitigation Plans and activities. NERC and RE Enforcement staff are focusing efforts on ensuring prompt certification by registered entities after completion.

#### Caseload

The ongoing use of CEs throughout the ERO Enterprise has contributed to the noncompliance average age of 7.3 months. Eighty-four percent of the ERO Enterprise noncompliance inventory is less than one year old, and only six percent is over two years old.

FRCC, NPCC, RF, and Texas RE have completed processing of all noncompliance with discovery dates before 2014. There are 37 pre-2014 possible noncompliance remaining to be processed across MRO, SERC, SPP RE, and WECC. Fourteen of these are from federal entities.

#### Self-Logging Utilization

As of June 30, 2017, 65 registered entities are self-logging. FRCC added its first registered new entity into the program in April 2017.

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<sup>8</sup> Appendix A includes the NERC enforcement metrics-related graphs and charts.

### **Self-Assessment and Self-Identification of Noncompliance**

Registered entities typically self-identify noncompliance in approximately 80 percent of new issues discovered. The self-identification rate went up to 93.6 percent in Q2 2017. During the same period, 88 percent of all internally discovered noncompliance was self-reported.

Registered entities submitted Self-Reports for 393 instances of noncompliance in Q2 2017.<sup>9</sup> These Self-Reports were submitted by 152 registered entities that represent approximately 10 percent of the compliance registry. NERC staff is performing additional analyses to understand better self-reporting practices.

### **Disposition of Noncompliance**

NERC filed one Full NOP in Q2 2017 with a total penalty amount of two hundred one thousand dollars (\$201,000). This case involved two violations with the CIP Reliability Standards that posed moderate risks to the reliability of the BPS. The RE emphasized the inadequacy of the registered entity's internal controls and its delay in self-reporting. The case highlighted the need for registered entities to implement internal controls that foster a culture of compliance, reliability, and security to safeguard their critical infrastructure.

Out of 177 instances of noncompliance posing a minimal risk to the reliability of the BPS processed during the second quarter of 2017, the ERO Enterprise disposed of 163 – 92 percent – as CEs. The ERO Enterprise processed the remaining instances of noncompliance posing a minimal risk as Spreadsheet NOPs (SNOPs).

In Q2 2017, most REs saw an increase in noncompliance for the newly effective MOD-025, PRC-019, and PRC-024 beginning after their mandatory and enforceable date in 2016.<sup>10</sup>

### **Vegetation-Related Transmission Outages**

The ERO Enterprise monitors all categories of vegetation-related outages that could pose a risk to the reliability of the BPS. Although the overall number of vegetation contacts remains small, there has been an increase in the number of contacts over the time. The increase has been primarily due to vegetation “fall-ins” to the right-of-way, which are not necessarily due to noncompliance with NERC Reliability Standards related to vegetation management. The ERO Enterprise will continue to monitor these matters and enforce any noncompliance appropriately. Data regarding vegetation-related outages in 2016 is available in the [2016 Annual Vegetation-Related Transmission Outage Report](#). Data regarding vegetation-related outages in Q1 2017 is available [here](#).<sup>11</sup>

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<sup>9</sup> There were 795 Self-Reports in the first half of 2017.

<sup>10</sup> See Appendix A, Figure A.15 for the most violated NERC Reliability Standards discovered in the first half of 2017.

<sup>11</sup> Vegetation-related outage information is consolidated on a delayed quarterly basis. Information related to Q2 2017 will be available in Q3 2017.

## Chapter 3: Compliance Assurance

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### Compliance Monitoring Oversight

#### NERC Compliance Oversight and Monitoring Priorities

NERC continued oversight activities under its 2017 compliance monitoring oversight plan, which identified key priorities for NERC monitoring. Among other things, key priorities include how the ERO Enterprise is monitoring risks to the reliability and security of the BPS, considering and reviewing internal controls, and implementing an overall consistent and effective program. NERC's oversight activities in Q2 and Q3 2017 involve observing and reviewing audit activities for over 30 audits, sampling ICEs conducted in 2015 and 2016, and sampling IRAs and Compliance Oversight Plans (COPs). The sample selection for audits, IRAs, and COPs include registered entities within the Coordinated Oversight Program for Multi-Region Registered Entities (MRREs). Detailed review will continue through Q3 and Q4 2017 with NERC completing these oversight activities in Q4 2017.

NERC worked with the REs to conduct a study that identifies the strength of the CIP Version 5 (CIP V5)<sup>12</sup> remote access controls, the risks posed by remote access-related threats and vulnerabilities, and appropriate mitigating controls as directed by FERC Order No. 822.<sup>13</sup> NERC filed with FERC the report on remote access protections required by NERC's CIP Reliability Standards in June 2017 and plans to complete additional analysis in Q3 2017.

NERC oversight also continues around assessing the effectiveness of registered entity implementation of CIP-014-2, including how the REs monitor registered entity compliance. NERC will consolidate its findings in Q3 2017 and make a FERC filing assessing whether high-impact control centers are being addressed by CIP-014-2 and whether the physical security controls registered entities apply to critical facilities are effective. In Q2 2017, the ERO Enterprise audit staff was provided guidance and training on CIP-014-2. This RE staff guidance considered and incorporated physical security best practices that RE auditors can reference when determining the adequacy and effectiveness of physical security measures implemented by the registered entities.

#### Continuous Monitoring

Continuous monitoring consists of NERC staff's ongoing review of processes and information to evaluate program effectiveness, which informs NERC oversight, staff training, and guidance needs. Among other things, NERC performs continuous monitoring of Audit Notification Letters (ANLs), IRA Summary Reports, and post-audit feedback surveys.

During Q2 2017, continuous monitoring activities showed the following:

- Registered entities submitted 25 post-audit surveys for audits initiated in 2017 (23 Compliance Audits and one Spot Check) and 2016 (one Compliance Audit). The surveys involved seven of the eight REs.
  - Post-audit feedback surveys indicated that there were no concerns related to deviations from the NERC ROP. Overall, RE audit staff conducted Compliance Audits and Spot Checks in a professional, efficient, and effective manner. From the 25 surveys collected, NERC noted two instances where registered entities did not fully understand how the IRA and COP informed their audit scope. NERC will continue to monitor this type of registered entity feedback, and – through ongoing oversight – will work with the REs to ensure that proper audit scoping occurs and that the registered entities understand how risk informs the audit scope.
- REs began using ERO Enterprise templates for ANLs, Compliance Audit and Spot Check Reports, and IRA Summary Reports to support consistency in sharing information with registered entities. As REs transition

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<sup>12</sup> In the context of this report, "CIP V5" encompasses the following NERC CIP Reliability Standards: CIP-002-5.1a; CIP-003-6; CIP-004-6; CIP-005-5; CIP-006-6; CIP-007-6; CIP-008-5; CIP-009-6; CIP-010-2; CIP-011-2, and CIP-014-1.

<sup>13</sup> *Revised CIP Reliability Standards*, FERC Order No. 822, 154 FERC ¶ 61,037.

to the new templates, NERC and the REs continue to identify possible improvements for consideration in future versions of the templates.

- For IRA Summary Reports collected during Q2 2017, NERC’s review indicated that most REs are now using the new ERO Enterprise common risk factors. The few exceptions are due to legacy processes and timing for IRA completions in progress. REs are now using the current IRA processes for any newly completed IRAs and refresher IRAs from prior years.

## Quarterly Compliance Monitoring Updates

The following quarterly compliance monitoring metrics are current as of June 16, 2017:<sup>14</sup>

### Coordinated Oversight Program for MRREs

The ERO Enterprise approved eight registered entities into the Coordinated Oversight Program, taking the total count of registered entity participation to 222.<sup>15</sup> Six registered entities were removed from participation in the Coordinated Oversight Program based on registration changes. Refer to Appendix B for additional supporting details on the Coordinated Oversight Program.<sup>16</sup>

### Compliance Guidance

NERC and the REs endorsed the following three [Implementation Guidance](#) documents:

- CIP-013-1 Cyber Security Supply Chain Risk Management Plans,<sup>17</sup>
- CIP-014-2 R1 Physical Security, and
- FAC-008-3 Facility Ratings.

Five additional proposed Implementation Guidance requests are under review by NERC and the REs.<sup>18</sup>

### Reliability Standards Auditing Worksheets (RSAWs)

NERC posted six final RSAWs for COM-001-2.1, MOD-025-2, MOD-033-1, TOP-001-3, TPL-007-1, and VAR-001-4. NERC posted draft RSAWs for CIP-005-6, CIP-010-3, and CIP-013-1.

### IRA and ICE Completion

During Q2 2017, RE progress toward completion of initial IRAs continues on track according to regional plans within RF, SERC, Texas RE, and WECC.<sup>19</sup> All REs are also assessing the need to conduct refresher IRAs and have been conducting them where needed. Completion plans for four REs remain unchanged, with expected completion as follows: SERC and Texas RE by the end of 2017, WECC by the end of 2018, and RF by the end of 2019. Completion plans consider the total number of registered entities, registered functions, risk priorities, and regional resources. At the end of Q2 2017, REs completed three ICEs. REs continue to conduct internal control review activities and implement processes for conducting reviews of internal controls during CMEP activities, such as audits.

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<sup>14</sup> Appendix B includes the NERC compliance monitoring metrics-related graphs and charts.

<sup>15</sup> 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.

<sup>16</sup> Information on the Coordinated Oversight of MRREs Program is available at:

<http://www.nerc.com/pa/comp/Reliability%20Assurance%20Initiative/Coordinated%20Oversight%20MRRE%20%20FAQ.pdf>

<sup>17</sup> Endorsement for this implementation guidance is based on the language of “draft 2” of the CIP-013-1 Reliability Standard dated April 2017. Any changes to the standard before the final ballot will require a reevaluation of the implementation guidance for continued endorsement.

<sup>18</sup> Refer to the [Compliance Guidance](#) web page located on the NERC website for proposed Implementation Guidance.

<sup>19</sup> Additional information regarding the percentage of IRAs completed for all registered entities within each RE across the ERO Enterprise and total registered entities as of March 3, 2017 – which includes registration changes, such as newly registered entities and deregistered entities – is available in Appendix B. REs will continue to prioritize IRA completions based on registered functions and registration changes throughout the year.

## Chapter 4: Certification and Registration

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### Certification

To ensure consistency and fairness in the implementation of the ORCP,<sup>20</sup> in Q2 2017, NERC and the REs developed processes described in the ERO Certification and Review Procedure, guidelines, and templates accessible on the NERC website. These design features have undergone a program review, and certain aspects have been identified for revision to better describe expectations and align with the ERO Enterprise Strategic and Operational plans.

Four program activities have been added to the work plan that support ORCP performance. These are expected to be completed in 2017. They include the following:

- Development of a Certification Oversight Plan;
- Development of certification templates that focus on evaluating the capabilities of a registered entity to perform the reliability functions of each registered function within the ORCP;
- Development of Certification Review program documents; and
- Review of training requirements for personnel engaged in certification activities.

### Q2 2017 Certification Completions

During Q2 2017, NERC and the REs completed four certification reviews. No full certifications were completed during this period. There is one certification review planned for the remainder of 2017.

### Registration

#### NERC-Led Review Panel

In Q2 2017, the NERC-led review panel (Panel) concluded that Golden Spread Electric Cooperative and the City of Bentonville, Arkansas were not material to the BES and therefore granted the requests to deregister as Distribution Providers (DPs). The Panel also determined that Alcoa Power Generating, Inc. – Long Sault Division should be registered as a Transmission Owner. The final decisions are publicly posted on the NERC website.<sup>21</sup> The NERC-led review panel is currently convening over three other cases and expects to render decisions in Q3 and Q4 2017.

### Q2 2017 Registration Changes

From April 1, 2017, through June 30, 2017, there have been 61 registration changes, including 30 activations and 31 deactivations. Of the 31 deactivations:

- 12 were due to the sale of assets to another registered entity;
- 3 were due to facility shut-downs;
- 6 were due to compliance responsibility being assumed by another registered entity;
- 3 were due to consolidation to a mutually-owned registered entity;
- 6 were due to determination of not meeting the NERC registration criteria; and
- 1 was due to the findings of the NERC-led review panel.

NERC verifies registration change activity by monitoring the REs and reviewing documentation relating to change requests to the registry.

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<sup>20</sup> See Section 502.2 of the NERC ROP.

<sup>21</sup> <http://www.nerc.com/pa/comp/Pages/Registration.aspx>.

## Appendix A: Enforcement

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### CMEP Metrics

#### Mitigation Completion Status

Mitigation of the oldest noncompliance (dating from 2014 and earlier) is over 99 percent complete. NERC Enforcement continues to monitor these instances of noncompliance and make them a priority for mitigation completion. For noncompliance discovered in 2015, the target has already been accomplished. Additionally, instances of noncompliance discovered in 2016 are being mitigated at a satisfactory rate, and the target should be accomplished by the end of 2017.

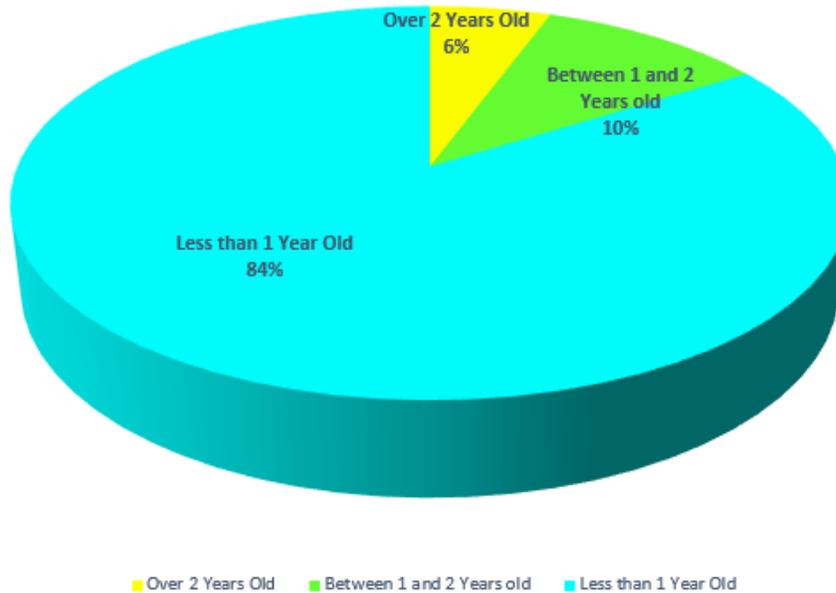
<b>Time Frame</b>	<b>Required Mitigation</b>	<b>On-going</b>	<b>Progress Toward Goal</b>	<b>Threshold</b>	<b>Target</b>	<b>Progress Since Last Quarter</b>
2014 and Older	9508	28	99.71%	99%	100%	0.27%
2015	724	26	96.41%	85%	90%	1.93%
2016	1139	506	55.58%	70%	75%	15.99%

There are 1,399 instances of noncompliance with mitigation that has not yet been completed. The majority of these were discovered in 2016 and 2017. Only 54 were discovered in 2015 or earlier. Of the 54 noncompliance with mitigation that has not yet been completed that were discovered in 2015 or earlier, eight are on schedule to be completed by their expected completion date, 33 have not submitted expected completion dates, and 13 have mitigation dates that have passed without NERC receiving notification that the mitigation is complete.

### Age of Noncompliance in ERO Inventory

Figure A.3 shows the age of noncompliance from all non-federal entities and only federal entities beyond the November 2014 cutoff.<sup>22</sup> There has been almost no change in the distribution of the percentages from the prior quarter.

**Age of Noncompliance in ERO Enterprise's Inventory**

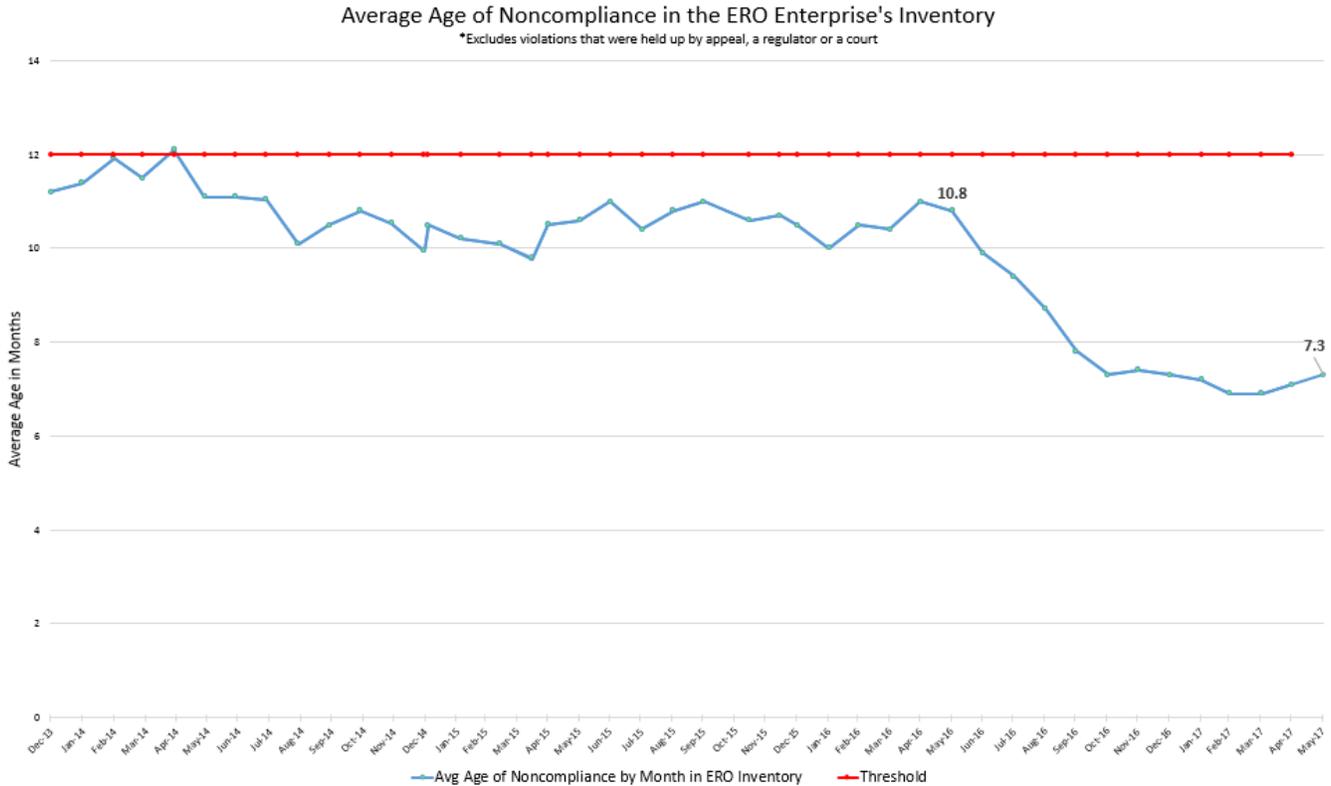


**Figure A.3: Age of Noncompliance in the ERO Enterprise Inventory**

<sup>22</sup> 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.

### Average Age of Noncompliance in the ERO Enterprise Inventory

The average age of noncompliance in Q2 2017 was 7.3 months.<sup>23</sup>



**Figure A.4: Average Age of Noncompliance in the ERO Enterprise Inventory**

### Number of New Noncompliance Discovered in 2017

The number of new noncompliance has continued to increase in Q2 2017. This steady increase in new noncompliance is partly due to the July 1, 2016, enforceable date for several new Reliability Standards. Over 75 percent of all newly discovered noncompliance in the first half of 2017 involved these newly enforceable Reliability Standards.<sup>24</sup>

**Table A.2: Noncompliance Discovered in 2017**

Discovery Month	FRCC	MRO	NPCC	RF	SERC	SPP RE	Texas RE	WECC	Total
January	3	6	6	27	34	24	23	34	157
February	1	0	9	27	17	23	44	87	208
March	8	2	13	32	21	3	41	76	196
April	4	14	22	33	24	12	10	29	148
May	4	6	14	28	23	12	30	48	165
June	6	3	15	28	35	3	23	13	126
<b>Total</b>	<b>26</b>	<b>31</b>	<b>79</b>	<b>175</b>	<b>154</b>	<b>77</b>	<b>171</b>	<b>287</b>	<b>1000</b>

<sup>23</sup> The age of noncompliance runs from the time the noncompliance is identified to the time it is resolved, e.g. through CE, FFT, SNOP, or Full NOP processing.

<sup>24</sup> For MRREs participating in the program, noncompliance will be accounted for in its Lead RE (LRE) statistics, but may actually affect assets in the Affected RE's (ARE's) regional footprint.

### Number of Instances of Noncompliance Discovered Internally Versus Externally

Below are four charts illustrating the internal and external identification of noncompliance by registered entities. Figure A.5 breaks down internal and external discovery method by year, and Figure A.6 over the last six quarters. The percentage of internally discovered noncompliance has increased over the last several years. The subsequent two charts reveal the makeup of internally discovered noncompliance and the number of registered entities that are responsible for Self-Reports in 2017.

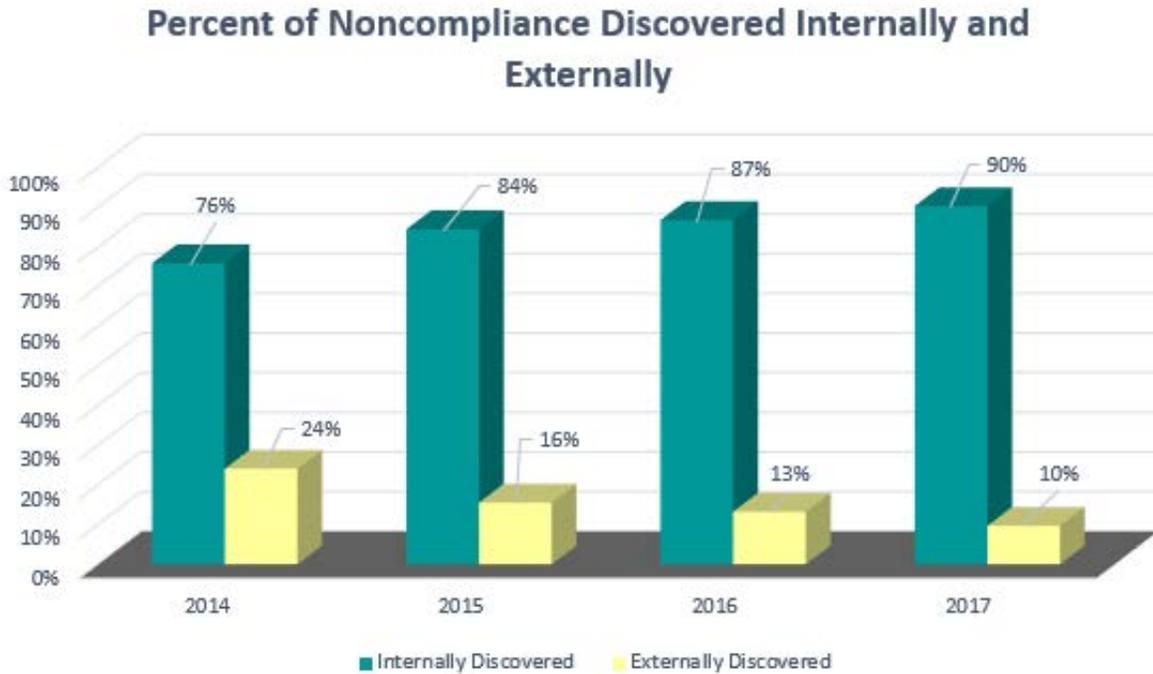


Figure A.5: Percent of Noncompliance Discovered Internally and Externally by Year

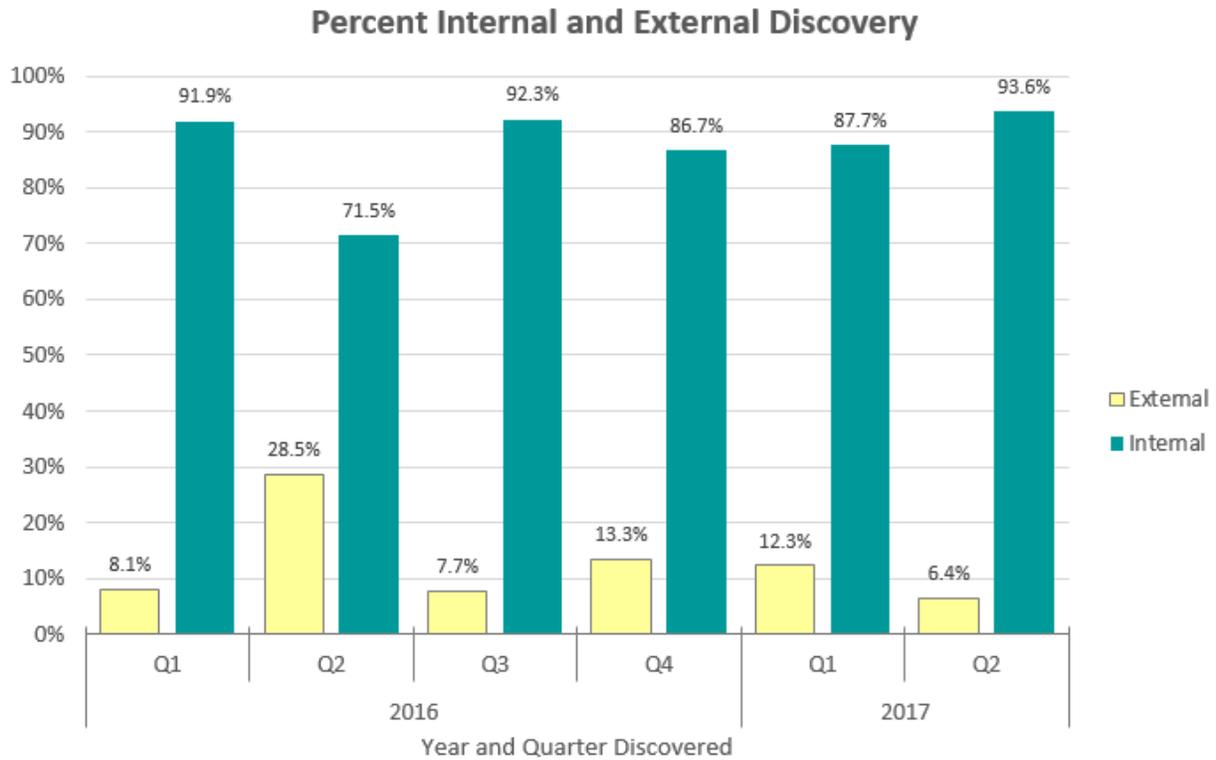


Figure A.6: Percent of Noncompliance Discovered Internally and Externally by Quarter

### Internally-Discovered Noncompliance in 2017

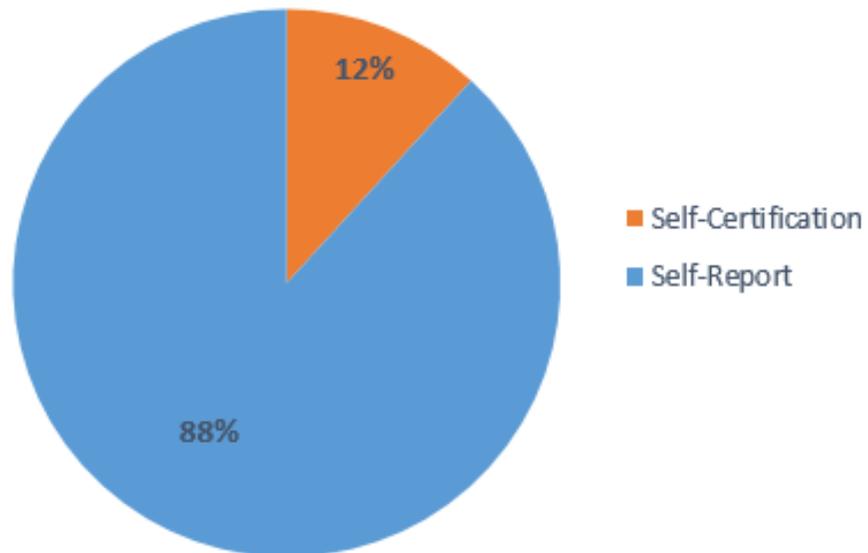


Figure A.7 Internally-Discovered Noncompliance in 2017

## Registered Entities Self-Reporting Noncompliance in 2017

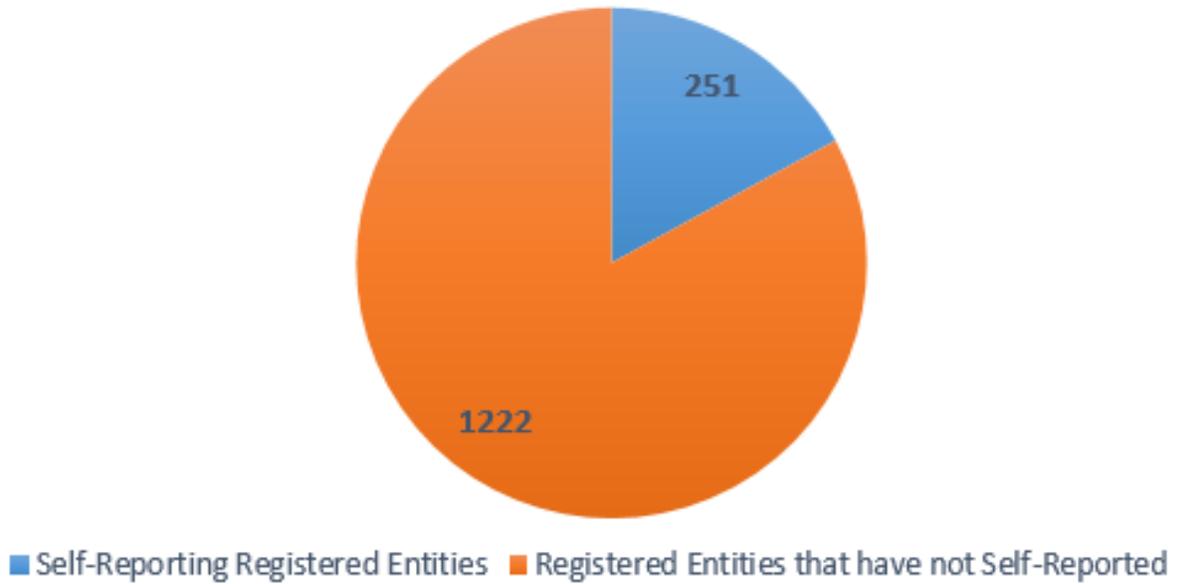


Figure A.8 Registered Entities Self-Reporting Noncompliance in 2017

### Self-Logging Utilization

There are 65 registered entities participating in the Self-Logging program across all eight REs.

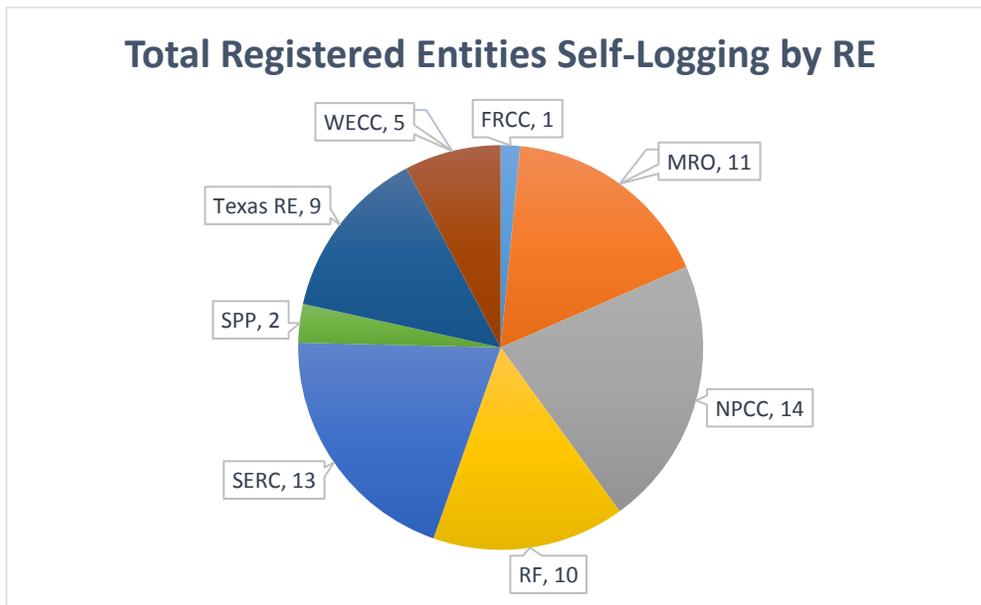
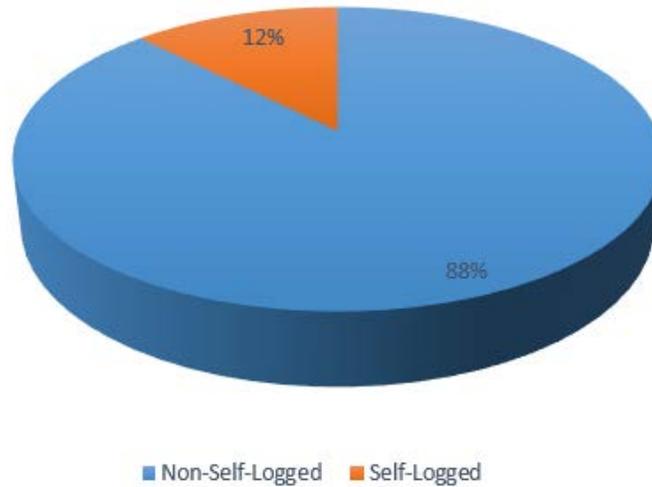


Figure A.9: Number of Self-Logging Entities per Region

**Percentage of Self-Logging and CEs**

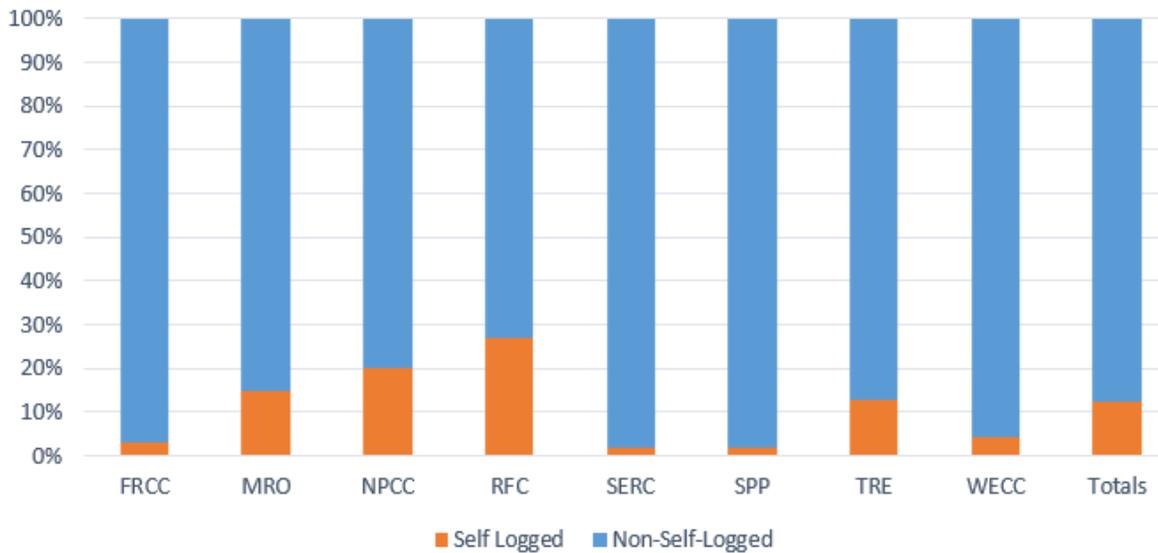
The percentage of CEs that are self-logged did not change substantially from the previous quarter at 13 percent.

**Percentage of Self-Logged Compliance Exceptions Since June 2014**



**Figure A.10: Percentage of Self-Logged CEs since June 2014**

**Percentage of Self-Logged CEs Since June 2014**

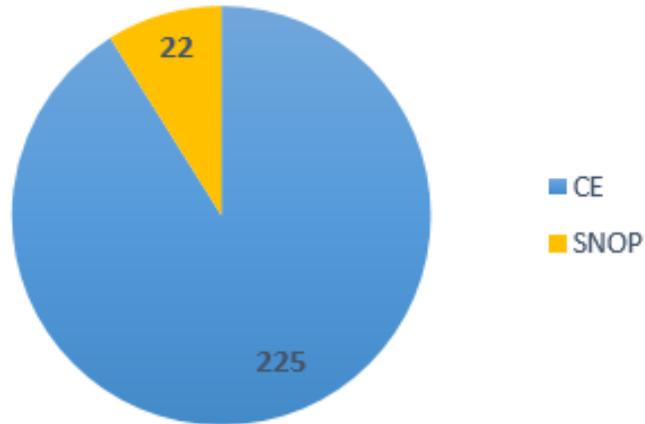


**Figure A.11: Percentage of Self-Logged CEs since June 2014 by RE**

**Use of CEs for Minimal Risk Issues**

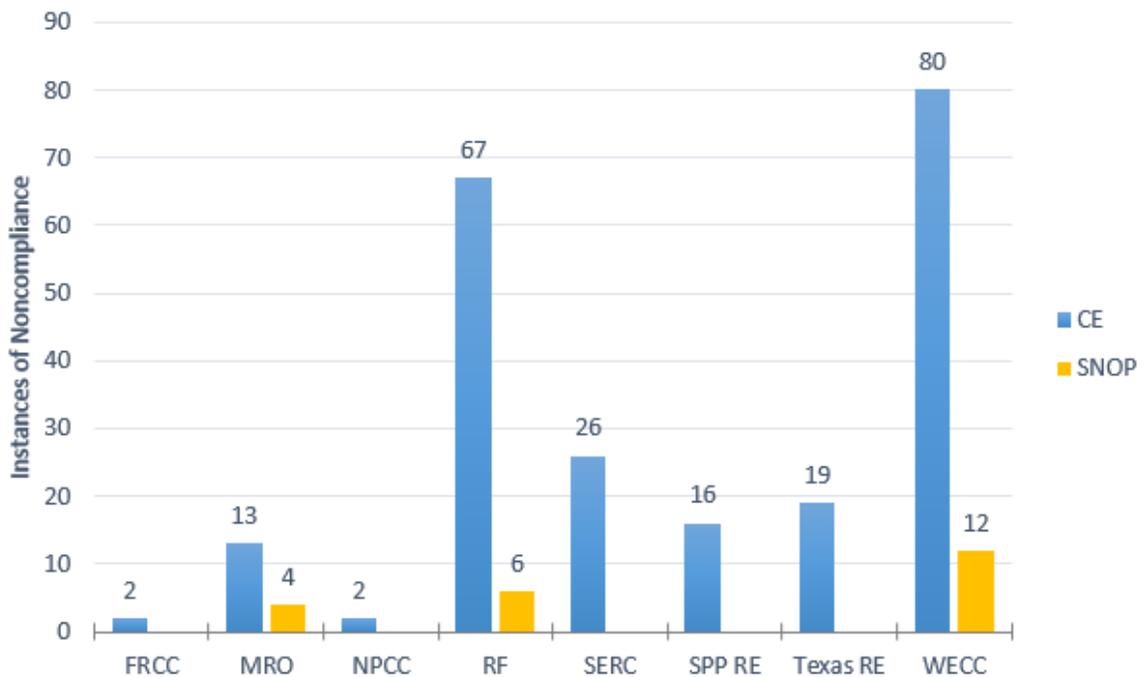
The charts below review the number of minimal risk noncompliance processed in Q2 2017. Figure A.12 shows the total across the ERO Enterprise by disposition type. A.13 shows the total by RE. Figure A.14 shows the disposition type in Q2 2017 by RE.

**Minimal Risk Noncompliance Processed Q2 2017**



**Figure A.12: Minimal Risk Noncompliance Processed in Q2 2017**

**Minimal Risk Noncompliance by Region Q2 2017**



**Figure A.13: Minimal Risk Noncompliance Processed in Q2 2017 by RE**

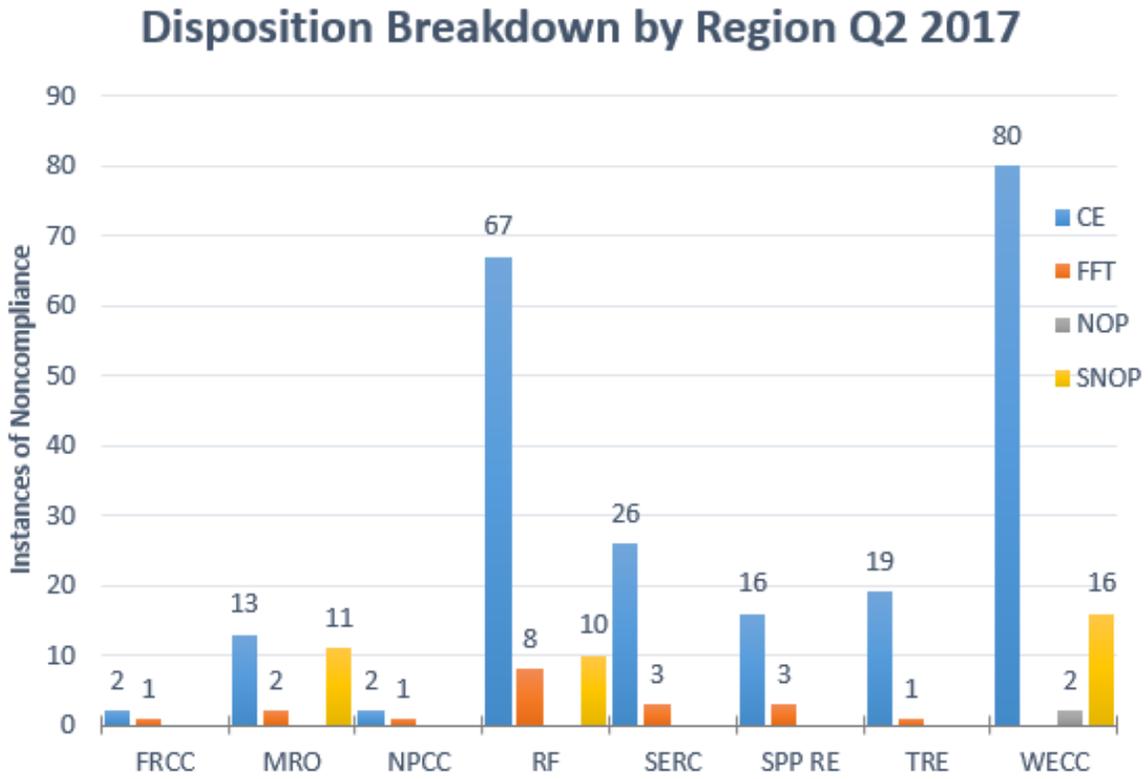


Figure A.14: Disposition Type of Noncompliance Processed in Q2 2017 by RE

### Most Violated Standards Discovered in 2017

In addition to having the highest frequency of noncompliance in 2017, 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.<sup>25</sup> In addition, MOD-025, PRC-019, and PRC-024 were newly effective July 1, 2016, and most REs have seen a steady increase in noncompliance for these Reliability Standards beginning since their mandatory and enforceable date in 2016.



**Figure A.15: Most Violated Reliability Standards Discovered in 2017**

<sup>25</sup> The high frequency of noncompliance for these specific Reliability Standards is primarily due to these Reliability Standards having requirements that apply to large quantities of assets or numbers of personnel, thus resulting in a higher number of potential areas to experience instances of noncompliance.

## Vegetation Management

There were seven vegetation-related outages in the first quarter of 2017. All seven of the outages occurred on 230 kV transmission lines during inclement weather. The outages were located in SERC, WECC, and FRCC.

The vegetation-related outages in 2017 appear to be on a consistent pace with the total in 2016, and they have been comprised entirely of weather-related Category 3 outages.<sup>26</sup>

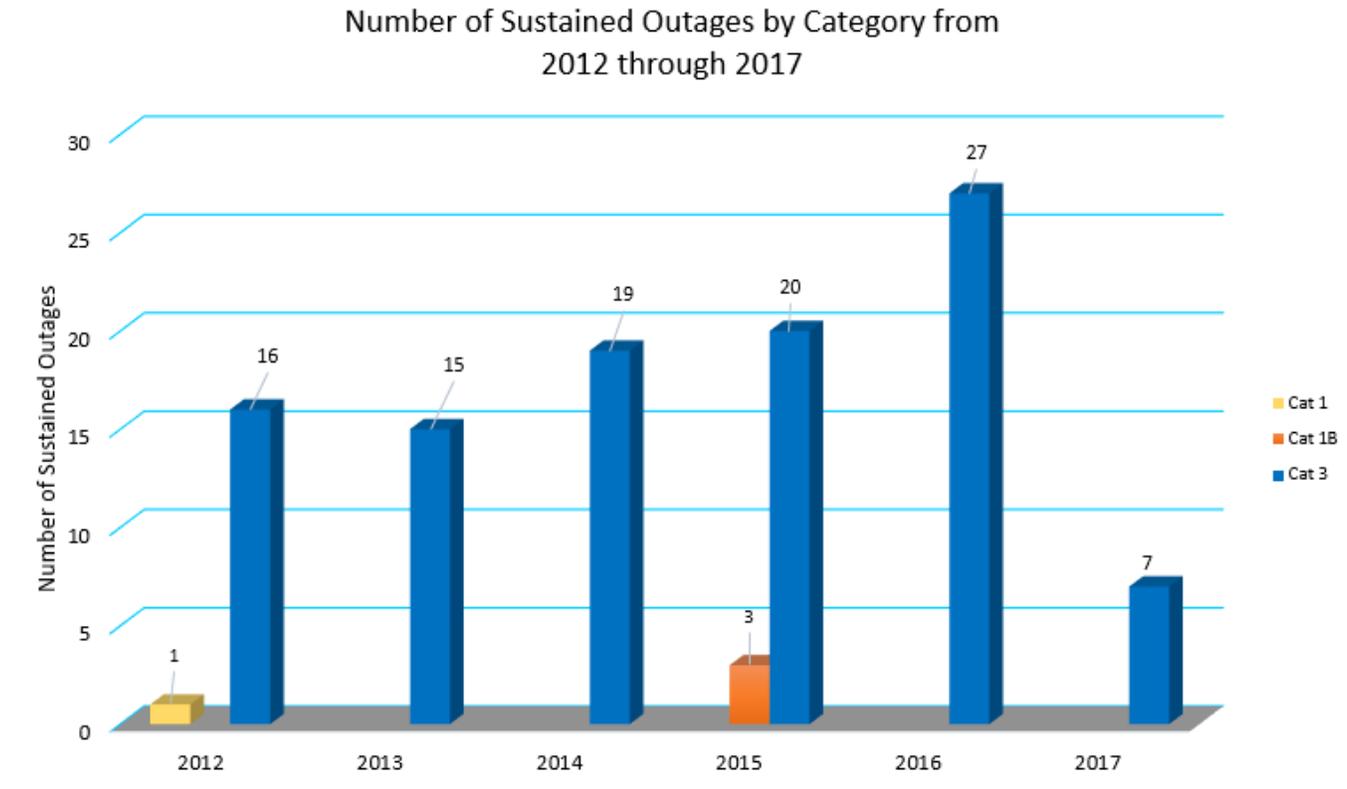


Figure A.16: Vegetation-related Outages by Category

<sup>26</sup> Vegetation-related outage information is consolidated on a delayed quarterly basis. Information related to Q2 2017 will be available in Q3 2017.

## Violations Posing a Serious Risk

Since 2010, NERC has gathered data and regularly monitored violations posing serious risk to the BPS. As shown below, serious risk violations have declined over time, and they continue to account for a small portion of all instances of noncompliance reviewed by the ERO Enterprise.

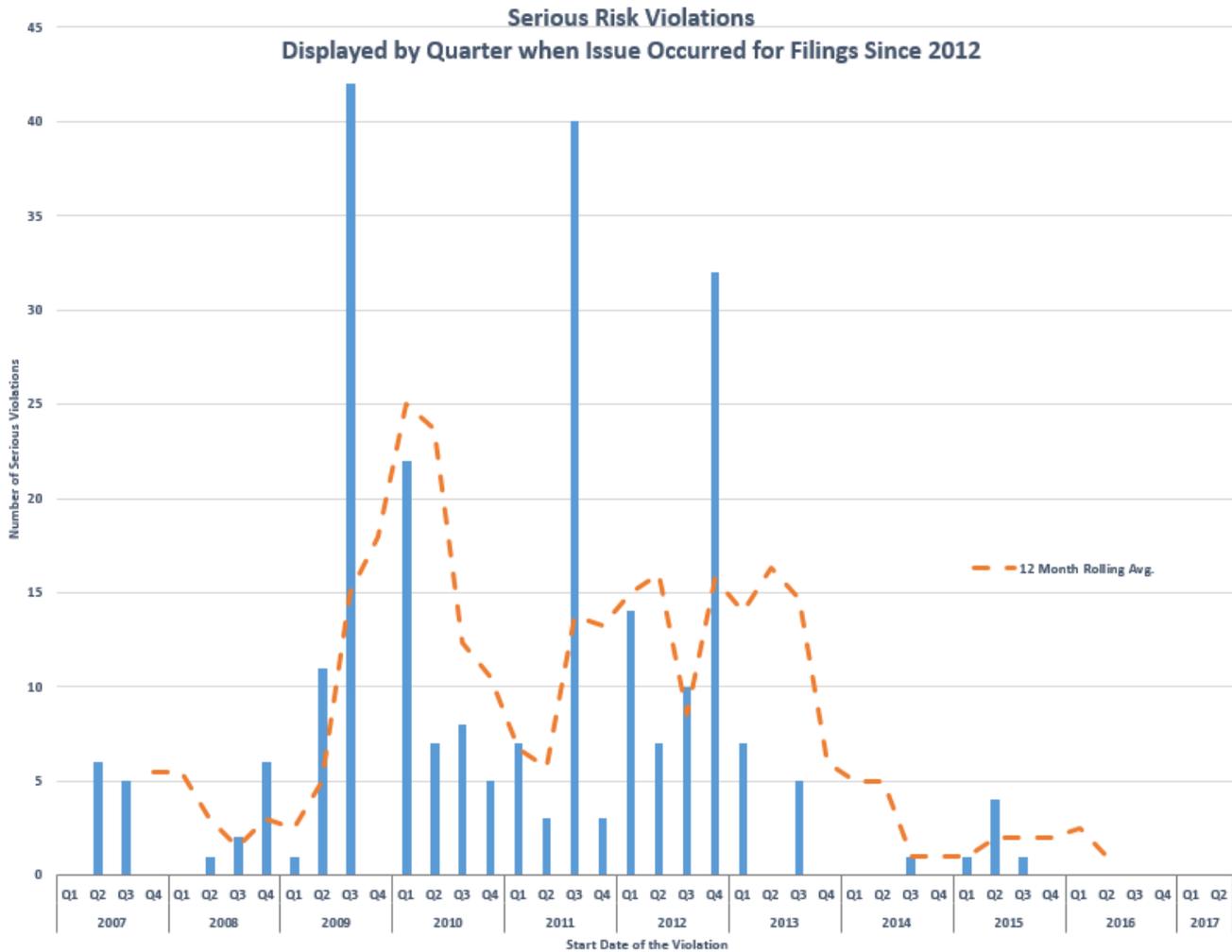


Figure A.17: Serious Risk Violations by when Issue Occurred for Filings post-2012

## Violations with a Measured Reliability Impact

NERC gathers enforcement data using metrics that measure reliability impact to the BPS. Figure A.18 represents the occurrence dates of noncompliance filed since 2014 that had some observed impact on reliability. This is a quarterly count of the number of noncompliance with observed reliability impact, regardless of the risk assessment.<sup>27</sup> The moving averages provide an indicator of the rate of impactful noncompliance. As shown in Figure A.18, impactful noncompliance appears to be decreasing and is better controlled. The impact chart saw only modest additions in mainly Tier 2 violations. The most recent noncompliance with impact was a single Tier 1 violation with a start date in Q2 2016.

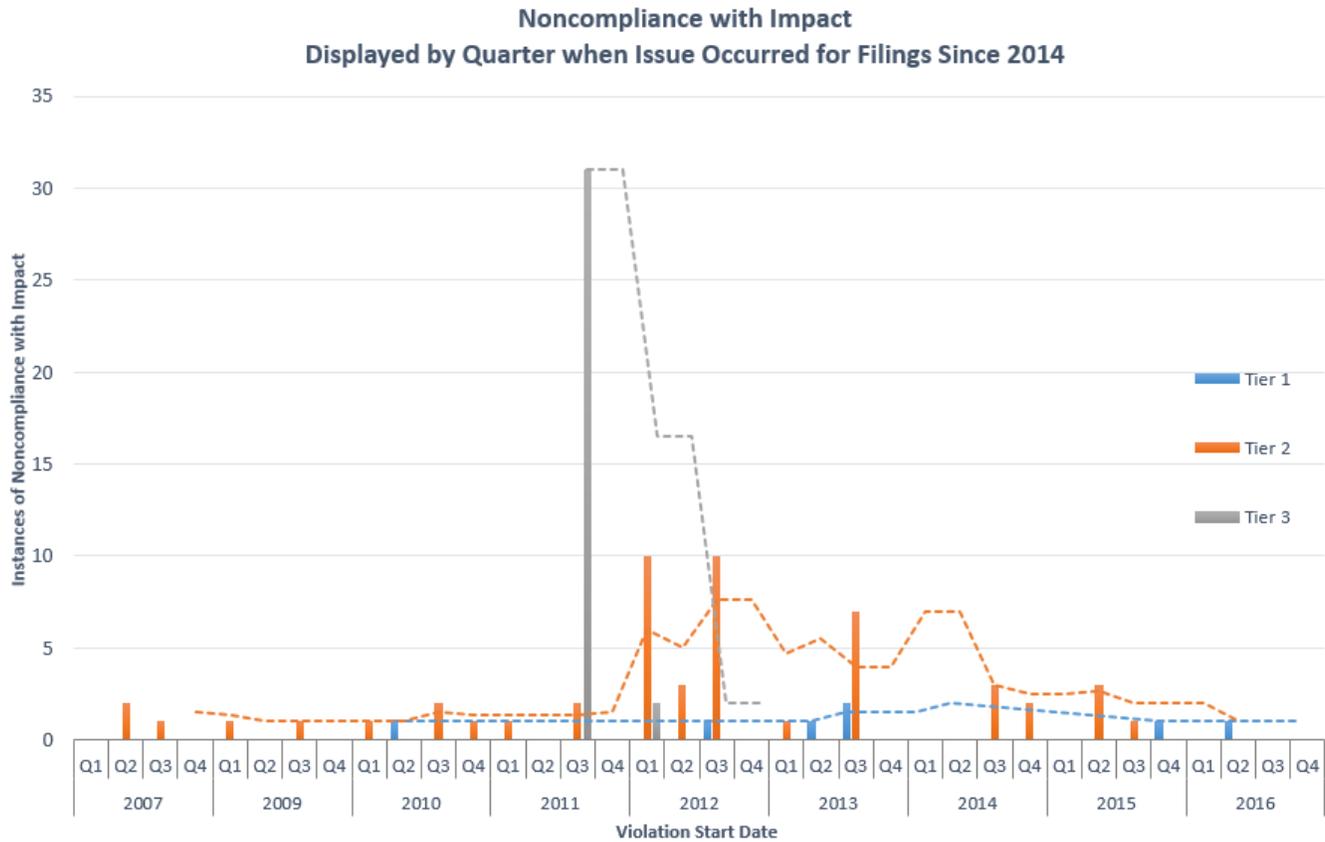


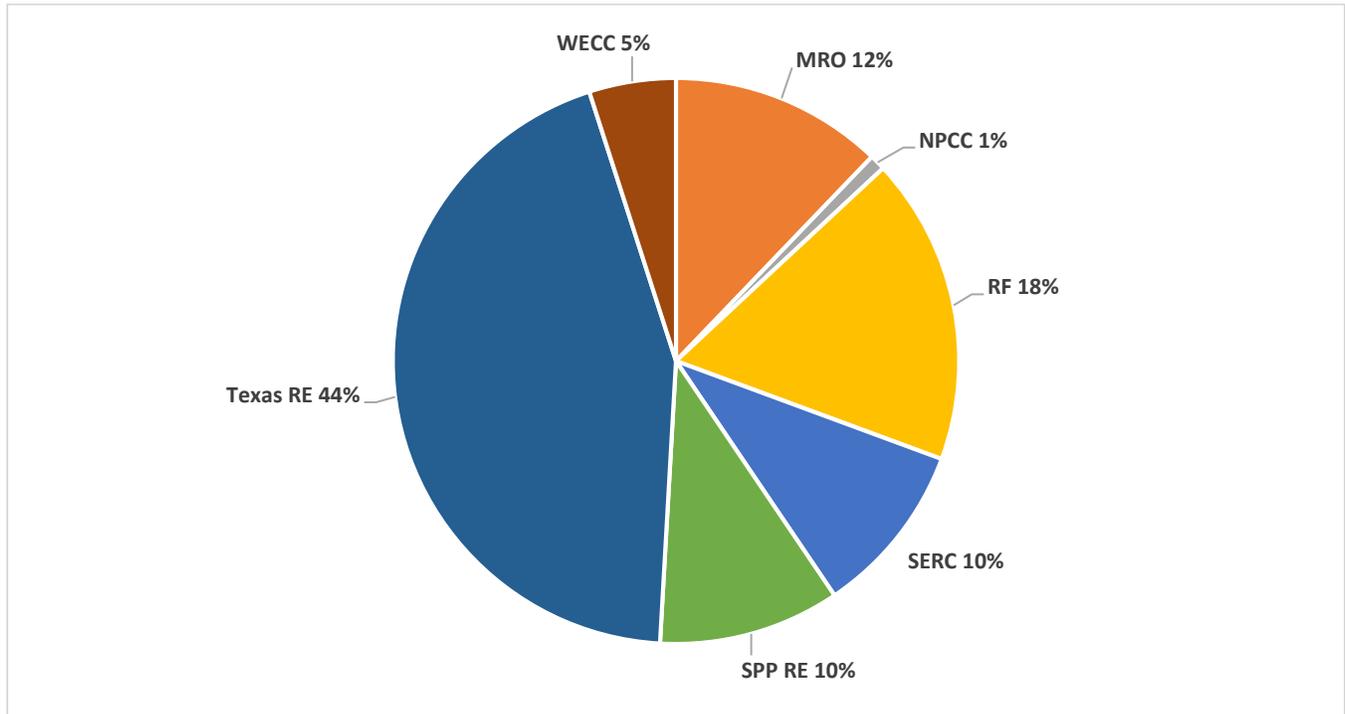
Figure A.18: Noncompliance with Impact by Quarter

<sup>27</sup> Tier 0 observations (no observed impact) are not depicted. Tier 1 are minor impacts of lesser magnitude. Tier 2 are moderate impact noncompliance, such as Interconnection Reliability Operating Limit exceedances or unexpected BES facility trips. Tier 3 violations caused or contributed to a major BES disturbance. Because of the subjectivity inherent in the definitions of observable impacts and the establishment of the tiers, it is expected that the definitions of the tiers will evolve over time based on experience.

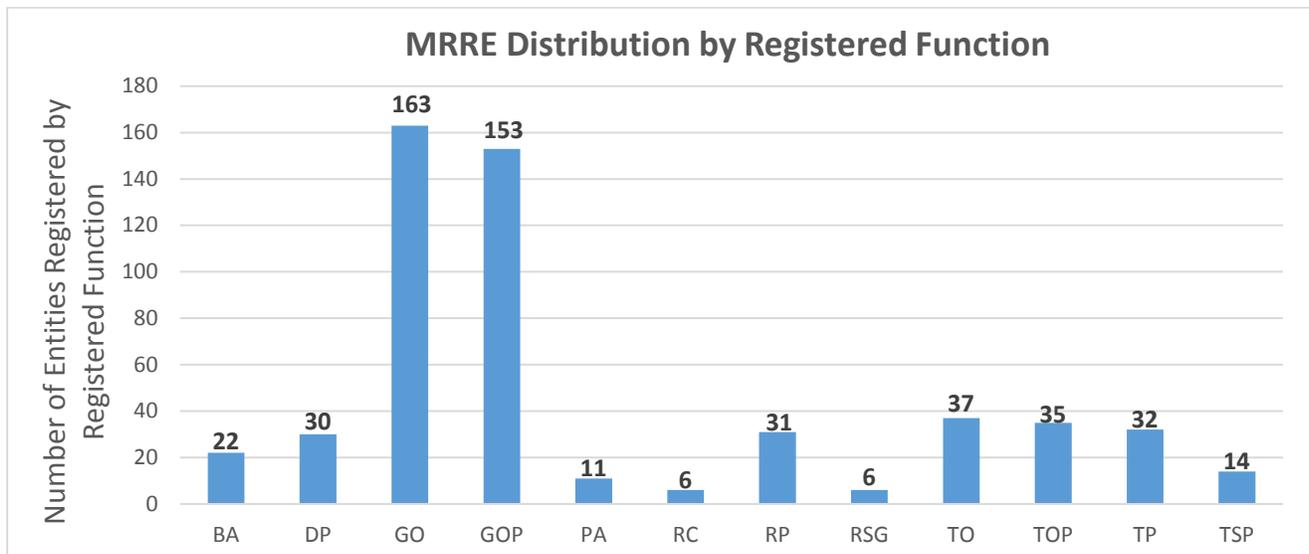
## Appendix B: Compliance Assurance

### Coordinated Oversight Program for MRREs

Figure B.1 represents the percentage distribution of the 222 MRREs by LRE, and Figure B.2 represents the distribution of MRREs by registered function. The registered entities that opted to join the program are registered for various reliability functions in multiple regions.



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

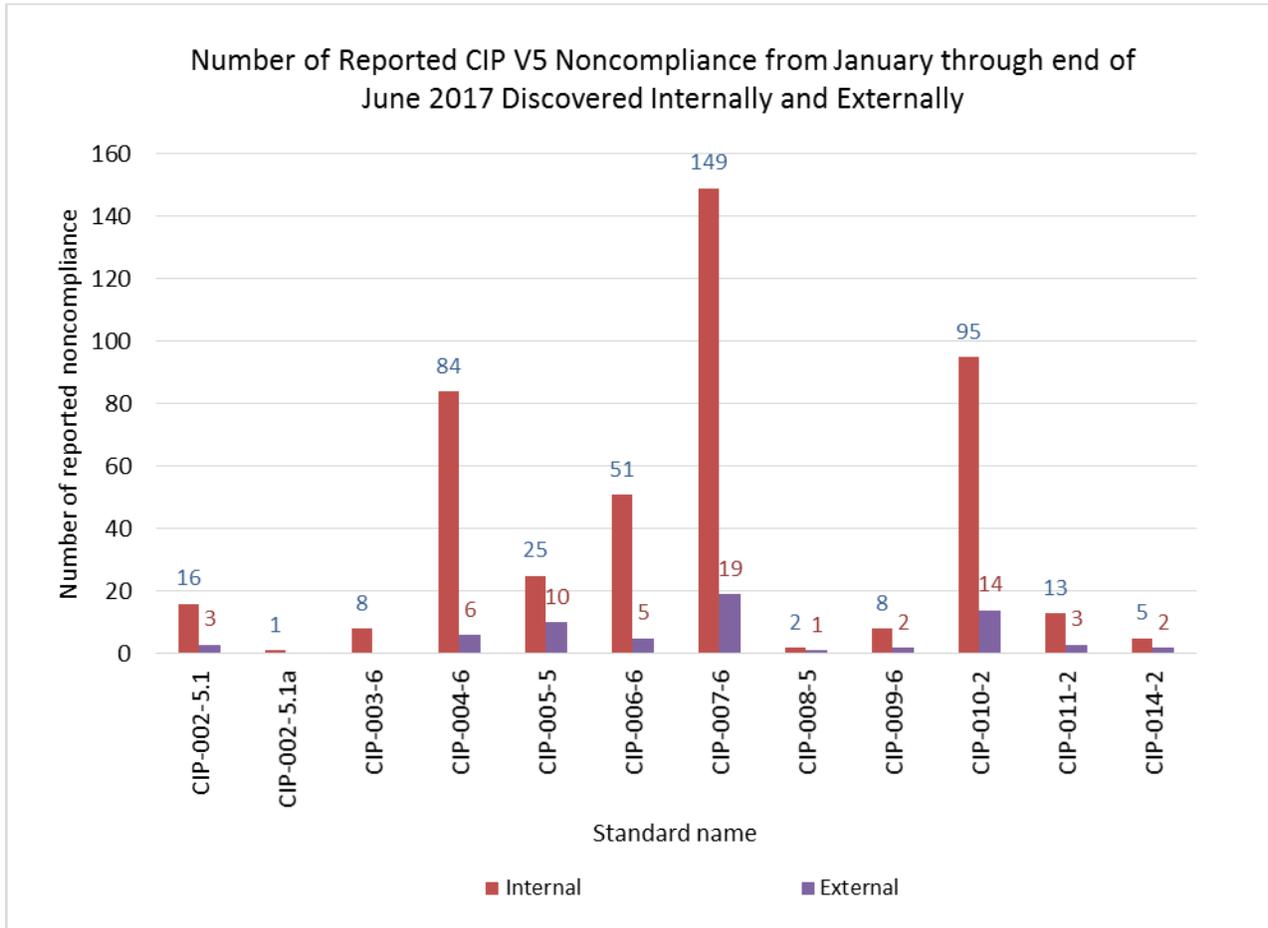


**Figure B.2: Registered Entities from All Registered Functions in Coordinated Oversight<sup>28</sup>**

<sup>28</sup> Each bar represents the number of registered entities by function in the Coordinated Oversight Program for MRREs.

## CIP

Figure B.3 reflects the noncompliance data on the new CIP V5 NERC Reliability Standards.



**Figure B.3: Total CIP V5 New Noncompliance Discovered Internally and Externally**

## ERO Enterprise Completion of Initial IRAs

The chart below identifies the number of IRAs completed by each RE. Since beginning the assessments, the REs have completed 975 IRAs for the 1,474 registered entities as of Q2 2017.<sup>29</sup> The ERO Enterprise completed IRAs for approximately 66 percent of the total number of registered entities.<sup>30</sup> NERC and the REs anticipate registration changes that will affect overall IRA completion for registered entities. As such, IRA activity prioritization will consider registered functions and registration changes to ensure IRAs are completed.

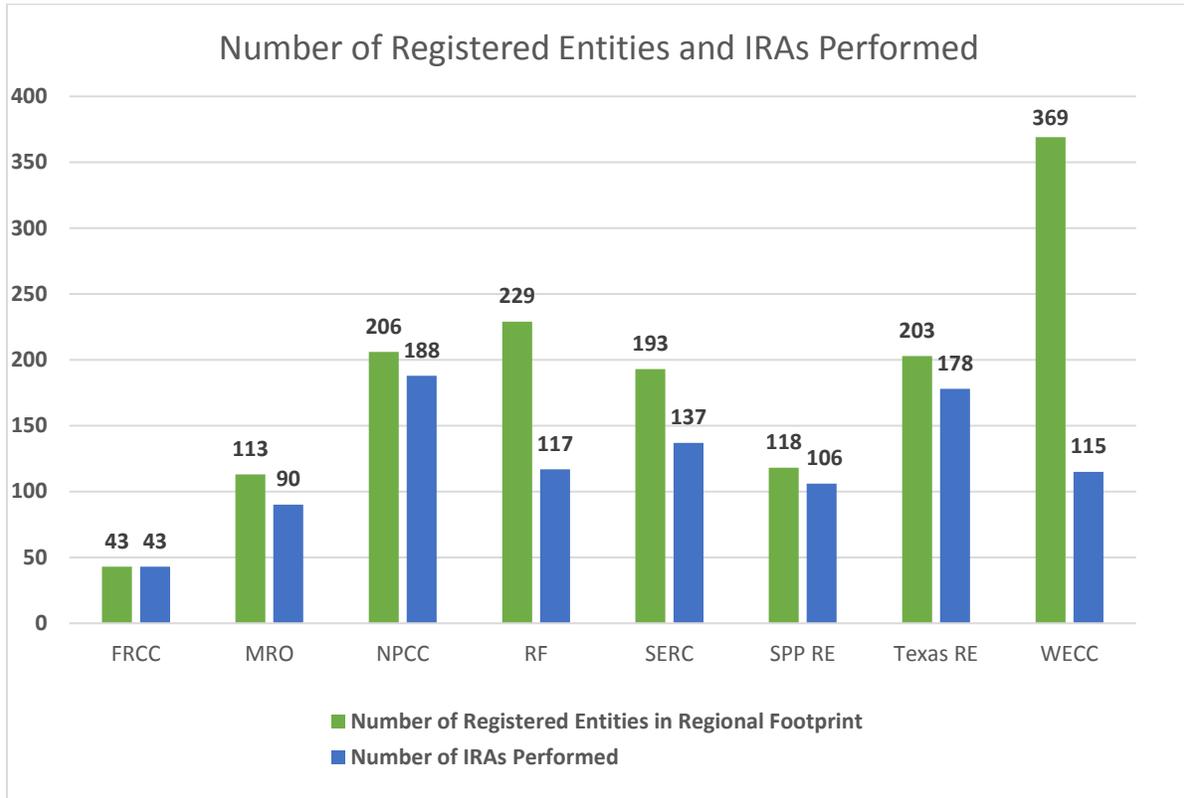


Figure B.5: RE Completion of IRAs

<sup>29</sup> The 1,474 registered entities are based on registration data as of June 16, 2017.

<sup>30</sup> Some of the registered entities are MRREs. As such, until the LRE completes the IRA for that entity, the numbers do not update for the AREs. Therefore, some of the entities included in Figure B.5 are being counted twice until their IRAs are completed.

## Appendix C: Registration

The following charts depict Q2 2017 registration change activity by RE and by function.

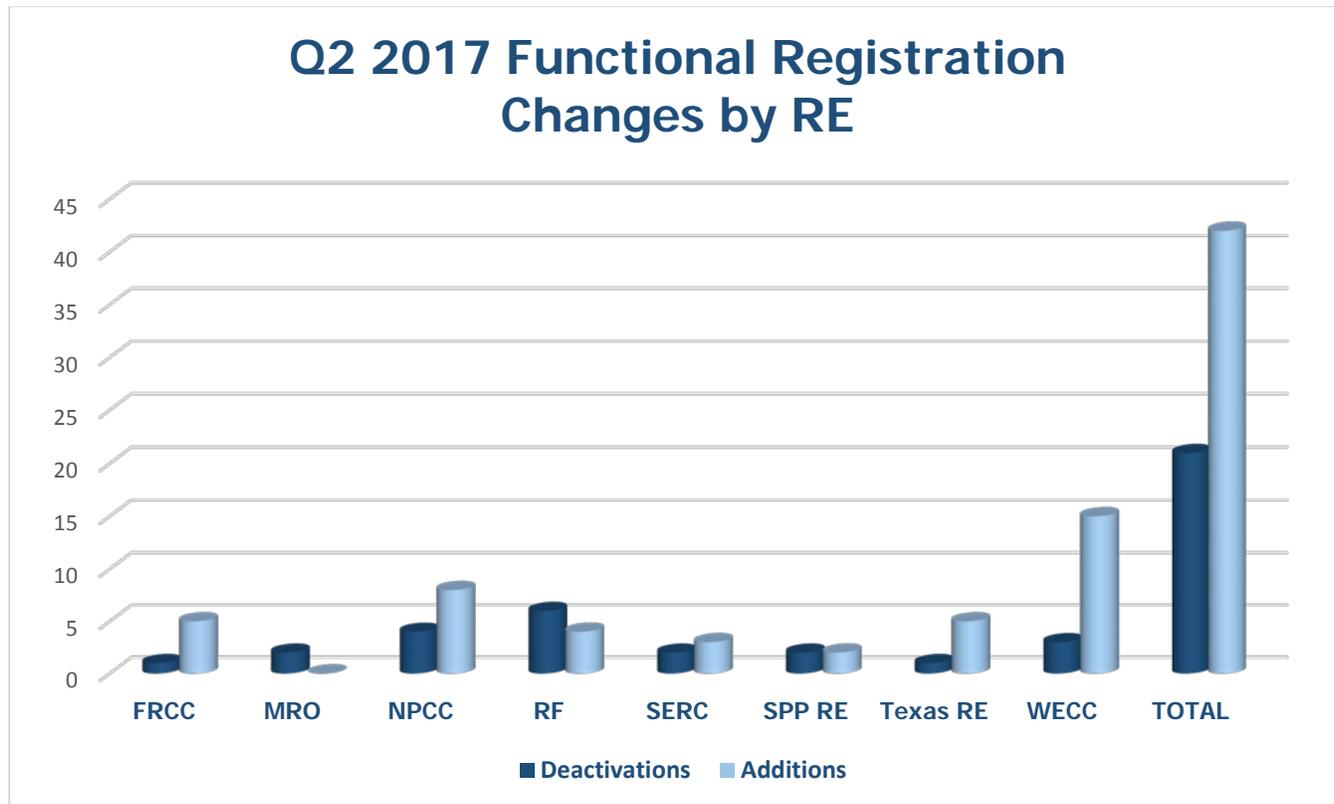


Figure C.1: Registration Change Activity by RE and Total Q2 2017 Changes

	FRCC	MRO	NPCC	RF	SERC	SPP RE	Texas RE	WECC	TOTAL
Deactivations	1	2	4	6	2	2	1	3	<b>21</b>
Additions	5	0	8	4	3	2	5	15	<b>42</b>

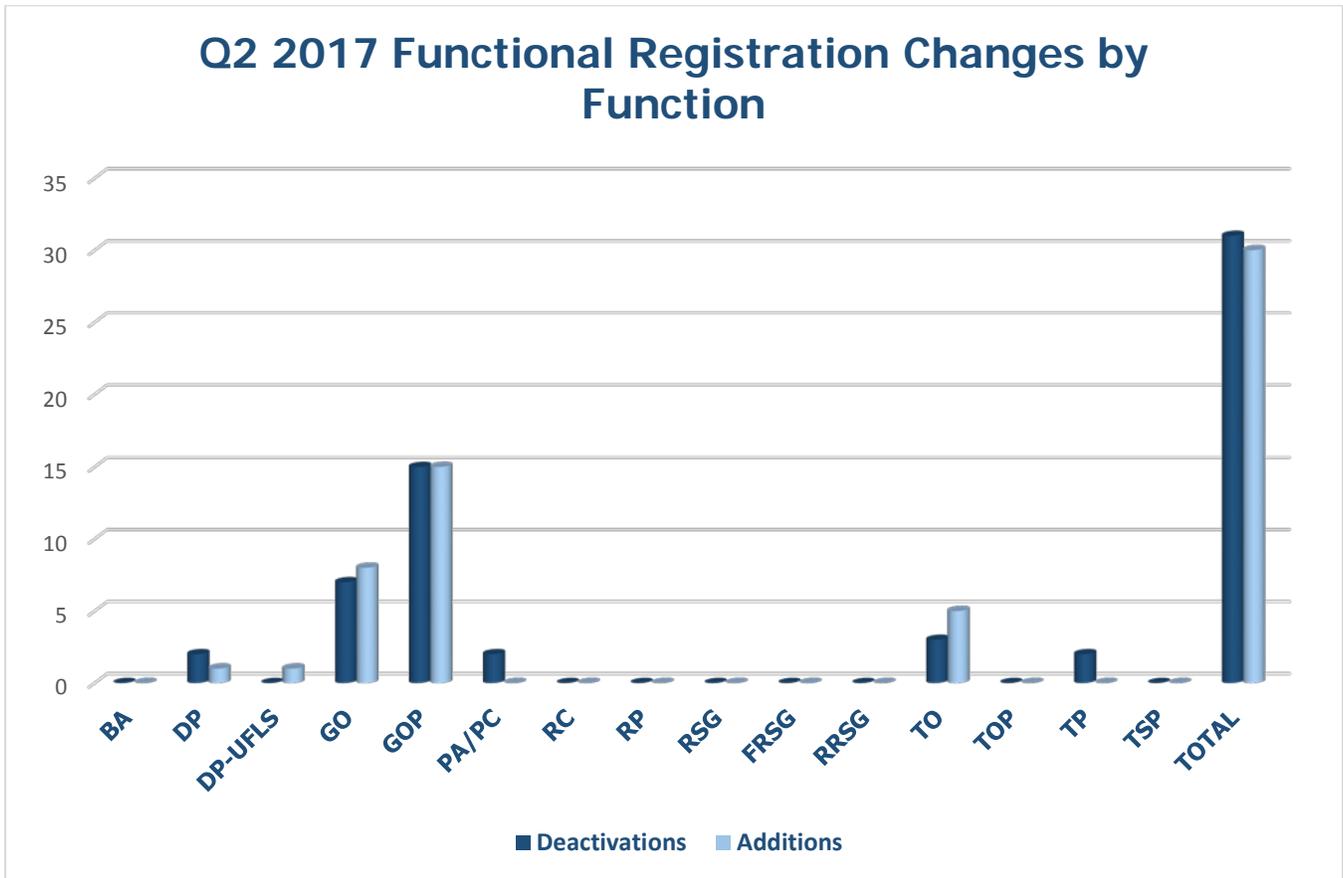


Figure C.2: Q2 2017 Registration Change Activity by Function

Table C.2: Q2 2017 Registration Change Activity by Function														
	BA	DP	DP-UFLS	GO	GOP	PA/PC	RC	RP	RSG	TO	TOP	TP	TSP	TOTAL
<b>Deactivations</b>	0	2	0	7	15	2	0	0	0	3	0	2	0	<b>31</b>
<b>Additions</b>	0	1	1	8	15	0	0	0	0	5	0	0	0	<b>30</b>

The following table shows the basis for Q2 2017 registration changes. NERC seeks justification from each RE when approving registration change activity.

Table C.3: Q2 2017 Registration Change Basis	
Compliance Responsibility Assumed by Another Registered Entity	6
Consolidated to Another Mutually-owned	3
Facility Shut Down	3
Sold to Another Registered Entity	12
NERC-led Panel Deactivation	1
Determined to not Meet Registration Criteria	6