

Agenda

Compliance Committee

November 8, 2017 | 10:15 a.m. – 11:15 a.m. Central

JW Marriott New Orleans
614 Canal Street
New Orleans, LA 70130

Introduction and Chair's Remarks

NERC Antitrust Compliance Guidelines

Agenda Items

- 1. Minutes* – Approve**
 - a. August 9, 2017 Meeting
- 2. Follow-up Regarding Action Items from Prior Meeting – Discussion**
- 3. Policy Input Regarding ERO Enterprise CMEP Program Alignment Efforts* – Discussion**
- 4. Critical Infrastructure Protection Activities* – 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

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

The Westin Ottawa
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Ottawa, ON K1N 9H4
Canada

Janice B. Case, Chair, called to order the duly noticed meeting of the Board of Trustees Compliance Committee (BOTCC) of the North American Electric Reliability Corporation (NERC) on August 9, 2017, at approximately 11:15 a.m. Eastern, 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

NERC Staff

Charles A. Berardesco, Senior Vice President, General Counsel, and Corporate Secretary
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
Tobias Whitney, Senior Manager, Critical Infrastructure Protection Physical and Cyber Security Assurance

Regional Entity Staff

Florida Reliability Coordinating Council

Linda Campbell, Vice President Compliance, Enforcement, and Reliability Performance

Midwest Reliability Organization

Sara Patrick, Vice President Compliance Monitoring and Regulatory Affairs

Additional Attendees

Patti Metro, Compliance and Certification Committee Chair

Introduction and Chair's Remarks

Ms. Case reported on the June 15, 2017, and August 8, 2017, Executive Sessions. She highlighted a registered entity presentation on establishing an effective Critical Infrastructure Protection (CIP) compliance program.

NERC Antitrust Compliance Guidelines

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

Minutes

Upon motion duly made and seconded, the BOTCC approved the May 10, 2017, meeting minutes as presented.

Follow-up Regarding Action Items from Prior Meeting

Ms. Case explained that the Consistency Framework to address ERO Enterprise consistency issues in a structured manner has been rebranded to ERO Enterprise Program Alignment to more accurately represent the scope of the ERO Enterprise efforts.

ERO Enterprise Program Alignment Efforts

Mr. McIntyre discussed the ERO Enterprise Program Alignment efforts, including the program's design and examples of alignment activities both completed and ongoing. He described the ERO Enterprise Program Alignment web page, which was developed to facilitate communication regarding alignment activities.

Mr. McIntyre also noted NERC and Regional Entity representatives' coordination with the Compliance and Certification Committee (CCC) members to design approaches and processes to support the program. Ms. Metro, Chair of the CCC, moderated a panel on program alignment.

Ms. Patrick described alignment efforts on the development of Inherent Risk Assessments (IRAs). She highlighted the IRA base case study wherein the ERO Enterprise identified 18 common risk factors for registered entities.

Ms. Campbell addressed alignment efforts in the Coordinated Oversight Program for Multi-Region Registered Entities. Development of Coordinated Oversight procedures has been a primary activity in those efforts.

Ms. Mendonça reported on NERC's alignment efforts regarding penalty determinations, including NERC staff's continued oversight of individual penalty determinations and the review of case studies with ERO Enterprise enforcement staff.

CIP Version 5

Mr. Whitney updated the BOTCC on the activities and observations to date regarding the ERO Enterprise's implementation of CIP Version 5. He noted that the rate of noncompliance has not increased to scale with the increase in the number of facilities within the scope of CIP Version 5 when compared to the number of Critical Assets within the scope of CIP Version 3.

He also discussed focusing on security controls and emerging threats in the 2018 CIP monitoring and outreach program.

Compliance Monitoring and Enforcement Program Quarterly Report

Ms. Mendonça and Ms. Koch discussed highlights regarding second quarter Compliance Monitoring and Enforcement Program activities. Ms. Mendonça reported on the progress of various enforcement metrics. She explained that mitigation completion rates remain an area of focus, noting that mitigation is complete for over 99 percent of violations discovered prior to 2014. She also noted that self-identification of noncompliance is 93.6 percent.

Ms. Koch updated the BOTCC on various NERC compliance activities. She described the updated Internal Controls Guide and reported on outreach efforts at the NERC Standards and Compliance Workshop.

Adjournment

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

Submitted by,



Charles A. Berardesco
Corporate Secretary

Policy Input Regarding ERO Enterprise CMEP Program Alignment Efforts

Action

Discussion

Background

On October 5, 2017, the Chair of the NERC Board of Trustees requested policy input from the Member Representatives Committee (MRC) with respect to the ERO Enterprise Compliance Monitoring Enforcement Program Program (CMEP) Alignment process (Program Alignment). On November 8, 2017, NERC staff will review the policy input received from the MRC and provide an update on the ongoing Program Alignment efforts.

Critical Infrastructure Protection Activities

Action

Update

Background

In 2017, NERC and the Regional Entities (REs) have focused Compliance Monitoring and Enforcement Program (CMEP) activities on key aspects of the Critical Infrastructure Protection (CIP) Reliability Standards:

- NERC worked with the REs to conduct a study that identified the strengths and challenges of the CIP Version 5 remote access controls in response to FERC Order 822,¹ which was filed in July.
- In September, NERC completed an annual report on the effectiveness of the Technical Feasibility Exception (TFE) program; and
- NERC performed an analysis of whether High Impact Control Centers should receive the CIP-014 protections in response to FERC Order 802² and filed the report in October.

Based on the conclusions from these reports, the following activities will be conducted in concert with industry, the Critical Infrastructure Protection Committee (CIPC), or compliance monitoring activities:

- NERC, in coordination with the CIPC and the Standards Drafting Team, will continue its analysis of remote access controls to ensure effective mitigation of security risks.
- NERC will initiate its stakeholder processes, including the Critical Infrastructure Protection Committee, to identify those High Impact Control Centers that have operational control of BES assets, and – if damaged, rendered inoperable, or seized as a result of a physical attack – could result in instability, uncontrolled separation, or Cascading in an Interconnection; and
- Through continued compliance monitoring activities, NERC will evaluate the use and prevalence of TFEs.

Summary

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

¹ Order No. 822, *Revised CIP Reliability Standards*, 154 FERC ¶ 61,037 at P 64 (2016).

² *Physical Security Reliability Standard*, Order No. 802, 149 FERC ¶ 61,140 (2014). Subsequently, FERC approved a second version of the Reliability Standard, CIP-014-2, to remove the term "widespread" from the requirements, consistent with FERC's directive in Order No. 802. *North American Electric Reliability Corporation*, Letter Order, Docket No. RD15-4-000 (Jul. 14, 2015).

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Agenda Item 5

Compliance Monitoring and Enforcement Program Quarterly Report

Q3 2017

November 8, 2017

RELIABILITY | ACCOUNTABILITY



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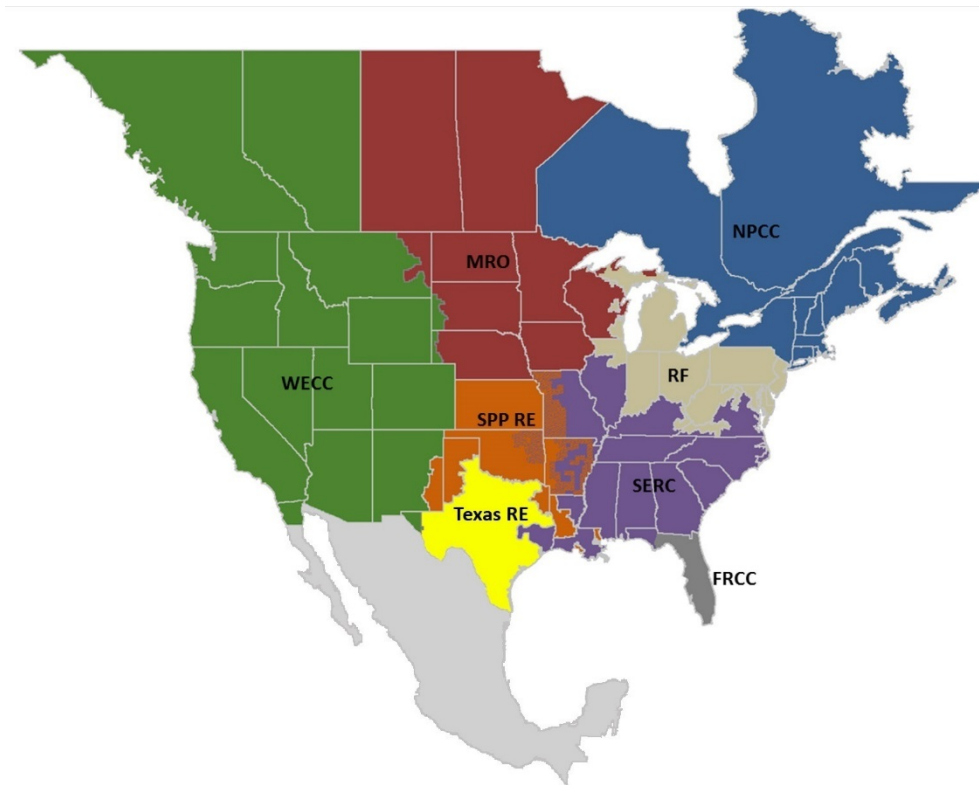
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Preface

The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to assure the reliability 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.

Eight Regional Entity (RE) boundaries divide the North American BPS as shown in the map and corresponding table below.



The highlighted areas denote overlap as some load-serving entities participate in one RE while associated transmission owners/operators participate in another.

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

Introduction

To supplement its annual Compliance Monitoring and Enforcement Program (CMEP) report,¹ NERC provides the Board of Trustees Compliance Committee with quarterly reports that track a number of metrics, as well as 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 Q3 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. In addition, the ERO Enterprise continued its development of the ERO Enterprise CMEP Alignment Process. NERC also continued to focus its enforcement and compliance resources on serious risk noncompliance, repetitive conduct, and entity-specific risks.

The average age of noncompliance in the ERO Enterprise inventory dropped in Q3 2017, from eight to seven 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 focus monitoring activities on risk to the reliability of the BPS.

Highlights from Q3 2017

CMEP Activities

The ERO Enterprise developed the ERO Enterprise CMEP Alignment Process to track (identify and capture), triage (classify, analyze, and prioritize), and provide transparency on (post and report) alignment issues across the ERO Enterprise. In Q3 2017, related activities included developing processes for issue classification and tracking; identifying roles and responsibilities of NERC, the REs, and industry stakeholders; and continuing to consolidate various information sources from across the ERO Enterprise.

Additionally, the ERO Enterprise is updating the ERO Enterprise CMEP Manual to enhance certain terminology and definitions in the Compliance Auditor Handbook. The ERO Enterprise identified an opportunity to establish common terminology around conclusions of compliance monitoring activities, such as Areas of Concern and Recommendations, as well as how audit teams should capture considerations of internal controls during compliance monitoring.

In Q3 2017, NERC posted the [2018 ERO Enterprise CMEP Implementation Plan \(IP\)](#) and conducted an industry webinar to provide an overview of the CMEP IP. The 2018 CMEP IP includes the risk elements that prioritize risks related to the BPS for consideration in compliance oversight planning. NERC identifies risk elements through the review of compliance findings; event analysis experience; data analysis; and the expert judgment of NERC and RE staff, committees, and subcommittees (e.g., NERC Reliability Issues Steering Committee).

The proposed CMEP Technology Program continued its development in Q3 2017. The ERO Enterprise continued outreach regarding the program to various Compliance and Certification Committee (CCC) subcommittees as well as at various RE and NERC workshops. In July 2017, NERC conducted a CMEP Technology Project Stakeholder Webinar. Similar outreach opportunities are expected to continue throughout the project duration. In August 2017, NERC and RE Compliance and Enforcement subject matter experts met for roundtable discussions to identify those areas where there was consensus on the required capabilities of any possible future support tools and consistency in use and implementation. NERC engaged a stakeholder team that includes members from the CCC Alignment Working Group and industry to provide input on the CMEP Technology Project.

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

In fulfilling its obligations to oversee and monitor RE adherence to the CMEP and NERC Rules of Procedure (ROP), NERC performs periodic process reviews to assess RE implementation of various CMEP programs. NERC Enforcement and Compliance staff have begun an oversight process review to evaluate the mitigation processes across the ERO Enterprise. This oversight activity will focus on effective mitigation of noncompliance, which reduces the immediate risk to reliability and reduces the likelihood that the noncompliance will recur and create additional risks.

During Q3 2017, the ERO Enterprise reviewed and endorsed two Implementation Guidance documents, the [MOD-033-1 Methodology Reference Document](#) and the [CIP-004-6 R3 Nuclear Plant Generator Operator Employee Access to NERC Transmission Owner Sites-personnel risk assessments](#).

With the ERO Enterprise adoption of the Compliance Guidance Policy in 2015, NERC staff began reviewing existing legacy guidance documentation, including Compliance Application Notices and Compliance Bulletins. NERC intends this review to determine whether those guidance documents are still relevant or should be retired. Possible reasons for retirement include that the guidance is no longer applicable to the effective Reliability Standards, is outdated, or NERC's ROP already addresses the information. NERC plans to complete its review in Q4 2017 and will convert any remaining relevant legacy guidance into CMEP Practice Guides or include in other procedural material (e.g. CMEP IP, NERC's ROP, etc.) beginning in Q1 2018.

Enforcement

NERC filed four Full Notices of Penalty (NOPs)² in Q3 2017, covering 63 violations of the Critical Infrastructure Protection (CIP) Reliability Standards and 18 violations of the Operations and Planning (O&P) Reliability Standards. The Full NOPs included a combined penalty amount of eight hundred fifty thousand dollars (\$850,000).

In Q3 2017, NERC staff completed its joint annual review of the Find, Fix, Track, and Report (FFT) and CE Programs with FERC staff. NERC staff issued the final feedback letters to REs in Q3. FERC staff issued its 2017 Statement on its Review of FFTs and CEs, noting the continued effectiveness of the programs. The results of the review are available in the [2017 Annual FFT and CE Report](#) filed with FERC on October 4, 2017.

During Q3 2017, ERO Enterprise staff discussed the Self-Report User Guide and Mitigation Plan Guide with a registered entity focus group to identify improvement opportunities. The focus group suggested updates to the User Guides based on the current operations and systems surrounding the enforcement and mitigation processes at the REs. NERC staff is updating and consolidating the User Guides in accordance with this feedback with a target release date of Q1 2018.

In September 2017, ERO Enterprise Enforcement staff met to work through several cases as part of ongoing training activities. This training focused on discussions of hypothetical violation descriptions, risk assessments, penalties, and proposed mitigation activities.

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

² 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.

Compliance Assurance

In Q3 2017, the ERO Enterprise, in coordination with the CCC, enhanced its [ERO Enterprise Guide for Internal Controls](#). The revised guide incorporates principles for how the use of internal controls supports the reliability and security of the BPS. These enhancements will clarify expectations around registered entity internal control documentation and how the ERO Enterprise provides feedback to registered entities on internal controls.

In September 2017, NERC filed its [2017 Annual Report on Wide-Area Analysis of Technical Feasibility Exceptions](#) (TFEs). The report identified a significant reduction in the quantity of TFEs as the result of Version 5 of the CIP Reliability Standards taking effect.

In Q3 2017, NERC also filed with FERC its analysis of the [Physical Security Protection for High Impact Control Centers](#) under the CIP Reliability Standards.

Certification

In Q3 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 program performance. In addition, NERC developed an improved oversight approach. This program is undergoing review and soliciting comments from within executive leadership teams for implementation before the end of 2017.

Registration

During Q3 2017, the NERC-led Review Panel rendered one decision regarding the materiality of a certain entity to the reliability of the Bulk Electric System (BES).

Other registration activities for Q3 2017 included continuing research on how the ERO Enterprise handles and maintains Coordinated Functional Registrations (CFRs). In addition, the ERO Enterprise is identifying possible revisions to the NERC ROP, coordinating with the industry Organization Registration and Certification Subcommittee (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 2017.

Chapter 1: CMEP Activities

CMEP Alignment

Greater alignment across the ERO Enterprise can help maintain focus on the most significant risks to reliability using aligned practices in the monitoring and enforcement of compliance with the Reliability Standards. CMEP Alignment is an opportunity to identify new approaches to consistency and leverage ongoing efforts across the ERO Enterprise.

The CCC also has a role in identifying potential misalignments and framing issues for the ERO Enterprise to consider when planning its program alignment activities. NERC and the CCC are working together to inform industry about the acceptable differences between regions in the CMEP implementation and the Organization Registration and Certification (ORCP) programs.

Among other things, these activities include 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. In addition to other activities in Q3 2017, the CCC formally established a CCC Alignment 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 CMEP Alignment.

To assist registered entities in understanding where acceptable differences exist and to increase overall transparency across the ERO Enterprise, NERC, with the support of the REs, has developed the [Regional Program Information Matrix](#). To inform the Regional Program Information Matrix, the ERO Enterprise gathered and consolidated a description of regional processes for program areas such as CMEP implementation, ORCP, and Self-Logging. The Regional Program Information Matrix does not intend to capture all regional processes, interactions, and timing that may occur for all program activities, nor does it intend to require REs follow the exact processes.³

Finally, as a part of this process in Q3 2017, NERC implemented the [Consistency Reporting Tool](#) using the third party vendor EthicsPoint, which allows stakeholders to submit consistency issues anonymously, if desired. NERC's Consistency Reporting Tool takes the place of the Regional Consistency Process and Tool.

During Q3 2017, NERC launched the [CMEP Alignment](#) web page. This web page provides industry information on the CMEP Alignment process, the CCC Alignment Working Group's participation, a link to the [Consistency Reporting Tool](#), as well as other resources and reference documents. The web page provides transparency on issues the ERO Enterprise has received and the recommendations/resolutions of those issues.

CMEP IP

In Q3 2017, NERC posted the [2018 ERO Enterprise CMEP IP](#). The 2018 CMEP IP includes the risk elements that prioritize risks related to the BPS for consideration in compliance oversight planning. NERC identifies risk elements through the review of compliance findings; event analysis experience; data analysis; and the expert judgment of NERC and RE staff, committees, and subcommittees (e.g., the NERC Reliability Issues Steering Committee). While the 2018 risk elements are identical to 2017, there are updates to the areas of focus that identify some associated NERC Reliability Standards and requirements. The updated document also includes lists of registered functions under registered entities for attention related to the areas of focus and the description of the risk elements. Additional highlights for compliance monitoring and enforcement activities are also within the CMEP IP.

³ NERC ROP and ERO Enterprise guidance are the governing documents. Any differences in regional processes should not cause material effects on ERO Enterprise programs and should support the fair and reasonable treatment of registered entities.

Mitigation Process Review

NERC staff conducts qualitative reviews on various aspects of the risk-based CMEP to evaluate the effectiveness of its various strategies and program execution. In Q3 2017, NERC staff began its oversight process review to evaluate mitigation processes across the ERO Enterprise. This oversight activity will focus on effective mitigation of noncompliance, which reduces the immediate risk to reliability and reduces the likelihood that the noncompliance will recur and create additional risks. The results of the oversight activity may identify and incorporate best practices and guidance or additional enhancements for mitigation programs. The REs submitted requested evidence documents in September 2017. NERC expects to complete the initial review in Q4 2017.

CMEP Technology Project

The proposed CMEP Technology Project is one of four strategic vision and technology programs within the broader ERO Enterprise Systems Initiative. The proposed scope of the CMEP Technology Project includes projects to support a common ERO Enterprise-level CMEP system built from aligned business processes and data integration. 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 the dissemination of information in a manner that would both increase efficiency and help accomplish the ERO's reliability mission.

NERC engaged a stakeholder team that includes members from the CCC Alignment Working Group as well as Member Representatives Committee (MRC) to provide input on the CMEP Technology Project based on industry's experiences with current CMEP systems. The team met in Q3 2017, provided input on the CMEP Technology Project request for proposal, and addressed security considerations.

The CMEP Technology Project was discussed at the August 2017 NERC Board meeting, and various board committees discussed the project over the last few months. The Board is scheduled to approve the CMEP Technology Project at the November 2017 meeting.

Coordinated Oversight Program for Multi-Region Registered Entities

The ERO Enterprise approved two registered entities into the Coordinated Oversight Program, taking the total count of registered entity participation to 224.⁴ Refer to Appendix B for additional supporting details on the Coordinated Oversight Program.⁵

2017 MRRE Coordinated Oversight Effectiveness Survey

The ERO Enterprise initiated a stakeholder survey in 2016 as one measure of the effectiveness of the ERO Enterprise in executing coordinated oversight of Multi-Region Registered Entities (MRREs). The ERO Enterprise will use a follow-up survey scheduled for completion in Q4 2017 to identify progress and effectiveness of the program as well as opportunities to improve the Coordinated Oversight Program.

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 Q3 2017, NERC provided additional details in response to the questions from NERC's Internal Audit department.

⁴ 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.

⁵ Information on the Coordinated Oversight of MRREs Program is available at: <http://www.nerc.com/pa/comp/Reliabilitypercent20Assurancepercent20Initiative/Coordinatedpercent20Oversightpercent20MRREpercent20FAQ.pdf>

Standards and Compliance Workshop

NERC held the Standards and Compliance Workshop in July 2017 in New Orleans, Louisiana. As one example of CMEP topics covered, NERC staff facilitated a panel discussion on operationalizing internal controls presented by the Chief Compliance Officer of General Electric and three registered entities. In addition, the workshop included updates on the Coordinated Oversight Program for MRREs, CIP Version 5, and CIP-014 Physical Security. NERC and RE Enforcement staff presented on risk assessment and root cause evaluations. Approximately 400 participants attended the two-day workshop in-person and via Cisco WebEx.

Chapter 2: Enforcement Oversight

Quarterly Enforcement 2017 Metrics Highlights

The following quarterly enforcement metrics updates are current as of the end of Q3 2017 (September 30, 2017):⁶

Full NOP Summaries

NERC filed four Full NOPs in Q3 2017 with a combined penalty amount of eight hundred fifty thousand dollars (\$850,000). These Full NOPs included 8 serious, 43 moderate, and 30 minimal risk violations. One of these Full NOPs involved an event on the BES that included loss of customer load. Three of these Full NOPs involved registered entities with inadequate internal controls and poor compliance culture. Two of the Full NOPs involved prior failures to prevent recurrence of violations. One Full NOP emphasized the registered entity's lack of cooperation and failures to submit Mitigation Plans in a timely manner, as well as failures to provide adequate evidence of completion of Mitigation Plans.

Out of 255 instances of noncompliance posing a minimal risk to the reliability of the BPS processed during Q3 2017, the ERO Enterprise treated 211 (83 percent) as CEs. The ERO Enterprise processed the remaining instances of noncompliance posing a minimal risk as Spreadsheet NOPs (SNOPs) and Full NOPs.

In Q3 2017, most REs saw a continued increase in noncompliance for the newly effective MOD-025, PRC-019, and PRC-024 NERC Reliability Standards beginning after their mandatory and enforceable date in 2016.⁷

Mitigation Completion

With respect to noncompliance discovered in 2014 and prior in FRCC, MRO, NPCC, SERC, SPP RE, and Texas RE, all mitigation is complete. There are three pre-2014 noncompliance remaining to be mitigated across RF and WECC. Two of the three are from federal entities. This number represents less than one percent (approximately a quarter of one percent) of the total noncompliance discovered in 2014 and earlier.

Caseload

The ongoing use of CEs throughout the ERO Enterprise has contributed to the noncompliance average age of 7.0 months. Eighty-seven percent of the ERO Enterprise noncompliance inventory is less than one year old and only three percent is over two years old.

FRCC, NPCC, RF, SERC, and Texas RE have completed processing of all noncompliance with discovery dates before 2014. There are 14 pre-2014 noncompliance remaining across MRO, SPP RE, and WECC; 13 of these are from federal entities.

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 last several years. The increase has been primarily due to vegetation "fall-ins" to the right-of-way that 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 Q2 2017 is available [here](#).⁸

⁶ Appendix A includes the NERC enforcement metrics-related graphs and charts.

⁷ See Appendix A, Figure A.15 for the most violated NERC Reliability Standards discovered in the first three quarters of 2017.

⁸ Vegetation-related outage information is consolidated on a delayed quarterly basis. Information related to Q3 2017 will be available in Q4 2017.

Compliance Severity Risk Index

One of the ERO Enterprise's measures of success in the [NERC 2017-2020 Strategic Plan](#) is reduced reliability risk from noncompliance. The Compliance Severity Risk Index is a tool to monitor changes in noncompliance risk at the ERO Enterprise level based on a similar metric first developed by MRO.

NERC calculates the index by assigning a value to the noncompliance based on the final risk determination and another value for the discovery method. These values are multiplied to determine the index. The indices for each individual noncompliance discovered in a given year are then stacked to create a single index for the ERO Enterprise. While this metric provides a way to identify trends in the aggregate risk faced by the ERO Enterprise, NERC's use of this metric during 2017 has exposed some limitations and, therefore, it remains a work in progress.

Reduced Repeat Moderate and Severe Risk Violations

As a response to the FERC Five-Year Order, NERC has been measuring the effectiveness of the risk-based CMEP on reducing repeat noncompliance.⁹ In its Five-Year Order, FERC identified repeat noncompliance as a key indicator of the effectiveness of the CMEP in recognizing, mitigating, and preventing violations.

To measure the effectiveness of the risk-based CMEP on reducing noncompliance, NERC reviews moderate and serious risk violations and includes them in one of three categories: noncompliance with no prior compliance history, noncompliance with prior compliance history that does not involve similar conduct, and noncompliance with compliance history that includes similar conduct. NERC continues to identify the underlying causes of repeat noncompliance. NERC has found that the number of noncompliance with similar conduct has remained relatively consistent over the last five years despite the fluctuation in the number of filed violations. Though NERC is still working to determine the underlying cause of repeats, the metric has served to provide NERC with additional visibility into the universe of repetitive noncompliance.

NERC continues to focus on the most significant risks to the BPS using this newly adopted metric measuring repeat moderate and serious risk violations. While some number of repeat noncompliance may be unavoidable as they are the result of high frequency conduct, others may be the result of mitigation that failed to resolve the underlying cause the first time. The ERO Enterprise is focusing its review on this latter set of noncompliance to identify whether failures in mitigation lead to repeat noncompliance. The ongoing joint Enforcement and Compliance review of mitigation practices will allow the ERO Enterprise to explore further the relationship of prior mitigation to noncompliance with aggravating compliance history and identify any additional areas of focus and future actions.

In 2016, NERC filed 111 violations with moderate or serious risk determinations that had prior noncompliance with similar conduct. NERC's target is to reduce the total number in 2017 and the years ahead.

Self-Assessment and Self-Identification of Noncompliance

In Q3 2017, NERC staff began analyzing self-reporting data to identify trends and areas of focus that may further shape compliance and enforcement activities. Registered entities typically self-identify noncompliance in approximately 80 percent of new issues discovered. Self-identification includes Self-Reports (and self-logging), Self-Certifications, and Periodic Data Submittals. The self-identification rate was 86.6 percent in Q3 2017. During the same period, 99 percent of all internally discovered noncompliance was self-reported. In Q3 2017, 150 registered entities submitted Self-Reports covering 395 instances of noncompliance. These 150 registered entities represent approximately 10 percent of the NERC compliance registry.

⁹ "[W]e direct NERC to include an analysis of repeat violations in its next Performance Assessment that will allow NERC, the REs, and FERC to evaluate whether NERC's compliance and enforcement efforts have been effective in improving registered entities' compliance and overall reliability." North American Electric Reliability Corporation, [Order on the Electric Reliability Organization's Five-year Performance Assessment](#), 149 FERC ¶ 61,141 at P 39 (2014).

Prompt and accurate self-reporting is integral to identifying, mitigating, and preventing repeat noncompliance. To encourage this behavior and to provide additional insight into better self-reporting practices, NERC staff is performing additional analyses in 2017.

Self-Logging Surveys for Registered Entities

In 2016, NERC staff performed a review of the Self-Logging Program. NERC staff evaluated the REs' practices related to the program, levels of participation, and identified areas for improvement. As one follow-up activity to identify potential areas for enhancement, NERC staff designed two surveys to registered entities. NERC directed one survey to entities that are not in the Self-Logging Program that may nevertheless have constructive feedback for the program. NERC directed the second survey to certain registered entities that are currently self-logging.

RE staff had the opportunity for review and comment on the survey questions. Individual responses were due at the end of Q3 2017. NERC Enforcement is currently reviewing and discussing the results of the surveys with the REs, along with NERC's recommendations for improvements based upon the provided experiences and responses.

Annual FFT and CE Programs Review

In Q3 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 issued the final feedback letters from this review in Q3 2017. NERC filed the Annual FFT and CE Report with FERC in early October 2017. The report highlights the results of the review and includes additional details about how the program is functioning overall. The results of the 2016 annual review show a consistent improvement in program implementation. They indicate significant alignment across the ERO Enterprise, particularly in the processing and understanding of the risk associated with individual noncompliance.

NERC and FERC staff will begin planning the 2018 annual FFT and CE Programs review in Q4 2017.

Chapter 3: Compliance Assurance

In support of the ERO Enterprise Strategic Plan, NERC monitors each RE's adherence to the Regional Delegation Agreements, the NERC ROP, CMEP, and other relevant NERC guidance, policies, and procedures.

Compliance Monitoring Oversight

NERC Compliance Oversight and Monitoring Priorities

NERC continues its oversight activities under its 2017 compliance monitoring oversight plan, which identified key priorities for NERC monitoring, including 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 compliance-monitoring program. NERC's oversight activities through Q3 2017 involve observing and reviewing sampled audit activities, IRAs, Compliance Oversight Plans (COPs), and internal controls. The sample selection also includes registered entities within the Coordinated Oversight Program for MRREs. Detailed reviews will continue through Q4 2017, with NERC completing these oversight activities in Q4 2017.

TFEs

In September 2017, NERC filed its [2017 Annual Report on Wide-Area Analysis of TFEs](#) with FERC. The report identified a significant reduction in the quantity of TFEs as the result of Version 5 of the CIP Reliability Standards taking effect. In addition, the report describes feedback during audits and outreach events that indicate that Version 5 of the CIP Reliability Standards has enabled an effective means of identifying and protecting critical systems. The breadth of the number and types of assets will make it increasingly important to analyze effectively the BES cyber systems given TFE treatment. NERC will continue to assess the value of the TFE program and the benefits it provides to industry.

CIP-014-2 Filing on High Impact Control Centers

On October 2, 2017, NERC filed with FERC a [CIP-014 Report](#) that assessed whether the CIP-014 Reliability Standard should include all Control Centers with High Impact BES Cyber Systems, as identified and categorized under Reliability Standard CIP-002-5.1a. In Order No. 802, FERC directed NERC to make an informational filing that "addresses whether there is a need for consistent treatment of 'High Impact' Control Centers for cybersecurity and physical security purposes through the development of Reliability Standards that afford physical protection to all 'High Impact' Control Centers." Essentially, FERC requested NERC to assess whether to protect all High Impact Control Centers under Reliability Standard CIP-014-2, not just those primary control centers that physically operate a critical transmission station/substation. NERC analyzed whether backup control centers and control centers other than those that operationally control Transmission stations and substations need physical security protection under Reliability Standard CIP-014-2.

Consistent with FERC's directive, the report provided NERC's assessment that if a High Impact Control Center with operational control of BES Facilities – whether a primary or backup – would be subject to a physical attack, it could have a direct and significant impact on real-time operations and might result in instability, uncontrolled separation, or cascading within an Interconnection. Due to this concern, NERC will initiate its stakeholder processes, including the CIP Committee, to address the findings and recommendations in this report.

The ERO Enterprise will also continue to emphasize the evaluation of physical security controls during compliance monitoring engagements, both under CIP-014-2 and CIP-006-6. Further, the ERO Enterprise will conduct monitoring activities of registered entities with CIP-014 applicability to determine adequacy and appropriateness of resulting risk assessment methodologies and security controls. In addition, the ERO Enterprise will continue to emphasize the evaluation of physical security controls during compliance monitoring engagements, both under CIP-014-2 and CIP-006-6. Furthermore, the ERO Enterprise will conduct monitoring activities of registered entities with CIP-014 applicability to determine adequacy and appropriateness of resulting risk assessment methodologies

and security controls as well as further identify the physical security controls in place and what improvement opportunities exist. This is the next important step toward identifying actions needed to address this risk.

The security threat landscape is constantly changing and requires adaptation and information sharing on how best to address these issues in an effective and efficient manner. The ERO Enterprise will continue working with industry, both through the development of Reliability Standards, increased information sharing through the Electricity Information Sharing and Analysis Center, the development of security guidelines, and training exercises, among others, to enhance the security of the BES.

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, IRA Summary Reports, and post-audit feedback surveys, in-depth reviews of audit report content, and tracking of audit conclusions. Below is a summary of continuous monitoring activities through Q3 2017.

Registered Entity Post-Audit/Spot Check Feedback Surveys

During Q3 2017, registered entities submitted 27 post-audit surveys for audits initiated in 2017 (21 Compliance Audits and 5 Spot Checks) and 2016 (one Compliance Audit). The surveys involved seven of the eight REs. This quarter, NERC concluded that overall, RE audit staff conducted Compliance Audits and Spot Checks in a professional, efficient, and effective manner. From the 27 surveys collected, NERC noted two instances where registered entities did not fully understand how their audit scope related to inherent risks that the registered entity poses to the BPS. 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.

For IRA Summary Reports collected during Q3 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.

Compliance Audit and Spot Check Reports

As of Q3 2017, REs completed 306 compliance engagements.¹⁰ NERC staff reviewed 46 compliance engagement reports to ensure REs are utilizing a common reporting template and adequately justifying findings and determinations. Through its review, NERC has determined the following:

- The 46 compliance engagements resulted in 35 possible instances of noncompliance and 40 areas of concern as well as 163 recommendations to the registered entities involved in the compliance engagement.
- NERC requested additional information from five REs on audit findings and determinations and will work with the RE to enhance documentation and adherence to the ROP where appropriate; and
- Overall, REs are utilizing a common reporting template. Nevertheless, NERC staff identified a training opportunity regarding documenting possible instances of noncompliance and areas of concern more clearly in the reports. NERC staff will continue to review Compliance Audit and Spot-Check reports to inform its training and outreach programs.

¹⁰ Compliance engagement includes Compliance Audits and Spot Checks. Three hundred six compliance engagements include MRRE audits, CIP, and O&P audits for 203 registered entities.

Review of RE Implementation of the Complaint Process

Starting in Q3 2017, and continuing into Q4 2017, NERC is engaging with REs to understand their respective complaint handling process. The purpose of this review will be to evaluate RE alignment with processes described in the NERC ROP.¹¹ NERC will share the outcome of this review with respective REs along with proposed revisions of existing procedures.

Reliability Standards Auditing Worksheets

During Q3 2017, NERC issued a Bulletin announcing a new Reliability Standards Auditing Worksheet for [Reliability Coordination – Monitoring Analysis](#) (IRO-002-5).

IRA and Internal Control Evaluation Completion

During Q3 2017, RE progress toward completion of initial IRAs continues on track according to regional plans within RF, SERC, Texas RE, and WECC.¹² 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 Q3 2017, REs had completed four Internal Control Evaluations; however, REs continue to conduct internal control review activities and implement processes for conducting reviews of internal controls during CMEP activities, such as audits.

¹¹ NERC ROP Section 402-1.2 and Appendix 4C, Section 3.7.

¹² 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

Certification

The Organization Certification Program (OCP) is seeing a trend where registered entities are consolidating Transmission Operator footprints, and individual Energy Management Systems are expanding to include greater visibility into neighboring systems. The trend of registered entities updating their primary and back-up control center facilities continues. Plans for these transitions initiate a review of the already certified and operational entity and constitute the bulk of current OCP activity.

Q3 2017 Certification Completions

During Q3 2017, NERC and the REs conducted two certification reviews and completed no full certifications. There are seven certification reviews planned for Q4 2017.

Registration

NERC-Led Review Panel

In Q3 2017, the NERC-led Review Panel concluded that the City of Pasadena has a material impact on BES reliability and denied Pasadena's request to deactivate its Transmission Owner registration. The NERC-led Review Panel also concluded that Pasadena is required to register as a Transmission Planner in accordance with the NERC ROP Section 501.1.4.3. NERC has posted the final decision publicly on the NERC website [here](#). The NERC-led Review Panel is currently convening over two other cases and expects to render decisions in Q4 2017.

Centralized Entity Registration Process

In Q3 2017, the first major phase of the effort to migrate to a centralized entity registration process continues. This has begun with work to address 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.

Q3 2017 Registration Changes

During Q3 2017, there were 81 registration changes. These changes included 59 activations, 55 of which were Generator Owner/Generator Operator, 1 Transmission Owner, 1 Transmission Planner, 2 Distribution Provider registrations, and 22 deactivations.

Of the 55 Generator Owner/Generator Operator registrations, 18 were wind and six were solar. Of the 22 deactivations, 14 were due to the sale of assets to another registered entity, two were due to facility shutdowns, one was due to compliance responsibility being assumed by another registered entity, and five were due to determination of not meeting the NERC registration criteria.

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

Appendix A: Enforcement

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 as a priority for mitigation completion. Additionally, NERC should accomplish the target for 2016 by the end of 2017.

Time Frame	Required Mitigation	On-going	Progress Toward Goal	Threshold	Target	Progress Since Last Quarter
2014 and Older	9509	23	99.76%	99%	100%	0.05%
2015	723	17	97.65%	85%	90%	1.24%
2016	1139	336	70.50%	70%	75%	14.92%

Including noncompliance discovered in 2017, there are 1,530 instances of noncompliance with outstanding mitigation activities. Of these, 40 have discovery dates in 2015 or earlier. Of these 40, six have expected completion dates in Q4 2017 or 2018, and four have mitigation dates that have passed without NERC receiving notification that the mitigation is complete. Thirty have not submitted expected completion dates, 20 of which were on hold due to a registration appeal at the end of Q3 2017 but which were dismissed in early Q4 2017.

Age of Noncompliance in ERO Inventory

Figure A.1 shows the age of noncompliance from all non-federal entities and only federal entities beyond the November 2014 cutoff.¹³ There has been almost no change in the distribution of the percentages from Q2 2017.

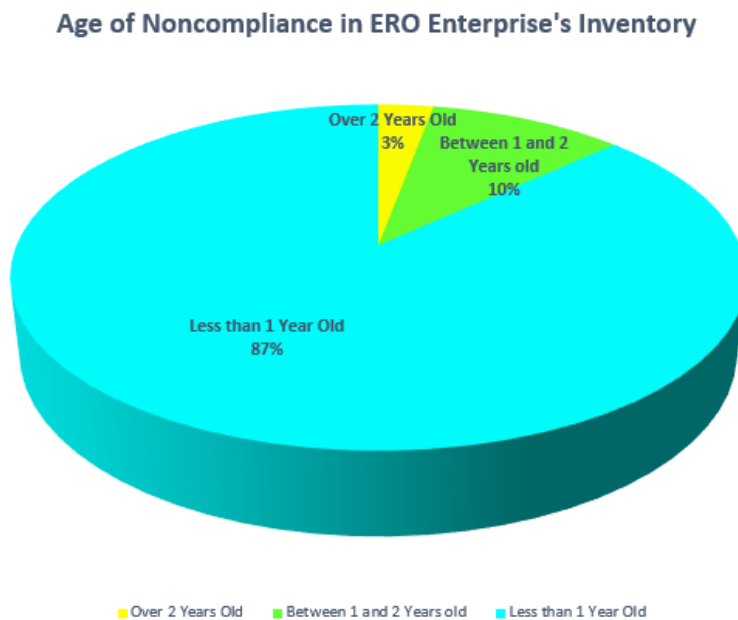


Figure A.1: Age of Noncompliance in the ERO Enterprise Inventory

¹³ 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 Q3 2017 was seven months.¹⁴

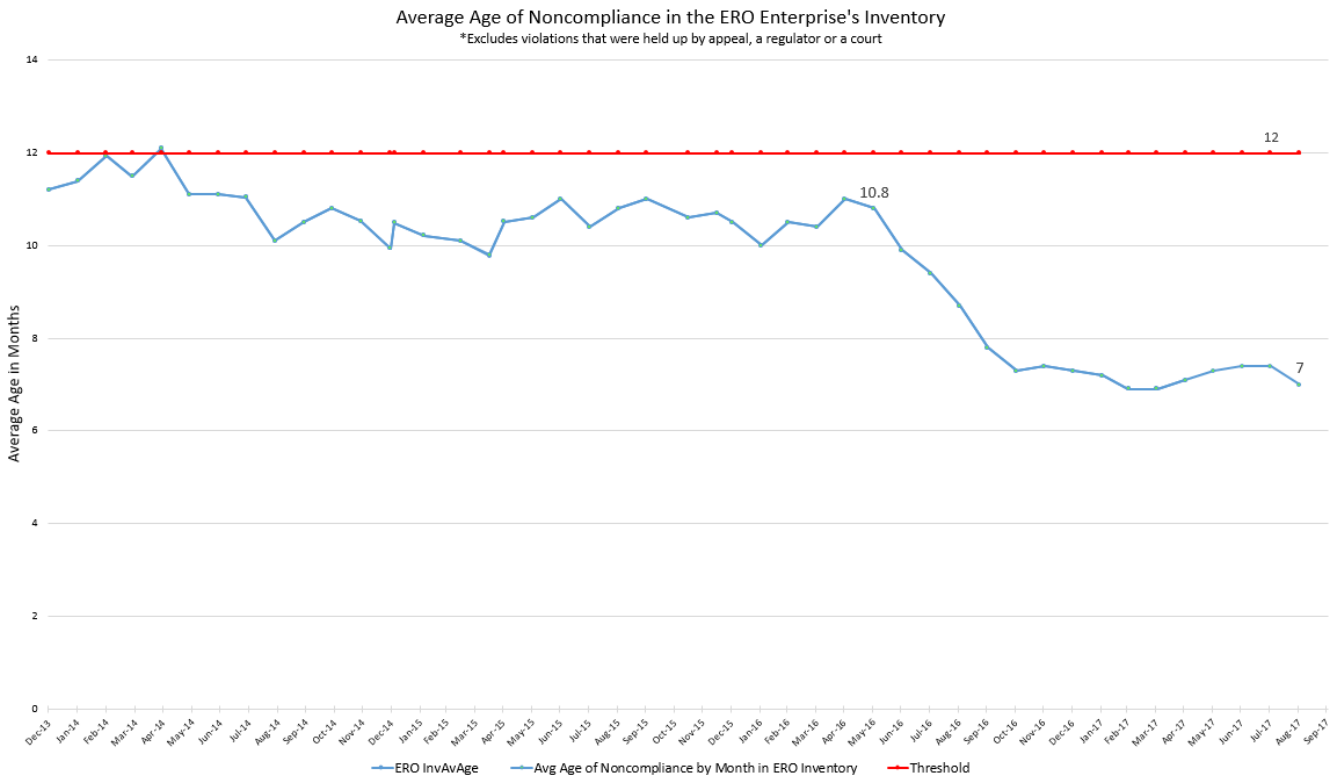


Figure A.2: Average Age of Noncompliance in the ERO Enterprise Inventory

Number of New Noncompliance Discovered in 2017

The number of new noncompliance has continued to increase in Q3 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.¹⁵

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	37	17	23	44	87	218
March	20	4	13	32	33	3	41	76	222
April	4	14	22	33	24	12	10	29	148
May	4	6	14	28	23	12	30	52	169
June	6	6	17	41	43	3	23	41	180
July	6	15	23	39	37	6	29	25	180
August	2	2	15	41	34	8	56	23	181
September	4	0	9	21	28	11	34	16	123
Total	50	53	128	299	273	102	290	383	1578

¹⁴ 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).

¹⁵ 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.

Percentage of Self-Logging and CEs

The percentage of CEs that are self-logged did not change substantially from the previous quarter at 12 percent.

Percentage of Self-Logged Compliance Exceptions Since June 2014

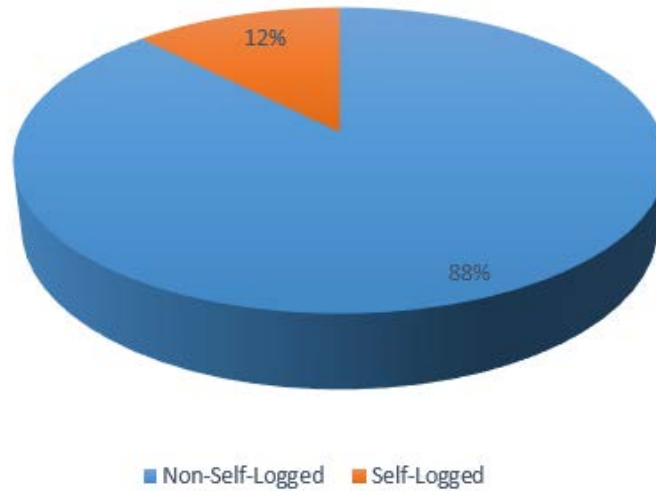


Figure A.3: Percentage of Self-Logged CEs since June 2014

Percentage of Self-Logged CEs Since June 2014

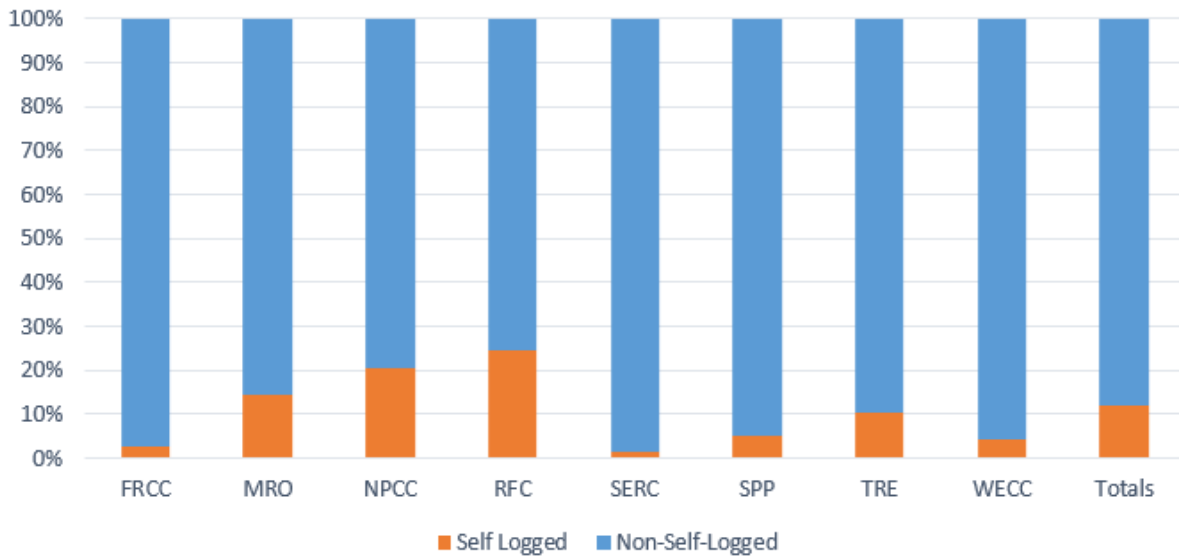


Figure A.4: Percentage of Self-Logged CEs since June 2014 by RE

Disposition of Noncompliance

The charts below review the number of minimal risk noncompliance processed in Q3 2017. Figure A.5 shows the minimal risk total across the ERO Enterprise by disposition type, and A.6 shows the total minimal risk by RE. Figure A.7 shows the disposition type in Q3 2017 by RE for all instances of noncompliance.¹⁶

Minimal Risk Noncompliance Processed Q3 2017

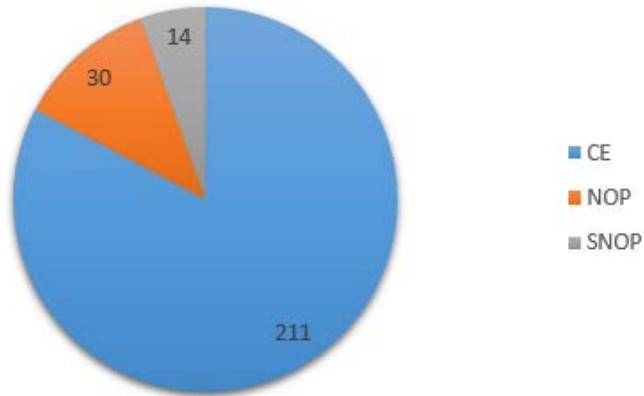


Figure A.5: Minimal Risk Noncompliance Processed in Q3 2017

Minimal Risk Noncompliance by Region Q3 2017

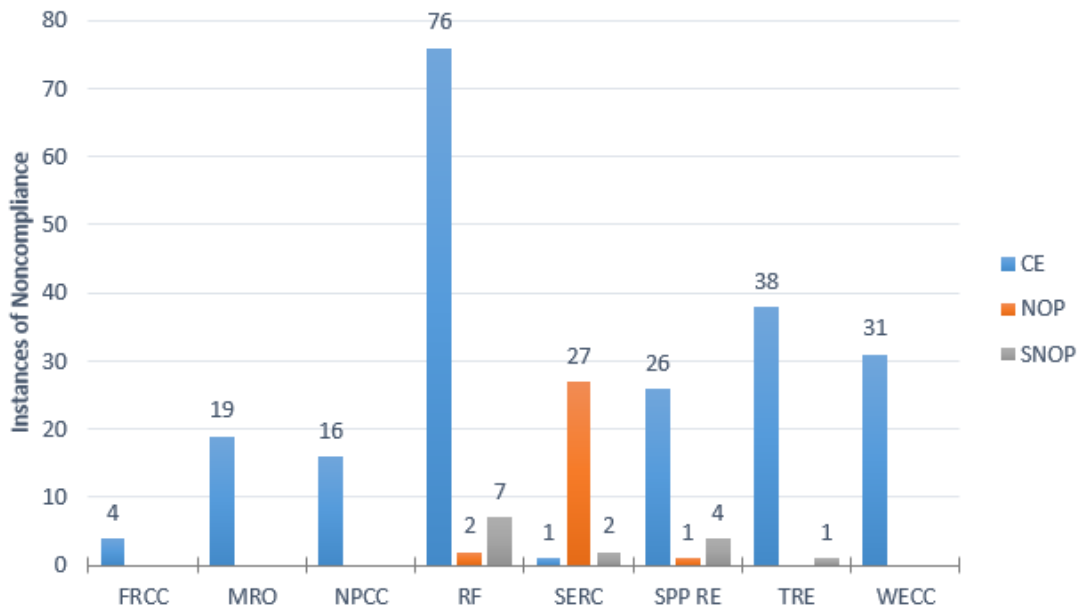


Figure A.6: Minimal Risk Noncompliance Processed in Q3 2017 by RE

¹⁶ The ERO Enterprise did not process any minimal risk noncompliance through FFT in Q3 2017.

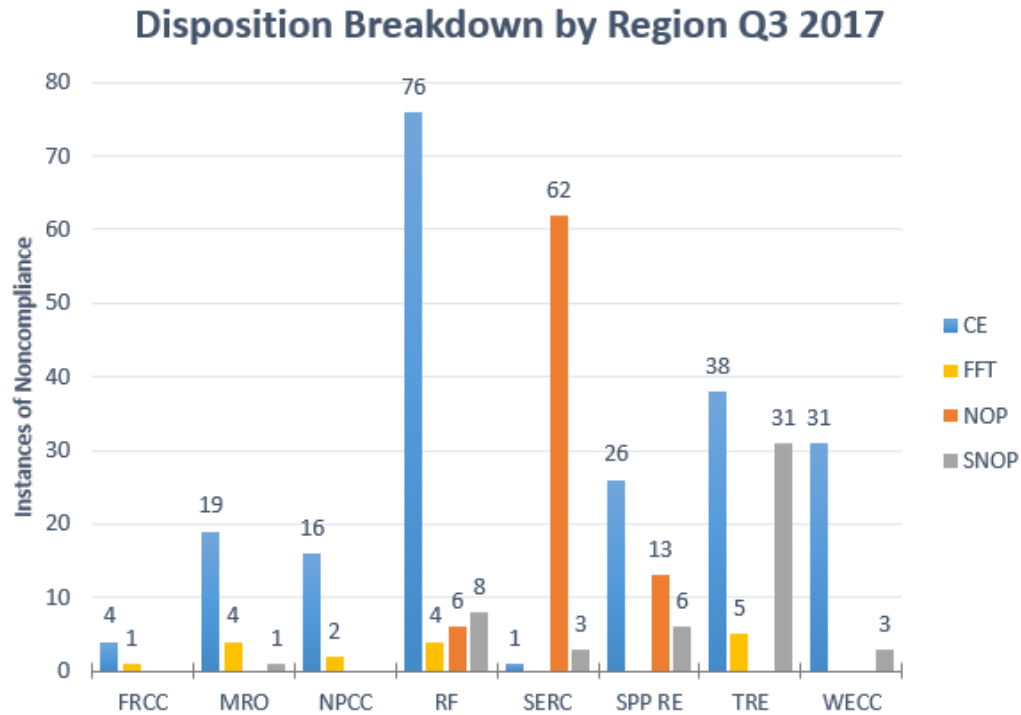


Figure A.7: Disposition Type of Noncompliance Processed in Q3 2017 by RE

Most Violated Standards Discovered in 2017

CIP-004, CIP-005, CIP-006, and CIP-007 have the highest frequency of noncompliance in 2017 and are historically among the most violated Reliability Standards. Other common violations are of PRC-005, FAC-008, and VAR-002.¹⁷



Figure A.8: Most Violated Reliability Standards Discovered in 2017

¹⁷ 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, resulting in a higher number of potential areas to experience instances of noncompliance.

Vegetation Management

There were six vegetation-related outages in the second quarter of 2017. There were five Category 3 outages as well as one Category 4B. The vegetation-related outages in 2017 appear to be on a consistent pace with the total in 2016, and all but one was comprised of weather-related Category 3 outages.¹⁸

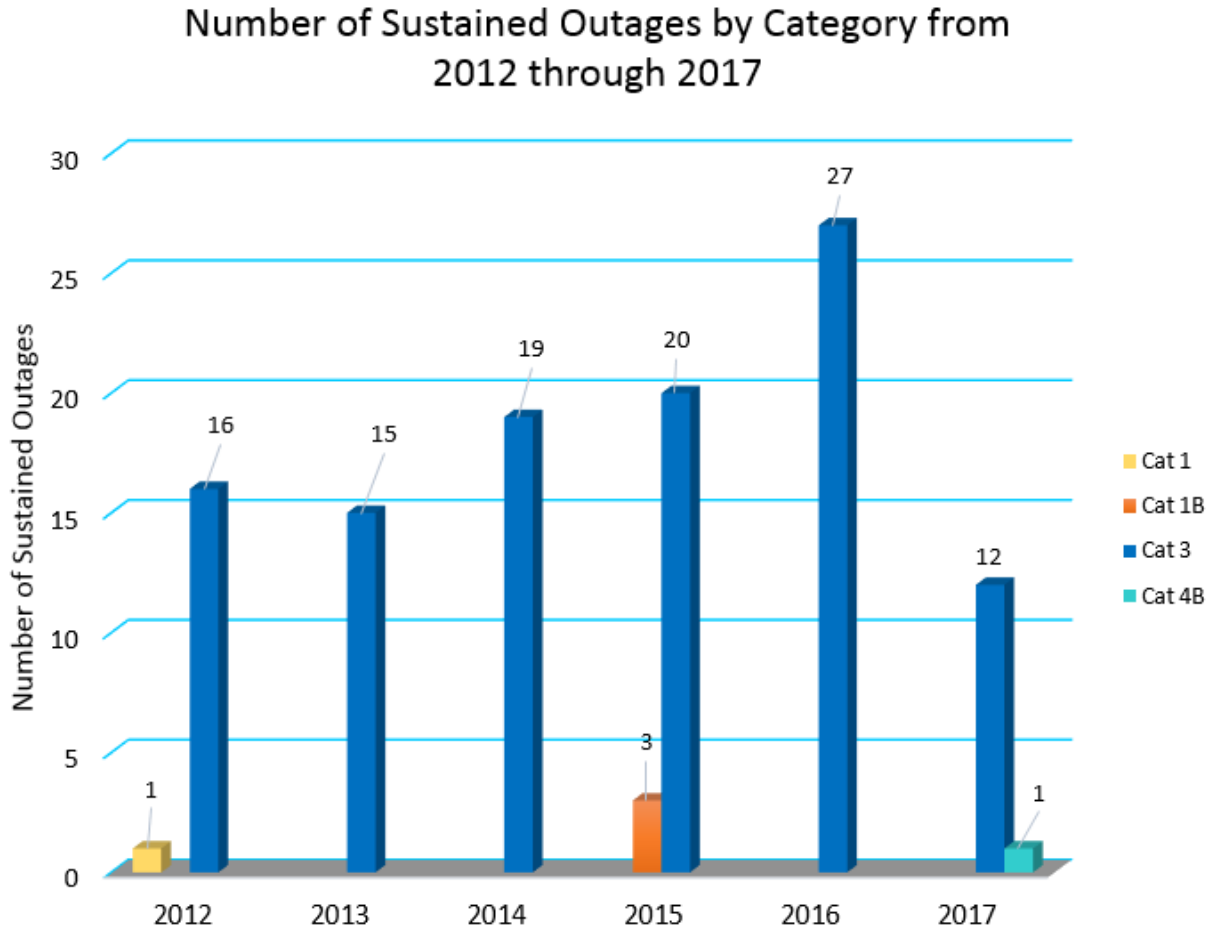


Figure A.9: Vegetation-related Outages by Category

¹⁸Vegetation-related outage information is consolidated on a delayed quarterly basis. Information related to Q3 2017 will be available in Q4 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.

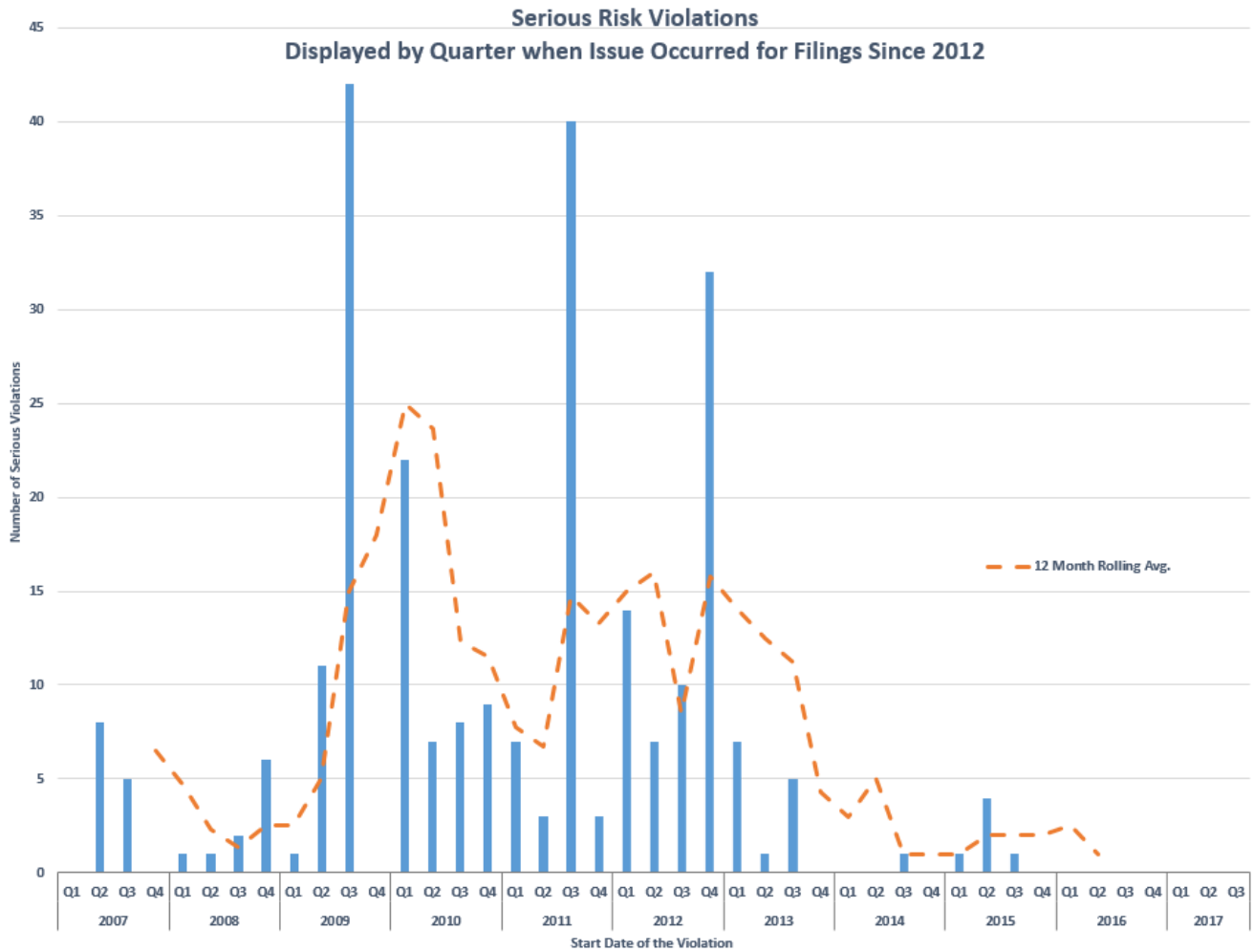


Figure A.10: Serious Risk Violations by Date of Occurrence for Filings post-2012

Violations with a Measured Reliability Impact

NERC gathers enforcement data using metrics that measure reliability impact to the BPS. Figure A.11 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.¹⁹ The moving averages provide an indicator of the rate of impactful noncompliance. Figure A.11 illustrates that noncompliance appears to be decreasing and is better controlled. The impact chart saw only two significant changes, two additional Tier 3 noncompliance that began in Q2 2007.

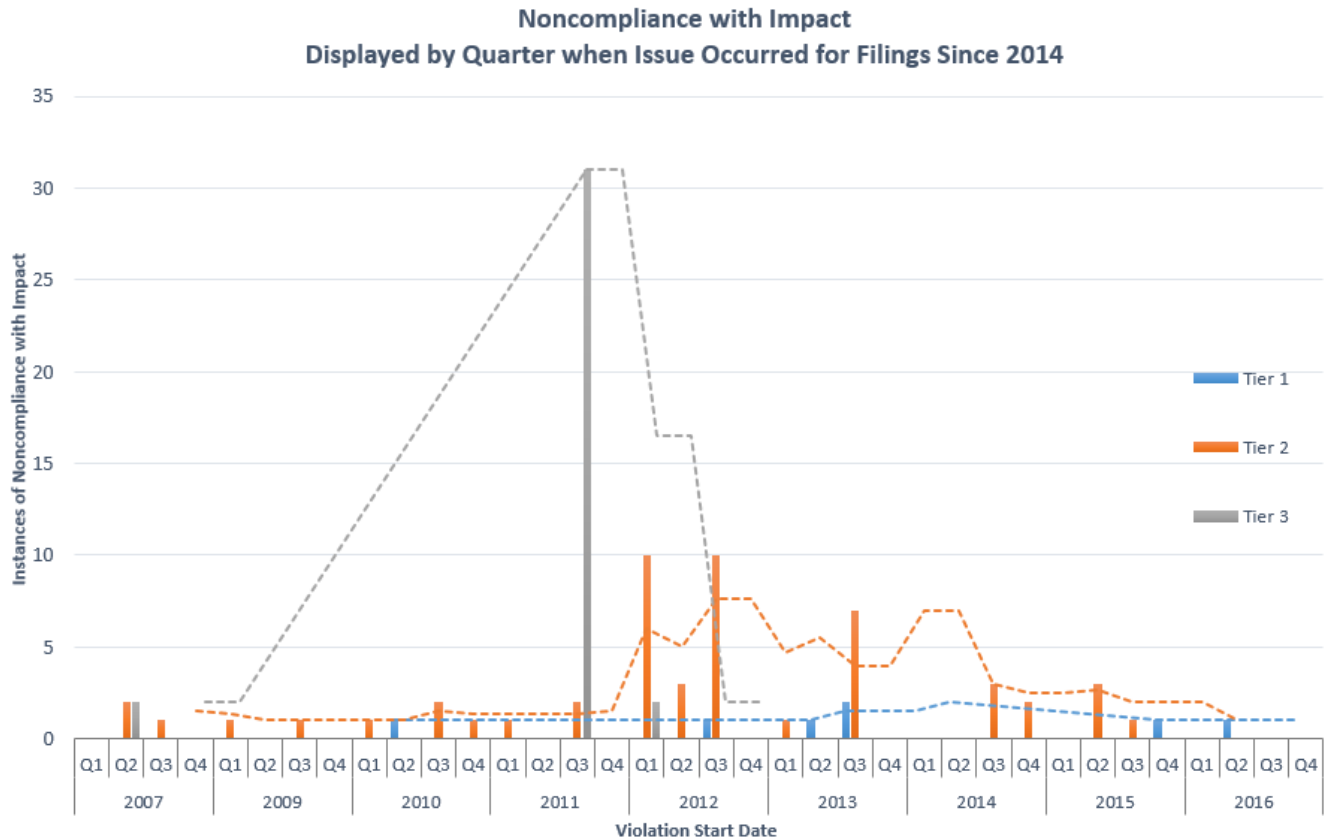


Figure A.11: Noncompliance with Impact by Quarter

Compliance Severity Risk Index

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

¹⁹ 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.

the non-CIP and CIP V1-V3. For all CIP violations (Figure A.13), the threshold and target was set at 65 and 55 percent of the 2011 index, respectively.

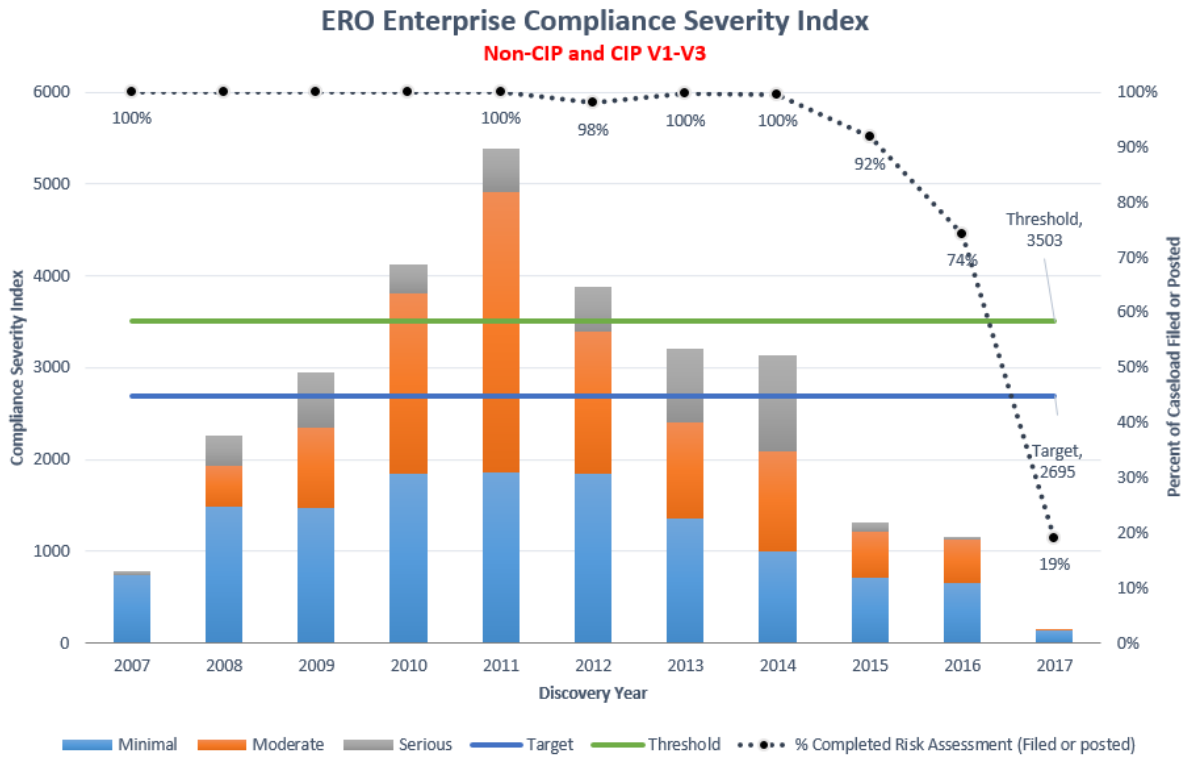


Figure A.12: Compliance Severity Risk Index for O&P and CIP V1 through V3

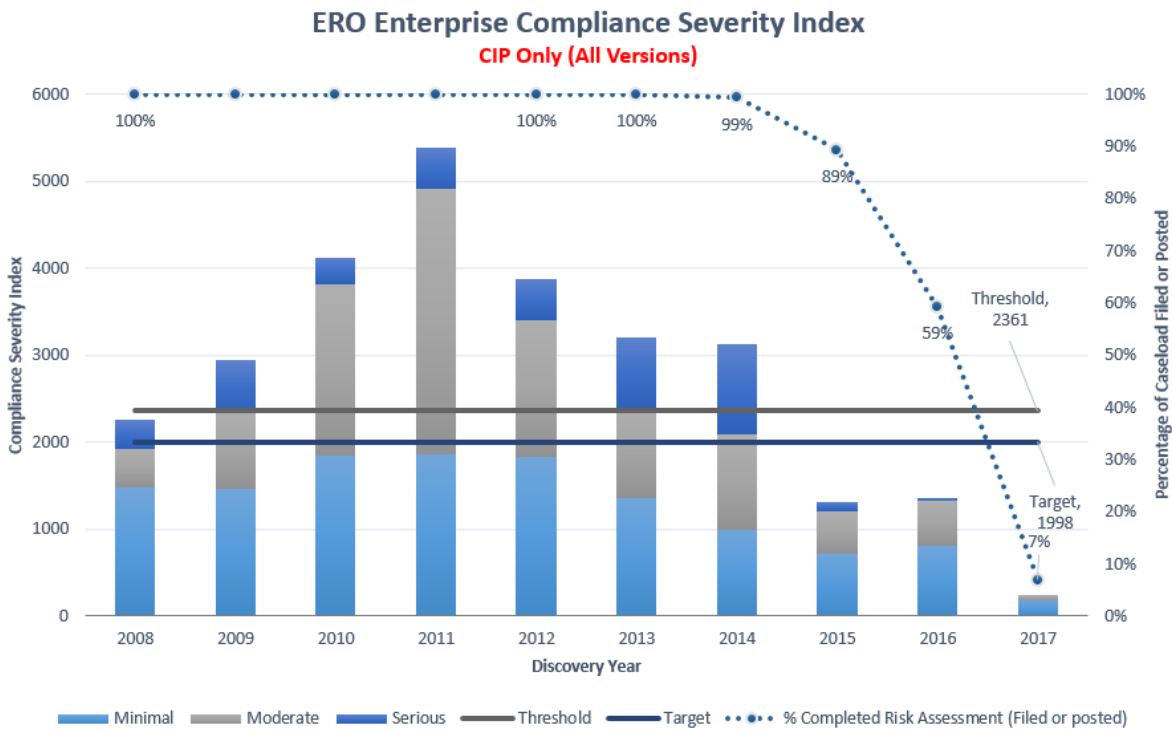


Figure A.13: ERO Enterprise Compliance Severity Risk Index for all CIP Violations

Reduced Repeat Moderate and Severe Risk Violations

The current state of repeat noncompliance with similar conduct for moderate and serious risk violations is below. The ERO Enterprise will continue to monitor compliance history (a prior violation of the same standard and requirement) and repeat noncompliance with similar conduct (a prior violation that stemmed from the same actions or conduct) to further explore the relationship of prior mitigation to repeat noncompliance and identify any additional areas of focus and future actions.

Figure A.14 juxtaposes three categories of moderate and serious risk noncompliance: noncompliance with compliance history, noncompliance with compliance history with similar conduct, and all filed moderate and serious risk noncompliance. Noncompliance with similar conduct is a subset of the wider group of repeat noncompliance. Additionally, the below chart compares these two numbers to the overall number of moderate and serious risk violations, which include those with compliance history, those with similar conduct, and those with no prior history.

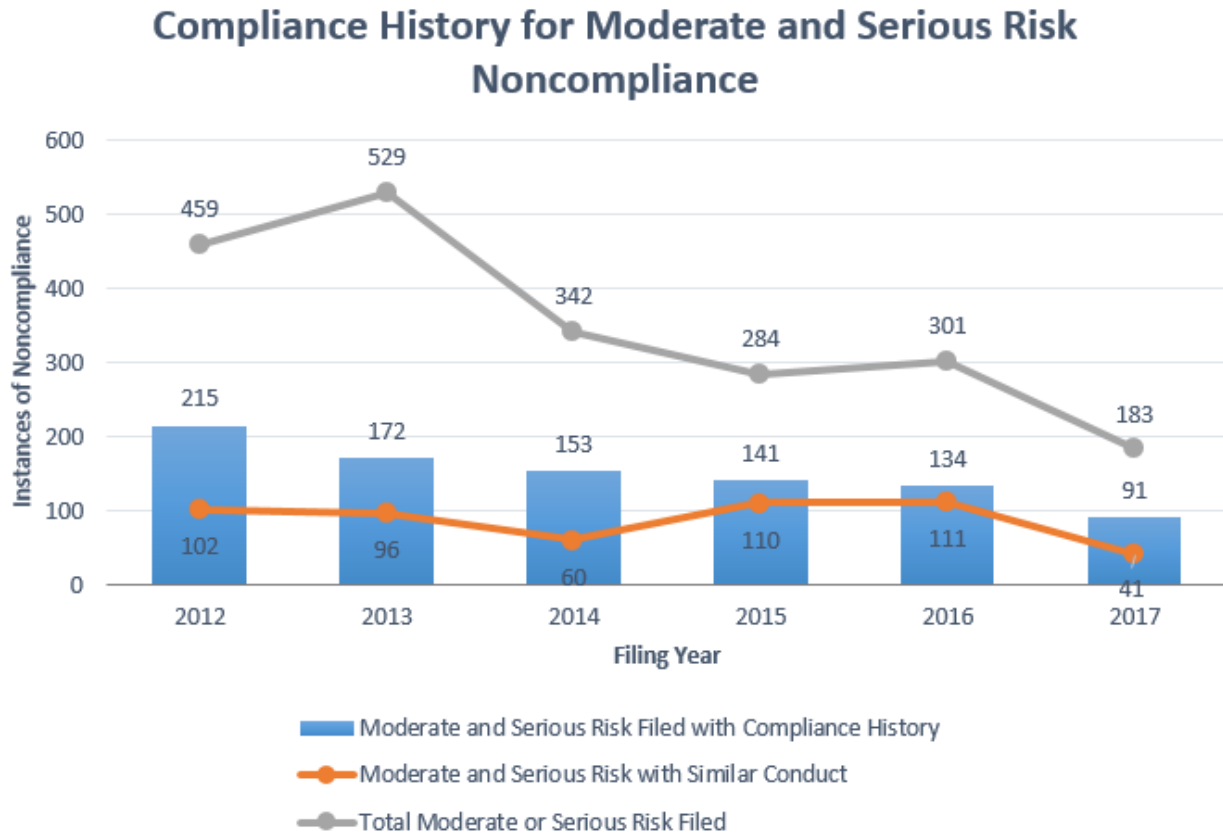


Figure A.14: Compliance History and Similar Conduct for Moderate and Serious Risk Violations

Self-Assessment and Self-Identification of Noncompliance

Below are four charts illustrating registered entities' internal and external identification of noncompliance. Figure A.15 breaks down internal and external discovery method by year and Figure A.16 over the last six quarters. The percentage of internally discovered noncompliance has increased over the last several years.

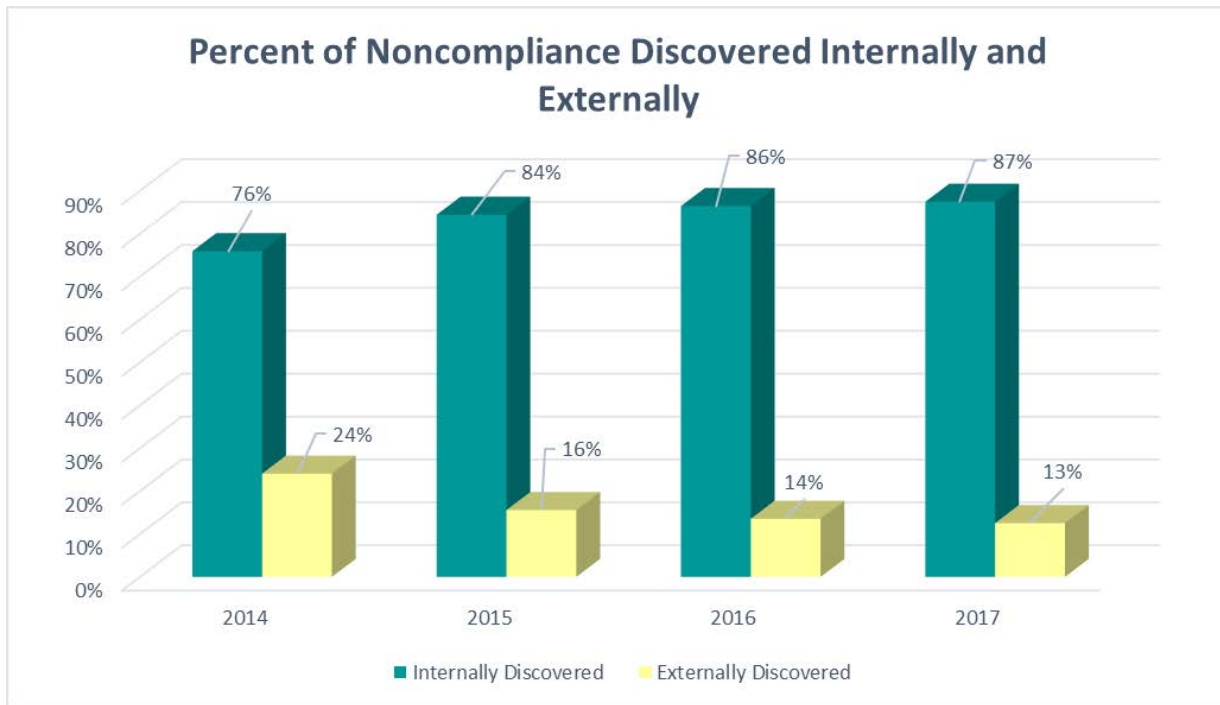


Figure A.15: Percent of Noncompliance Discovered Internally and Externally by Year

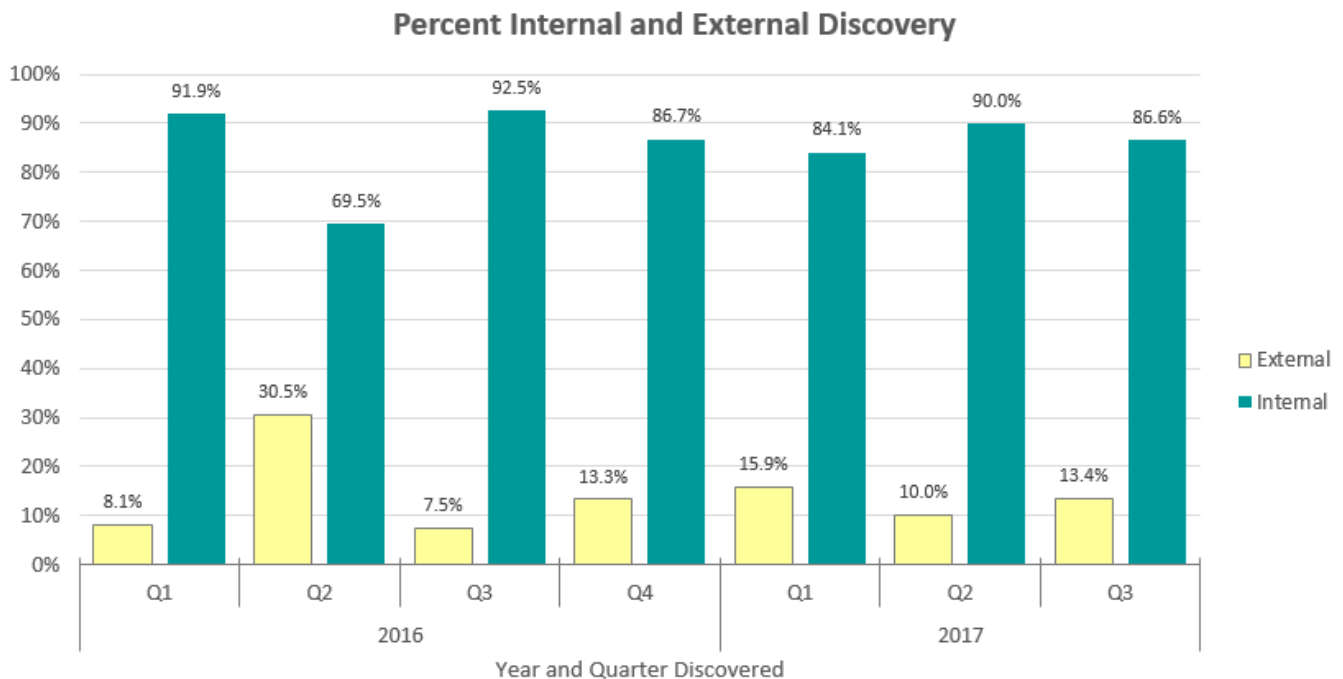


Figure A.16: Percent of Noncompliance Discovered Internally and Externally by Quarter

Appendix B: Compliance Assurance

Coordinated Oversight Program for MRREs

Figure B.1 represents the percentage distribution of the 224 MRREs by LRE, and Figure B.2 represents the distribution of MRREs by registered function. The registered entities that opted to join the program include various reliability functions in multiple regions.

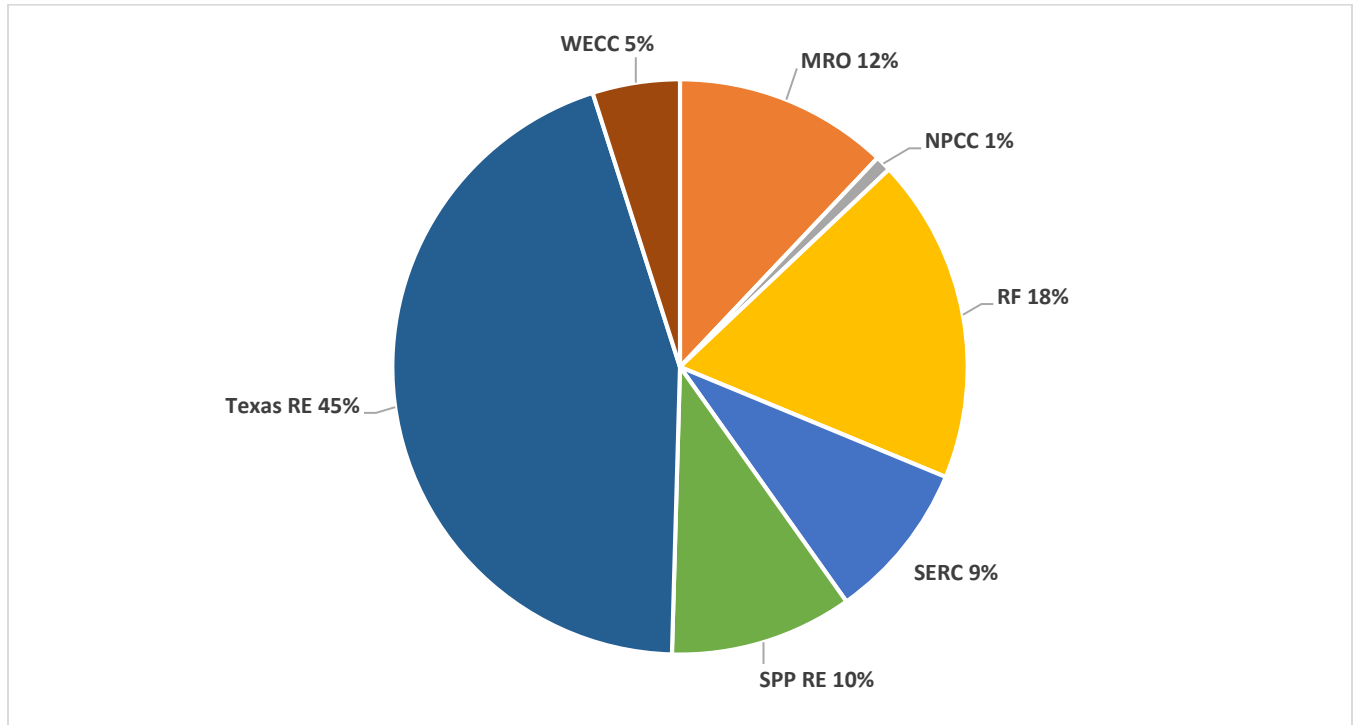


Figure B.1: Percentage of MRREs under Coordinated Oversight by LRE

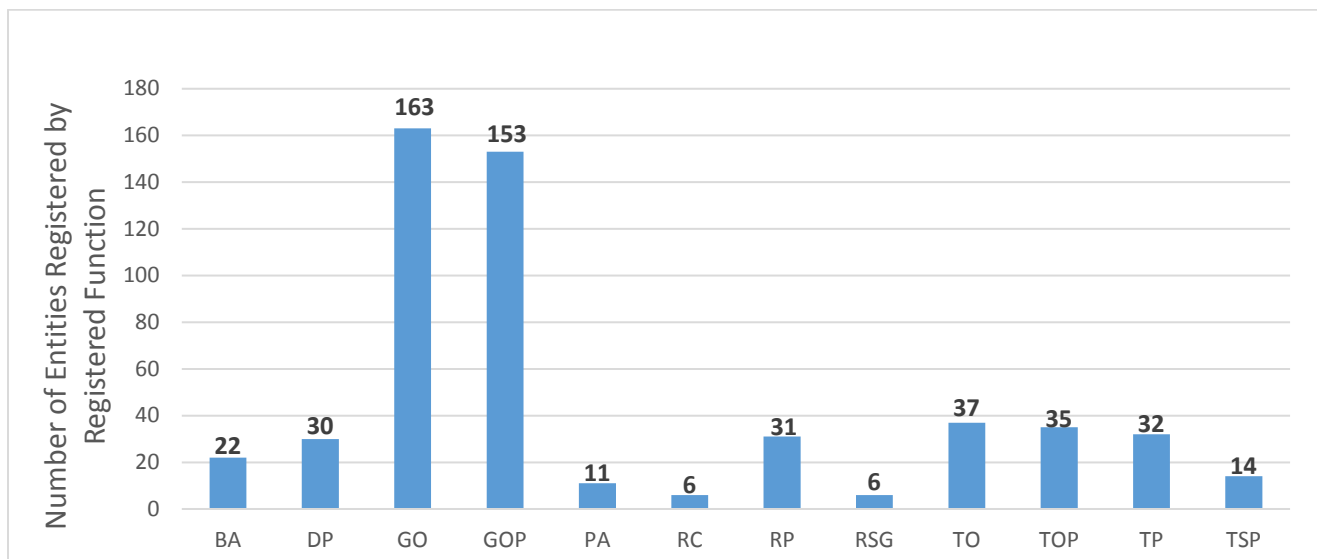


Figure B.2: Coordinated Oversight Distribution by Registered Function²⁰

²⁰ Each bar represents the number of registered entities by function in the Coordinated Oversight Program for MRREs.

CIP Standards

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

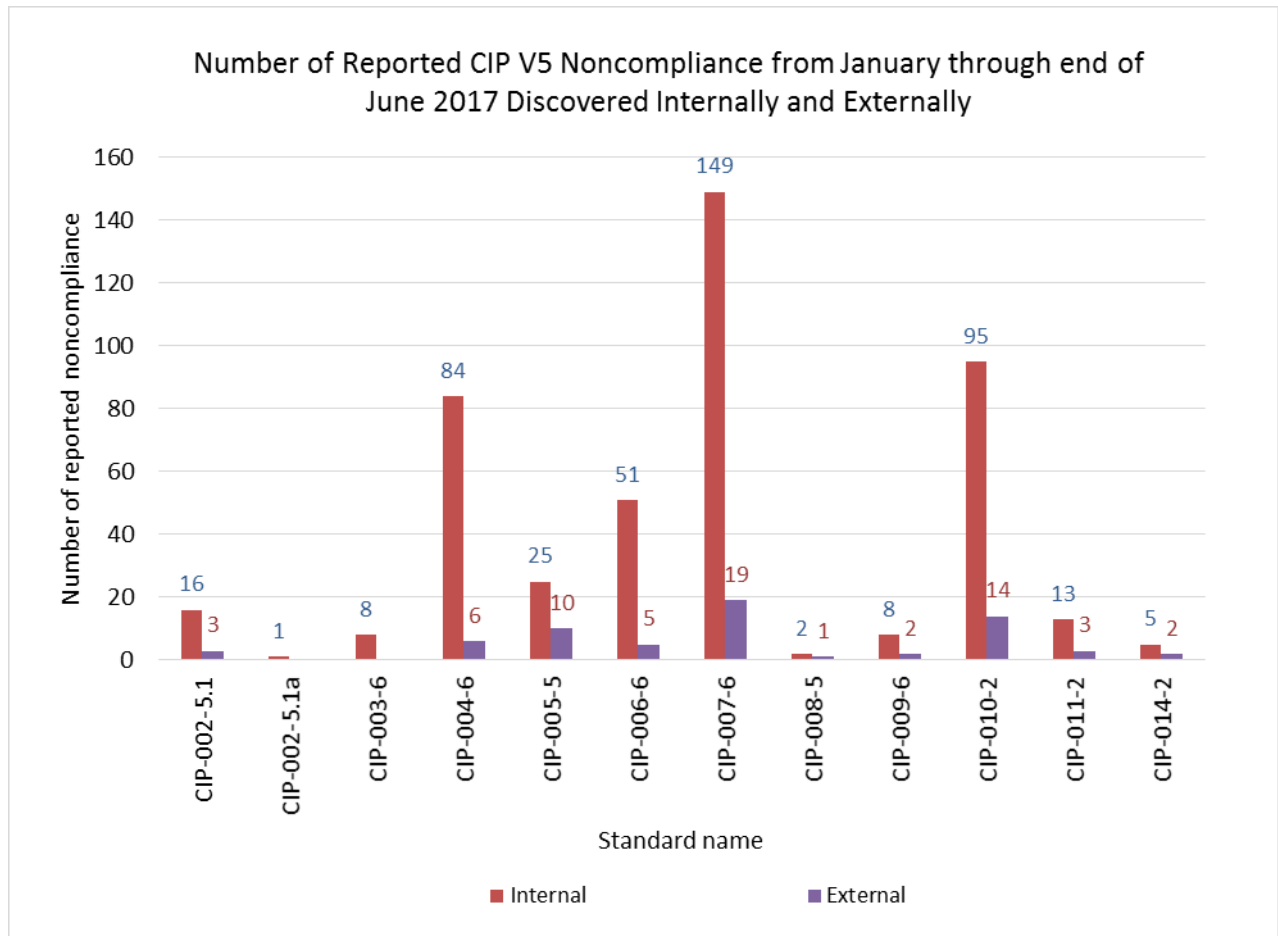


Figure B.3: Total CIP V5 New Noncompliance Discovered Internally and Externally

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 1,064 IRAs for the 1,463 registered entities as of Q3 2017.²¹ The ERO Enterprise completed IRAs for approximately 73 percent of the total number of registered entities.²² 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.

²¹ The 1,488 registered entities are based on registration data as of June 16, 2017.

²² Some of the registered entities are MRREs in the Coordinated Oversight Program. As such, until the LRE completes the IRA for that MRRE Group, the numbers do not update for the AREs. Therefore, some of the REs included in Figure B.4 are not credited until their IRAs are completed.

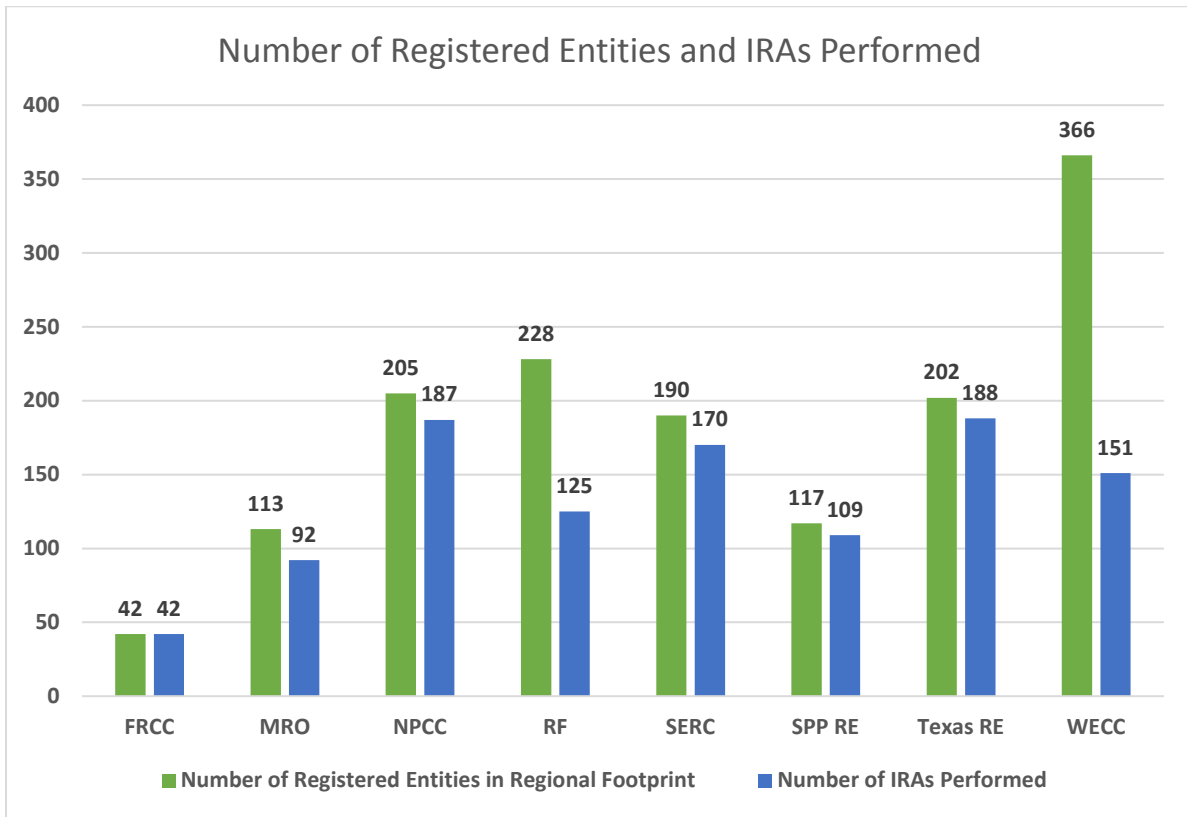


Figure B.4: RE Completion of IRAs

Appendix C: Registration

The following charts depict Q3 2017 registration change activity by RE and by function.

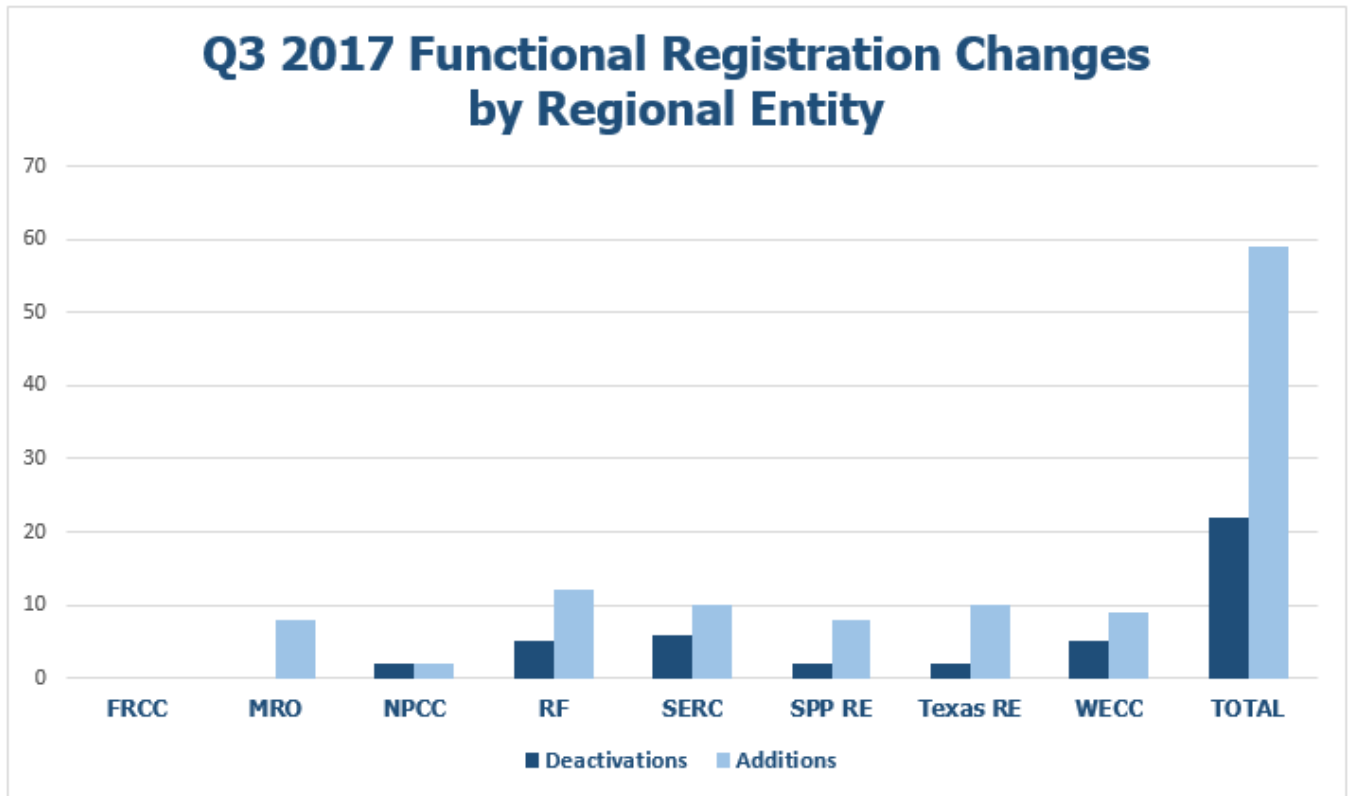


Figure C.1: Registration Change Activity by RE and Total Q3 2017 Changes

	FRCC	MRO	NPCC	RF	SERC	SPP RE	Texas RE	WECC	TOTAL
Deactivations	0	0	2	5	6	2	2	5	22
Additions	0	8	2	12	10	8	10	9	59

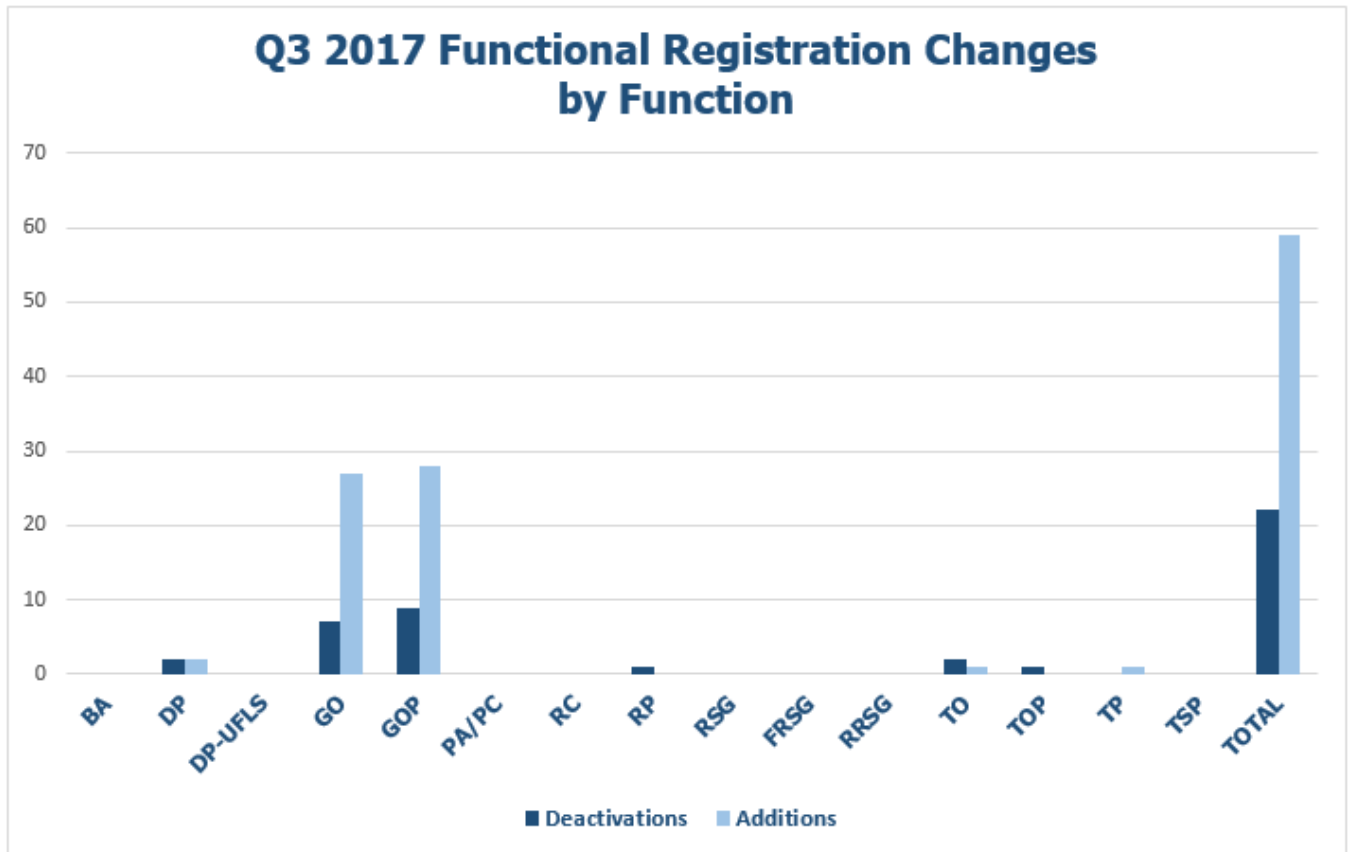


Figure C.2: Q3 2017 Registration Change Activity by Function

Table C.2: Q3 2017 Registration Change Activity by Function																
	BA	DP	DP-UFLS	GO	GOP	PA/PC	RC	RP	RSG	FRSG	RRSG	TO	TOP	TP	TSP	TOTAL
Deactivations	0	2	0	7	9	0	0	1	0	0	0	2	1	0	0	22
Additions	0	2	0	27	28	0	0	0	0	0	0	1	0	1	0	59

The following table shows the basis for Q3 2017 registration changes. NERC seeks justification from each RE when approving registration change activity.

Table C.3: Q3 2017 Registration Change Basis	
Compliance Responsibility Assumed by Another Registered Entity	1
Facility Shut Down	2
Sold to Another Registered Entity	14
Determined to not Meet Registration Criteria	5