

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# Compliance Monitoring and Enforcement Program Quarterly Report

Q2 2018

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**RELIABILITY | ACCOUNTABILITY**



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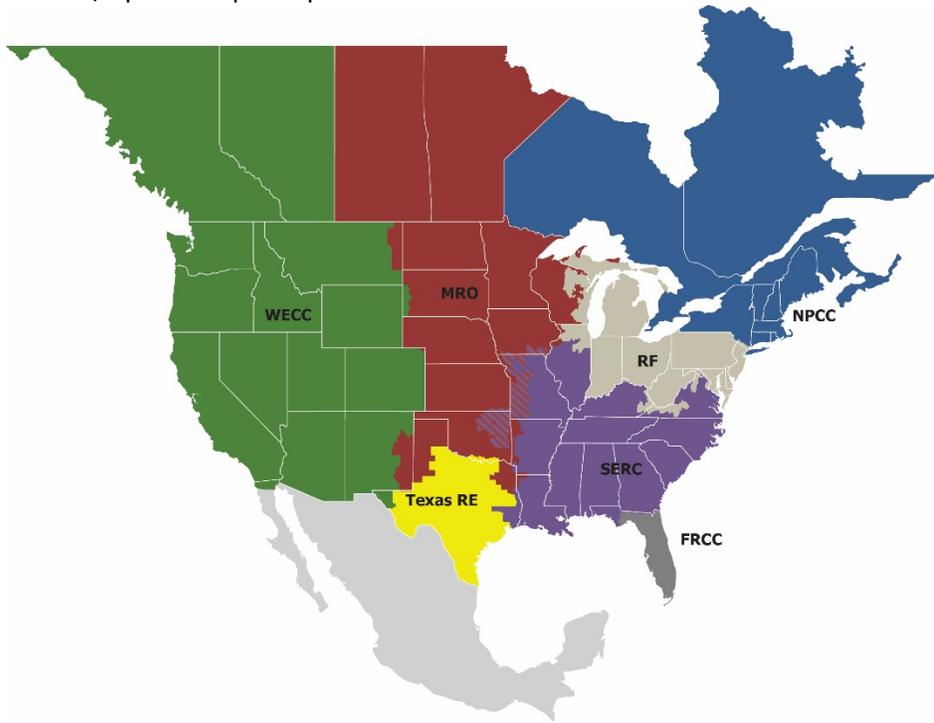
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# Preface

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

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



<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>Texas RE</b>	Texas Reliability Entity
<b>WECC</b>	Western Electricity Coordinating Council

## Executive Summary

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This report highlights key ERO Enterprise<sup>1</sup> Compliance Monitoring and Enforcement Program (CMEP) activities that occurred in Q2 2018 and provides information and statistics regarding those activities. In Q2 2018, CMEP activities throughout the ERO Enterprise reflected continuing implementation of a risk-based approach that has allowed the ERO Enterprise to focus resources on risks to the reliability of the BPS, entity-specific risks, and serious risk noncompliance with Reliability Standards. NERC and the REs also collaborated on various compliance monitoring activities to identify lessons learned and provide additional insight and information to industry stakeholders. Most significantly, in Q2 2018, the ERO Enterprise focused on the continued alignment of core CMEP activities.

In Q2 2018, the ERO Enterprise resolved two reported consistency issues through its [ERO Enterprise Program Alignment Process](#) (Program Alignment).<sup>2</sup> NERC identified two new issues in Q2 2018.

In Q2 2018, the ERO Enterprise posted its revised [Registered Entity Self-Report and Mitigation User Guide](#). The revised guide incorporates principles for how registered entities provide information to REs and clarifies expectations around registered entity self-reporting and design of mitigation activities to prevent recurrence.

On May 4, 2018, the Federal Energy Regulatory Commission (FERC) issued a delegated letter order accepting NERC, MRO, and SERC's March joint filing in Docket No. RR18-3-000 for approvals in connection with the termination of the Regional Delegation Agreement with Southwest Power Pool Regional Entity (SPP RE).

In Q2 2018, NERC filed four Full Notices of Penalty (NOPs), three involving vegetation contacts and one involving a serious risk violation of the Critical Infrastructure Protection (CIP) Reliability Standards.

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

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

# Chapter 1: CMEP Activities

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## Program Alignment

The ERO Enterprise is enhancing alignment of CMEP activities under a broader [ERO Enterprise Program Alignment Process](#). The program includes efforts to identify, prioritize, and resolve alignment issues across the ERO Enterprise. These efforts include multiple methods of identifying potential issues. Among others, these methods include the [Consistency Reporting Tool](#), oversight process reviews, and post-Compliance Audit and post-Spot Check surveys. In Q2 2018, the ERO Enterprise Program Alignment Process addressed two reported consistency issues related to one-time attestations and assessment criteria for VAR-002-4.1, R2. Additionally, NERC updated the [Issues and Recommendations Tracking](#) spreadsheet to include two issues related to TOP-001-4 attributes and CIP-002-5.1a low impact assets.

The ERO Enterprise has six remaining issues under review. Of those six issues, registered entities submitted two issues through the Consistency Reporting Tool. NERC identified the other four issues.

## CMEP Technology Project

In Q2 2018, work continued on the CMEP Technology Project. The CMEP Technology Project is a culmination of strategic efforts with the goal of improving and standardizing processes across the ERO Enterprise. The CMEP Technology Project is one of four strategic vision and technology programs within the broader ERO Enterprise Systems Initiative. NERC and the REs continue to make progress on the implementation of a new technology solution for CMEP activities.

## Coordinated Oversight Program

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

During Q2 2018, the ERO Enterprise approved 35 MRREs for entry into the Coordinated Oversight Program. Additionally, NERC and the REs reviewed the potential impact of the SPP RE dissolution on MRREs participating in the Program and re-evaluated the 20 MRRE groups where SPP RE was involved as either Lead Regional Entity (LRE) or Affected Regional Entity (ARE). Before the transition date of July 1, 2018, all 20 MRRE groups received notification of any changes to their LRE designation. Post-SPP RE dissolution, there are 222 registered entities participating in the Coordinated Oversight Program.<sup>3</sup>

## ERO Enterprise Staff Training and Industry Outreach

In April 2018, the ERO Enterprise conducted a three-day workshop for about 150 CMEP staff. The first day included general sessions focusing on internal controls and updates on key processes, like Coordinated Oversight of MRREs. Day two courses went into further detail for tools and techniques applied to compliance and enforcement of O&P and CIP standards. The last day was an intensive training for CIP and auditor use of a CIP analysis tool.

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<sup>3</sup> Appendix B includes further information on the MRREs participating the Coordinated Oversight Program.

## **Industry Outreach via Webinar and Regional Workshops**

The ERO Enterprise, along with the Compliance and Certification Committee (CCC) Alignment Working Group (AWG) representatives, provided outreach for the Program Alignment Process during regional spring workshops in 2018. The AWG is a CCC working group tasked specifically to work on Program Alignment. During each workshop, NERC staff and the AWG representative presented on the history and purpose of the Program Alignment Process, how to view and submit possible alignment issues, and the status of pending issues under review. The outreach also included discussion on the outcome of closed issues that had been resolved to date.

NERC staff also conducted Audit Team Lead and Certification Team Lead training at the WECC office in Salt Lake City in April 2018. This training was attended by 16 regional CMEP personnel.

Additionally, REs provided outreach throughout Q2 2018 through workshops, monthly newsletters, assist visit programs, and other events with industry stakeholders.

## **FERC Orders**

### **SPP RE Order**

On May 4, 2018, FERC issued a delegated letter order accepting NERC, MRO, and SERC's March joint filing in Docket No. RR18-3-000 for approvals in connection with the termination of the Regional Delegation Agreement with SPP RE. The Order approved the transfer of 122 SPP RE registered entities and the amended Regional Delegation Agreements with MRO and SERC. In addition, the Order acknowledges NERC's role as an interim Compliance Enforcement Authority for a two-year transitional period for the SPP registered entity functions following the dissolution of SPP RE.

### **Order Approving Revised Rules of Procedure Consolidated Hearing Process**

On June 8, 2018, FERC issued a letter order approving proposed revisions to section 400 (Compliance Enforcement), Appendix 2 (Definitions Used in the Rules of Procedure (ROP)), and Appendix 4C (CMEP) of the NERC ROP. These changes incorporated the Consolidated Hearing Process, which provides a uniform and more streamlined approach to hearings for REs by giving REs an option to select NERC to manage the hearing process.

## Chapter 2: Enforcement Oversight

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

In Q2 2018, NERC and FERC staff completed the annual review of the Find, Fix, Track, and Report (FFT) and Compliance Exception (CE) programs. NERC and FERC staff sampled 26 FFTs and 100 CEs to collect data on the effectiveness and efficiency of the FFT and CE programs, as well as to assess the REs' adherence to the risk-based CMEP, various FERC Orders, and NERC and FERC-issued guidance.

As of the end of Q2 2018, NERC and FERC staff have provided feedback to the REs, and they are finalizing the results of the review.

### Enforcement Q2 2018 Metrics Highlights

The following enforcement metrics updates are current as of the end of Q2 2018 (June 30, 2018):<sup>4</sup>

#### Focus on Serious Risk Issues

NERC filed four Full NOPs in Q2 2018 with a combined penalty amount of \$744,000.

#### *Vegetation Management*

NERC filed three Full NOPs resolving violations of FAC-003 R2 in Q2 2018. The ERO Enterprise has increased its focus on vegetation contacts based on more frequent vegetation encroachments on Bulk Electric System (BES) transmission facilities. NERC and the REs coordinated on the resolution of these cases to be able to file them with FERC at the same time.

The three Full NOPs shared certain similarities related to controls failures. In the first case, the registered entity's Transmission Vegetation Management Program did not adequately specify appropriate observation criteria for the inspection of potential vegetation contact issues that a fixed-wing patrol failed to identify. In the second case, the registered entity determined the arborist did not perform the scheduled 2017 aerial inspection due to a transcription error, and the contractor who performed the foot inspection in 2017 believed the registered entity was aware of the situation. In the third case, the registered entity did not have adequate vegetation management processes and procedures to address changing field or weather conditions that may result in increased vegetation growth rates.

The three registered entities at issue in the Full NOPs differed in size, location, and potential impact, which supported the respective risk assessments and penalties in each case. The first two cases posed a moderate risk to the reliability of the BPS, whereas the third case posed a serious risk. The size, location, and potential impact are part of the facts and circumstances considered by the ERO Enterprise when calculating penalties that reflect the seriousness of the underlying violations and that may affect registered entity behavior.

#### *CIP*

NERC filed one Full NOP with FERC to resolve an RE finding that the Unidentified Registered Entity had 22 violations of the CIP Reliability Standards, of which 15 posed a minimal risk, six posed a moderate risk, and one posed a serious and substantial risk to the reliability of the BPS. The violations were the result of a combination of contributing causes, including issues with implementing new tools and processes, asset and configuration management, inadequate workforce management (e.g., insufficient training and managerial oversight), external interdependencies (contractor and vendor failures), failure of situational awareness, and a lack of clearly defined internal policies.

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<sup>4</sup> Appendix A includes the NERC enforcement metrics-related graphs and charts.

## Vegetation-Related Transmission Outages

In Q2 2018, the ERO Enterprise posted the [2017 Annual Vegetation Report](#) data regarding vegetation-related outages reported in 2017.<sup>5</sup> In 2017, the ERO Enterprise had two Category 1B outages and the first reporting of Category 4B outages as well as 20 Category 3 outages. In Q1 2018, the ERO Enterprise reported an additional seven Category 3 outages. Six additional vegetation contacts were the result of possible violations of FAC-003 in 2017.<sup>6</sup> The ERO Enterprise will continue to monitor these matters and enforce any noncompliance appropriately. NERC is also considering what additional efforts to undertake to address the increase in vegetation-related issues.

## CIP Themes

In May 2018, representatives from RF, WECC, and SERC presented an overview of a CIP themes analysis to the NERC Board of Trustees Compliance Committee. In 2014, RF, in coordination with NERC and several stakeholders, began analyzing data around potential themes in CIP deficiencies and issued a report containing findings and recommendations. In Q2 2018, NERC, RF, WECC, and SERC issued a [2018 CIP Themes and Lessons Learned](#) document identifying risk themes associated with the CIP Reliability Standards. The main themes the report identifies are the development of organizational silos, a disassociation between compliance and security, a lack of awareness of a registered entity's needs or deficiencies, and inadequate tools or ineffective use of tools. Generally, the analysis found that significant CIP compliance deficiencies are the result of multiple causes that overlap and are interrelated. NERC and the REs are continuing their outreach efforts on the themes through workshops, newsletter articles, and individual engagements

## Spreadsheet Notices of Penalty

In Q2 2018, NERC filed six Spreadsheet NOPs (SNOPs) that included 38 violations of the NERC Reliability Standards and carried a total combined penalty of approximately \$272,000.

NERC's oversight of SNOPs in Q2 2018 confirmed that the REs continue to use this disposition method appropriately. REs used the SNOP disposition to address penalties for larger groups of minimal and moderate risk noncompliance that did not pose an elevated risk to the BPS but that were not otherwise appropriate for FFT or CE treatment. Other reasons for SNOP treatment in Q2 2018 include lengthy durations of noncompliance, prior violations involving similar conduct, and "above and beyond" mitigation investments.

## Continued Success of Streamlined Disposition

As of the end of Q2 2018, the ERO Enterprise added one registered entity into the Self-Logging Program. There are now 70 registered entities self-logging.

Out of 299 instances of noncompliance posing a minimal risk to the reliability of the BPS processed during Q2 2018, the ERO Enterprise treated 253 (85 percent) as CEs. The ERO Enterprise processed the remaining instances of noncompliance posing a minimal risk as FFTs, SNOPs, and Full NOPs.

In Q2 2018, most REs continued to see significant reporting of noncompliance for the newly effective CIP, MOD-025, PRC-019, and PRC-024 NERC Reliability Standards beginning after their mandatory and enforceable date in 2016.<sup>7</sup> NERC has posted the majority of these instances as CEs. They tend to be the result of registered entities' lack of understanding related to the implementation plans for these new Reliability Standards. NERC expects reporting of these standards to begin to decrease throughout the remainder of 2018, and the following years, as registered entities become more familiar with the phased implementation and the ERO Enterprise continues its outreach efforts.

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<sup>5</sup> Vegetation-related outage information is consolidated on a delayed quarterly basis. Information related to Q2 2018 will be available in Q3 2018.

<sup>6</sup> Three have been filed as Full NOPs, while the remaining Full NOPs remain in process.

<sup>7</sup> See Appendix A, Figure A.5 for the most violated NERC Reliability Standards discovered in Q2 2018.

## Caseload

The trend of an overall continuing decrease in the noncompliance average age<sup>8</sup> has begun to reverse in the fall of 2017. In 2017, the average age of noncompliance was 8.0 months; so far in 2018, the average age rose to 8.8 months in Q1 and to 9.6 in Q2. The increase in age is most likely due to a combination of the increase in reported noncompliance from 2016 without a corresponding increase in processing resources.

## Reduced Repeat Moderate and Severe Risk Violations

In its Five-Year Order,<sup>9</sup> FERC identified repeat noncompliance as a key indicator of the effectiveness of the CMEP in recognizing, mitigating, and preventing violations. In response to the Order, NERC tracks moderate and serious risk violations to identify whether there is prior relevant compliance history.<sup>10</sup> NERC uses this information to determine why the prior mitigation activities failed to prevent the more recent noncompliance. This focused review of mitigation activities then informs the review of mitigation activities going forward, leading to continued improvement.

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

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

## Self-Assessment and Self-Identification of Noncompliance

Prompt and accurate self-reporting is integral to identifying, mitigating, and preventing repeat noncompliance. Registered entities self-identify noncompliance for approximately 80 percent of new noncompliance. For purposes of this analysis, self-identification included Self-Reports, Self-Logs, Self-Certifications, and Periodic Data Submittals. In 2017, the self-report rate was 82 percent. The first quarter of 2018 has seen a consistent pace of internal discovery, but the rate of self-reporting has been lower. Registered entities identified only 78 percent of noncompliance through Self-Reports in Q1 and 79 percent in Q2. To provide additional insight into better self-reporting practices, NERC staff is performing additional analyses in 2018. NERC has begun to focus on the percentage of self-reported noncompliance (as opposed to all other types of self-identification).

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<sup>8</sup> Unlike the duration of a noncompliance, which is determined by the amount of time it takes a registered entity to mitigate the noncompliance, the age of noncompliance is determined by the amount of time between the discovery of the noncompliance by the RE and the conclusion of the resulting disposition.

<sup>9</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 Electric Reliability Organization’s Five-year Performance Assessment](#), 149 FERC ¶ 61,141 at P 39 (2014).

<sup>10</sup> To measure the effectiveness of the risk-based CMEP in reducing noncompliance, NERC reviews moderate and serious risk violations and includes them in one of three categories: 1) noncompliance with no prior compliance history; 2) noncompliance with prior compliance history that does not involve similar conduct; and 3) noncompliance with compliance history that includes similar conduct.

## Chapter 3: Compliance Monitoring Oversight

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### NERC Oversight Activities

In Q2 2018, NERC continued to execute its RE compliance monitoring oversight plan to assess implementation of risk-based compliance monitoring activities. Key activities included NERC staff observations of registered entity audits with two REs, as well as NERC staff observations of Internal Controls Evaluation (ICE) activity conducted on-site at a registered entity.

Over the next two quarters, NERC anticipates observing 19 audits conducted across all seven REs. NERC is also planning for on-site visits to REs to perform detailed reviews of RE processes and procedures for conducting Inherent Risk Assessments (IRAs).

Furthermore, NERC executed oversight of RE processes for conducting Self-Certifications. Oversight activities include review of RE processes for conducting Self-Certifications to determine compliance with the NERC ROP and alignment across the ERO Enterprise.

### Continuous Monitoring

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

### *Results*

#### Registered Entity Post-Audit Feedback Surveys

During Q2 2018, registered entities submitted 15 surveys for recent Compliance Audits conducted across five REs. From the 15 surveys collected, NERC concluded RE audit staff conducted Compliance Audits in a professional, efficient, and effective manner. Survey responses also indicated opportunities to communicate ERO Enterprise expectations around the use of ICE and its relation to compliance monitoring activities. Further, two survey responses identified a need for REs to communicate risk results and how IRAs, annual Implementation Plans and Risk Elements, and other considerations ultimately affect audit scope determinations. For the two audits associated with the participant responses, NERC conducted a detailed review of the associated IRA results and ANLs. NERC determined that the IRA did inform the final audit scope determination. Although there may be an opportunity for certain REs to enhance communication around risks, NERC did not identify a concern that audits were not being informed by risk. NERC will continue to monitor this type of registered entity feedback and, through ongoing oversight, will work with the REs to help ensure registered entities understand how risk and internal controls inform the audit scope.

#### Compliance Audit and Spot Check Reports

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

#### IRAs and ANLs for Q2 2018 Scheduled Audits and Spot Checks

During Q2 2018, NERC received and reviewed IRA Summary Reports and ANLs for the 47 Compliance Audits scheduled during the quarter. NERC's review ensured the REs were following the NERC ROP process and using ERO Enterprise templates.

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

## Compliance Monitoring Metric Updates

The following compliance monitoring metrics are current as of the end of Q2 2018.<sup>11</sup>

### Compliance Guidance

In late 2015, the NERC Board of Trustees approved the Compliance Guidance policy, which includes Implementation Guidance and CMEP Practice Guides. Pre-Qualified Organizations or Standard Drafting Teams develop Implementation Guidance that provides industry-vetted and ERO Enterprise-endorsed examples and approaches to illustrate how registered entities could comply with a Reliability Standard. The ERO Enterprise develops the CMEP Practice Guides to address how ERO Enterprise CMEP staff execute compliance monitoring and enforcement activities rather than how to implement the Reliability Standard.

During Q2 2018, the ERO Enterprise did not receive any proposed Implementation Guidance documents. The ERO Enterprise reviewed and endorsed three Implementation Guidance documents, which included two submitted in 2017 and one submitted in Q1 2018, and declined to endorse one Implementation Guidance document submitted in Q1 2018. The ERO Enterprise is currently reviewing one proposed Implementation Guidance document submitted in Q1 2018. Details on Compliance Guidance, including Implementation Guidance, are available on the [NERC Compliance Guidance](#) website.

### IRA and ICE Completion

During Q2 2018, RE progress toward completion of initial IRAs continued on track according to regional plans within WECC and RF.<sup>12</sup> Completion plans for WECC and RF remain unchanged with expected completion by the end of 2018 and 2019, respectively. Completion plans consider the total number of registered entities, registered functions, risk priorities, and regional resources. At the end of Q2 2018, REs had one ICE in-progress. REs continue to conduct internal control review activities and implement processes for conducting reviews of internal controls during CMEP activities, such as Compliance Audits.

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<sup>11</sup> Appendix B includes the NERC compliance monitoring metrics-related graphs and charts.

<sup>12</sup> Additional information regarding the percentage of IRAs completed for all registered entities within each RE across the ERO Enterprise is available in Appendix B. REs will continue to prioritize IRA completions based on registered functions and registration changes throughout the year.

## Chapter 4: Certification and Registration

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### Certification

In Q2 2018, certification activities related to proposed Reliability Coordinator changes in the Western Interconnection began. These activities will continue through 2019. These activities will likely affect Balancing Authorities and Transmission Operators throughout the Interconnection. The NERC ROP requires the ERO Enterprise to ensure Balancing Authority and Transmission Operator registered entities are under the responsibility of one and only one Reliability Coordinator. To the extent that Load and generation resources under the control of a particular Balancing Authority connect to transmission facilities of the BES, that Balancing Authority and the Transmission Operator for those Facilities will be required to be under the responsibility of the same Reliability Coordinator.

The organizations proposing to perform the duties and tasks of a Reliability Coordinator in the Western Interconnection have begun coordinating with each other to establish processes, procedures, tools, and sharing of information in the operations horizon; timelines for parallel operations; and, ultimately, cut-over of responsibilities. NERC and WECC are closely tracking the changes. They will evaluate the competencies of the registered entities proposing to perform Reliability Coordinator functions when appropriate.

### Q2 2018 Certification Completions

During Q2 2018, NERC and the REs completed three certification reviews.

### Registration

#### Revised ERO Enterprise Registration Practice Guide

NERC posted a revised [ERO Enterprise Practice Guide](#) on Distribution Provider “directly connected” Determinations. The purpose of the Practice Guide is to provide a reference to be used by ERO Enterprise staff when determining whether a registered entity, serving >75 MW of peak Load, should be registered as a Distribution Provider because it is “directly connected” to the BES. The Practice Guide’s revisions include a key explaining the color-coding. It also clarifies that the Practice Guide only applies to section III.a.1 of Appendix B of the NERC ROP and the 75 MW threshold is considered when evaluating whether a Distribution Provider is directly connected to the BES.

NERC received comments noting some confusion with the initial version of this document being called a “reference document.” This revised version clarifies that the document is a “Practice Guide.” Under the 2015 NERC Board of Trustees-endorsed [Compliance Guidance Policy](#), the ERO Enterprise provides guidance related to the performance of ERO Enterprise staff via Practice Guides. This Registration Practice Guide provides direction to ERO Enterprise staff on approaches to complete ERO Enterprise activities. Following development, Practice Guides are posted for transparency on the NERC website. While there is no prior external vetting process with Practice Guides, feedback is always welcome and considered.

#### Centralized Organization Registration Entity System Registration Process

In Q2 2018, planning began on a new project to develop an application for automating all registration processes. NERC and the REs developed high-level business requirements and in Q3 will continue the efforts of stabilizing the detailed requirements. This includes industry outreach, which is paramount to the project.

Also in Q2 2018, REs continued to work with registered entities that had a Coordinated Functional Registration and input the information into the new CFR tool that deployed in Q4 2017. NERC and the REs will continue to work with registered entities to upload the information and identify any areas for enhancement.

## Q2 2018 Registration Changes

NERC verifies registration change activity by monitoring the REs and reviewing documentation relating to change requests to the registry. NERC processed 79 functional registration changes, including 39 functional activations and 40 functional deactivations.<sup>13</sup> Of the 40 functional deactivations:

- Seven had their compliance responsibility assumed by another registered entity,
- Twenty-four were consolidations to another mutually-owned registered entity,
- Two were due to shut down facilities,
- Three were due to registered entity assets being sold to another registered entity, and
- Four did not meet registration criteria due to the “Directly Connected Practice Guide” application.<sup>14</sup>

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<sup>13</sup> All BPS owners, operators, and users are required to register with NERC. Section 500 and Appendix 5A of the NERC ROP describe the process for registration. The NCR lists all organizations registered and, therefore, subject to compliance with approved Reliability Standards.

<sup>14</sup> <https://www.nerc.com/pa/comp/RegistrationNewsDL/ERO%20Enterprise%20Revised%20Registration%20Practice%20Guide%20Posted.pdf>

## Appendix A: Enforcement

### CMEP Metrics

#### Mitigation Completion Status

Mitigation of the oldest noncompliance (dating from 2015 and earlier) is over 99 percent complete with only a single minimal risk instance of noncompliance with a date of 2014 or earlier.<sup>15</sup> NERC continues to monitor this instance of noncompliance, as well as those from 2016 and 2017, as priorities for mitigation completion.

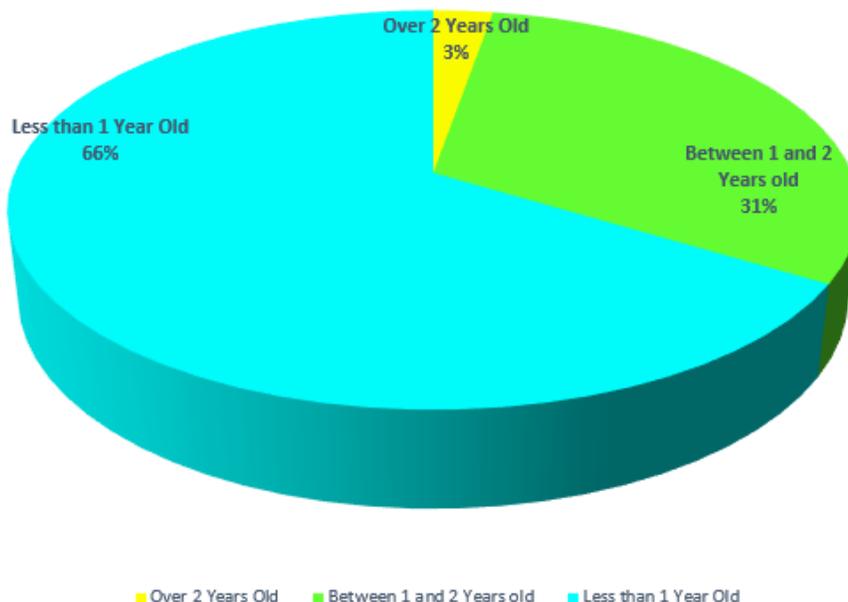
**Table A.1: Mitigation Completion Status**

Time Frame	Required Mitigation	On-going	Progress Toward Goal	Threshold	Target	Progress Since Last Quarter
2015 and Older	10206	9	99.91%	99%	100%	0.01%
2016	1153	129	88.8%	85%	90%	3.36%
2017	2020	868	57.0%	70%	75%	10.9%

#### Age of Noncompliance in ERO Enterprise Inventory

Figure A.1 shows the age of noncompliance from all non-federal entities and noncompliance from federal entities discovered after November 2014.<sup>16</sup> The inventory of noncompliance less than one year old has fallen by just over a fifth, from 87 percent to 66 percent since October 2017. The age of caseload inventory is increasing from an ERO Enterprise perspective. This is due in part to an increase in the number of new instances of noncompliance, which the ERO Enterprise is focusing on processing at an appropriate pace.

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



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

<sup>15</sup> The registered entity at issue requires an outage to address its last milestone—the outage is scheduled for Q4 2018.

<sup>16</sup> The U.S. Court of Appeals for the District of Columbia Circuit ruled in November 2014 that monetary penalties could not be imposed on federal entities. All previously reported federal entity violations were formerly on hold pending the court's decision. The pre-court case federal entity violations and the post-court case violations have been separated because routine processing was interrupted.

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

The average age of noncompliance rose from 8.8 months in Q1 2018 to 9.6 in Q2 2018.<sup>17</sup> The average age of noncompliance in the ERO Enterprise inventory has been steadily rising since September 2017, when it was at 7.0 months. The rising average age of inventory is a result of the increased number of noncompliance reported from Reliability Standards that became enforceable since July 2016. Noncompliance with CIP-007-6 (21 percent) and CIP-010-2 (15 percent) make up over a third of all noncompliance in the inventory.

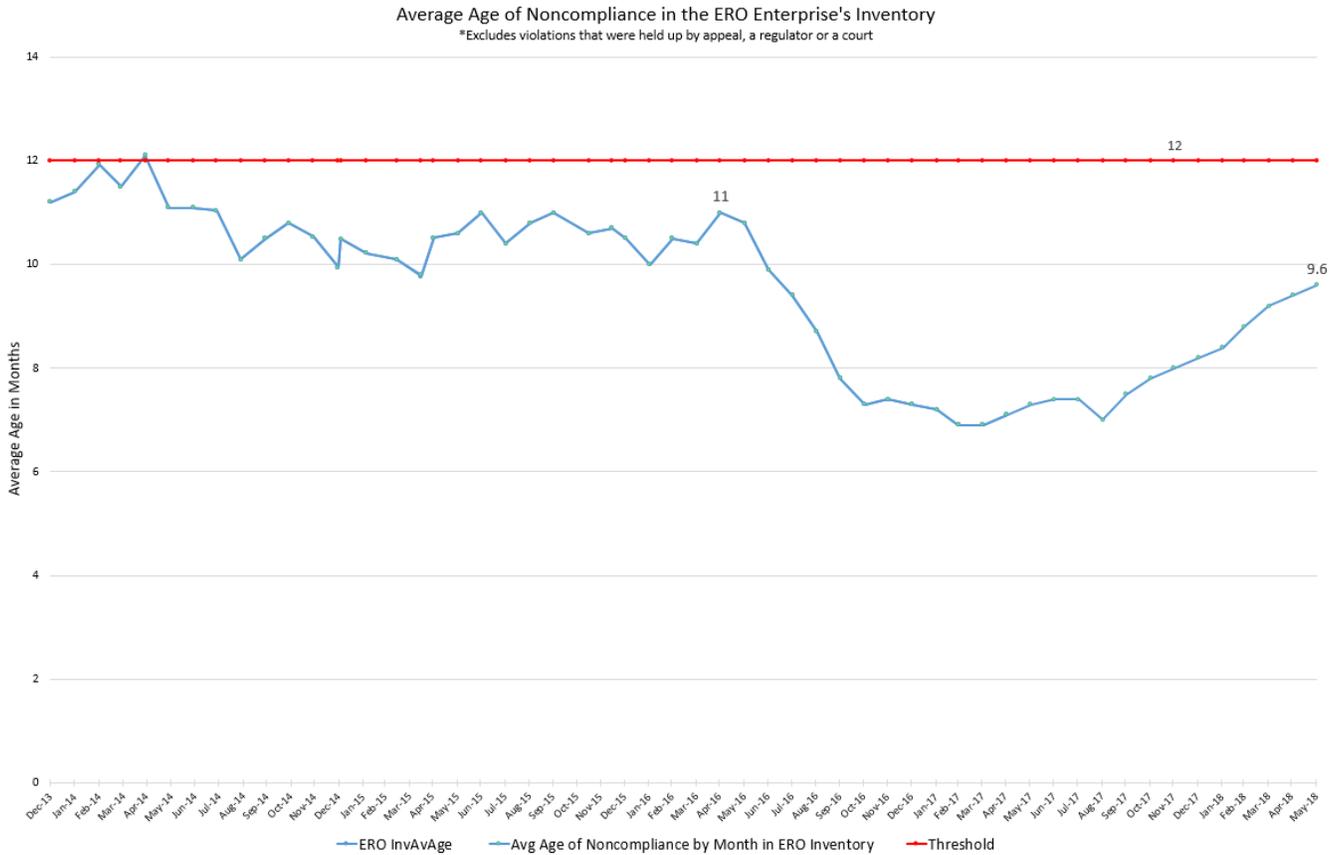


Figure A.2: Average Age of Noncompliance in the ERO Enterprise Inventory

<sup>17</sup> The age of noncompliance runs from the time the noncompliance is identified to the time it is resolved (i.e., through CE, FFT, SNOP, or Full NOP processing).

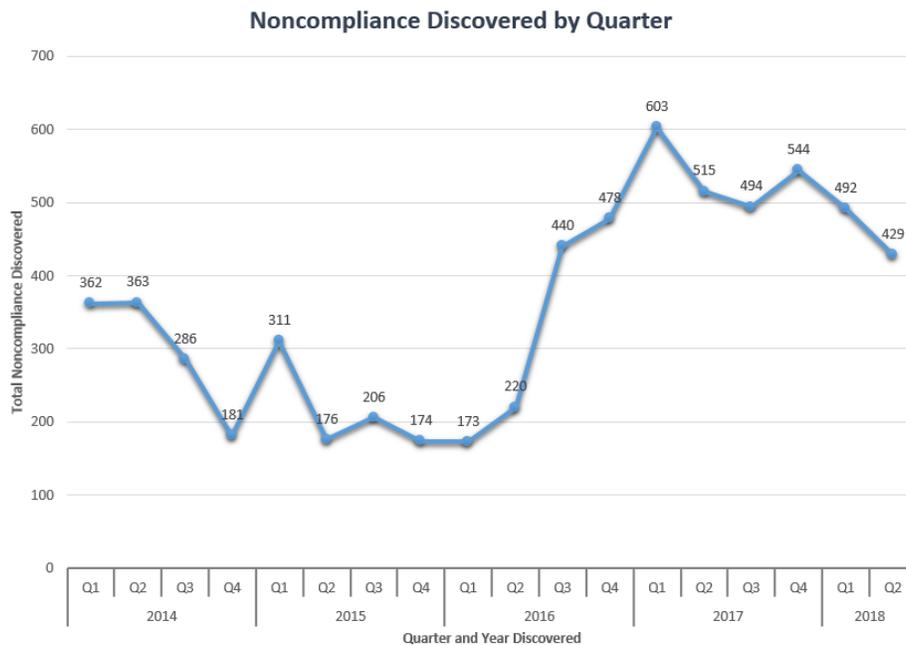
### Number of New Noncompliance Discovered in Q2 2018

The number of new noncompliance has remained high in Q2 2018. The 2,050 instances of noncompliance discovered in 2017 represented approximately 1.5 times the number discovered in 2016 (1,301), which had already nearly increased from the same pace from 2015 (867). The increase between 2015 and 2016 reversed a trend of declining discovered noncompliance that had peaked in 2011 with 2,597 and fell steadily through 2015. Approximately 80 percent of all newly discovered noncompliance in the first quarter of 2018 involved Reliability Standards that have gone into effect since July 2016.<sup>18</sup> The disproportionate representation of these Reliability Standards is a trend that continued through 2017 and appears to be continuing in 2018.

**Table A.2: Noncompliance Discovered in Q1 and Q2 2018**

Discovery Month	FRCC	MRO	NPCC	RF	SERC	SPP RE	Texas RE	WECC	Total
January	10	26	7	23	30	11	15	49	171
February	1	0	30	34	18	24	21	54	182
March	4	6	16	35	33	5	9	31	139
April	3	23	7	25	18	11	33	25	145
May	4	1	7	41	41	0	26	35	155
June	2	0	15	24	25	0	32	31	129
<b>Total</b>	<b>24</b>	<b>56</b>	<b>82</b>	<b>182</b>	<b>165</b>	<b>51</b>	<b>136</b>	<b>225</b>	<b>921</b>

Prior spikes in reported noncompliance may provide insights into this trend. As illustrated by Figure A.3, the last surge of noncompliance – also associated with new Reliability Standards – lasted approximately three years, peaking after the completion of the first full year the new Reliability Standards were in effect. If this increase follows a similar pattern and 2017 is the peak, the total discovered noncompliance should begin to fall sometime in 2018 and fall again more significantly in 2019. The decrease would follow ERO Enterprise outreach efforts and registered entities’ familiarity with the requirements necessary for compliance with the new standards, as well as the ERO Enterprise completing compliance monitoring activities for the applicable registered entities.



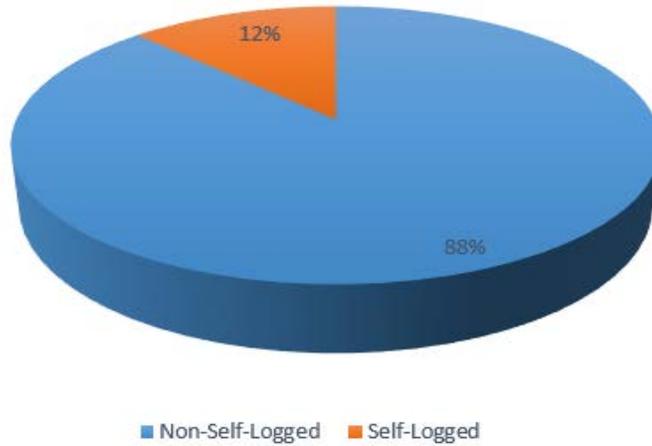
**Figure A.3: Noncompliance Discovered by Quarter**

<sup>18</sup> For MRREs participating in the Coordinated Oversight Program, noncompliance will be accounted for in its LRE statistics but may actually affect assets in the ARE’s regional footprint.

### Percentage of Self-Logging and CEs

The percentage of self-logged CEs did not change substantially from the previous quarter. This percentage of self-logged CEs has remained consistent from 2016, when the rate was also 12 percent.

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

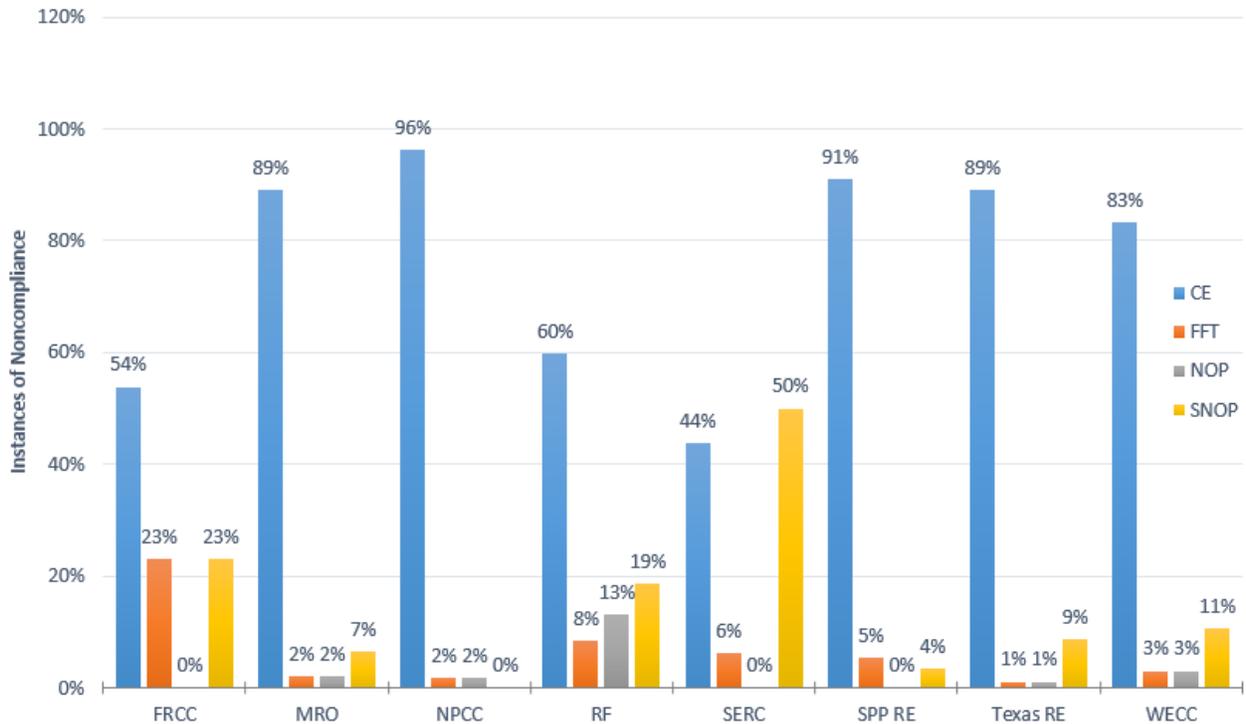


**Figure A.4: Percentage of Self-Logged CEs since June 2014**

### Disposition of Noncompliance

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

**Disposition Breakdown by Region in 2018**



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

### Most Violated Standards Discovered in Q2 2018

MOD-025, CIP-007, CIP-004, PRC-019, and CIP-010 have the highest frequency of noncompliance in Q2 2018. CIP-004, CIP-007, PRC-005, and VAR-002 are historically among the most violated Reliability Standards.<sup>19</sup> There was a significant increase in reporting of CIP-010 in 2017 and into the first quarter of 2018. While the CIP-010 standard did appear in the most violated Reliability Standards lists at the beginning of 2017, it was the ninth-most discovered violation. Since last year, the increase in identified CIP-010 noncompliance has led it to be the fourth most violated Reliability Standard. The second quarter of 2018 included an increase in the filing of MOD-025 issues predominantly as CEs.

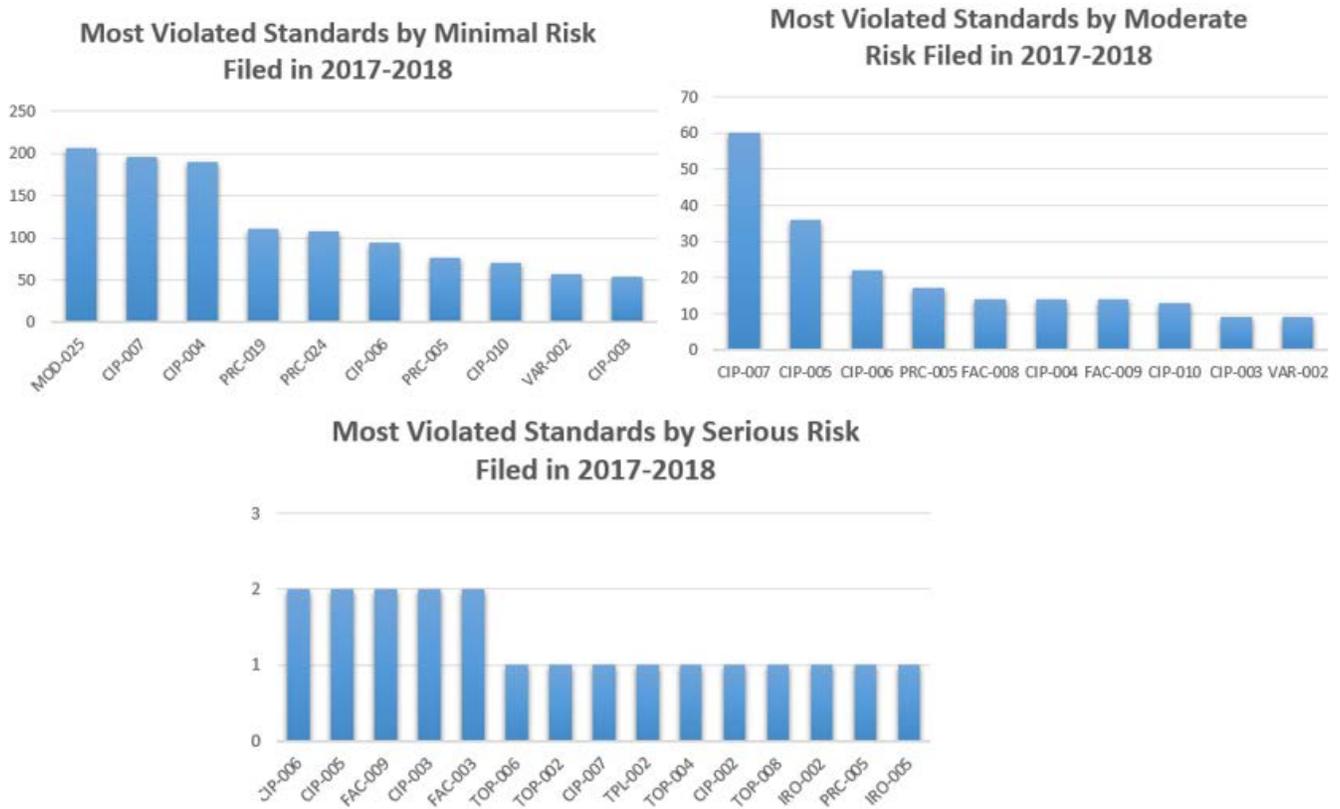


Figure A.6: Most Violated Reliability Standards by Risk in 2017-2018

<sup>19</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, resulting in a higher number of potential areas to experience instances of noncompliance.

### Vegetation Management

There were seven vegetation-related Category 3 outages in the first quarter of 2018.<sup>20</sup> In 2017, the ERO Enterprise received reports of a total of 20 Category 3 outages, 2 Category 1B outages, and 2 Category 4B outages. Registered entities report these outages through Periodic Data Submittals on a quarterly basis as displayed in Figure A.7. The 24 vegetation-related outages are a reduction from the prior year, though it is still too early to make conclusions about whether there is a trend.

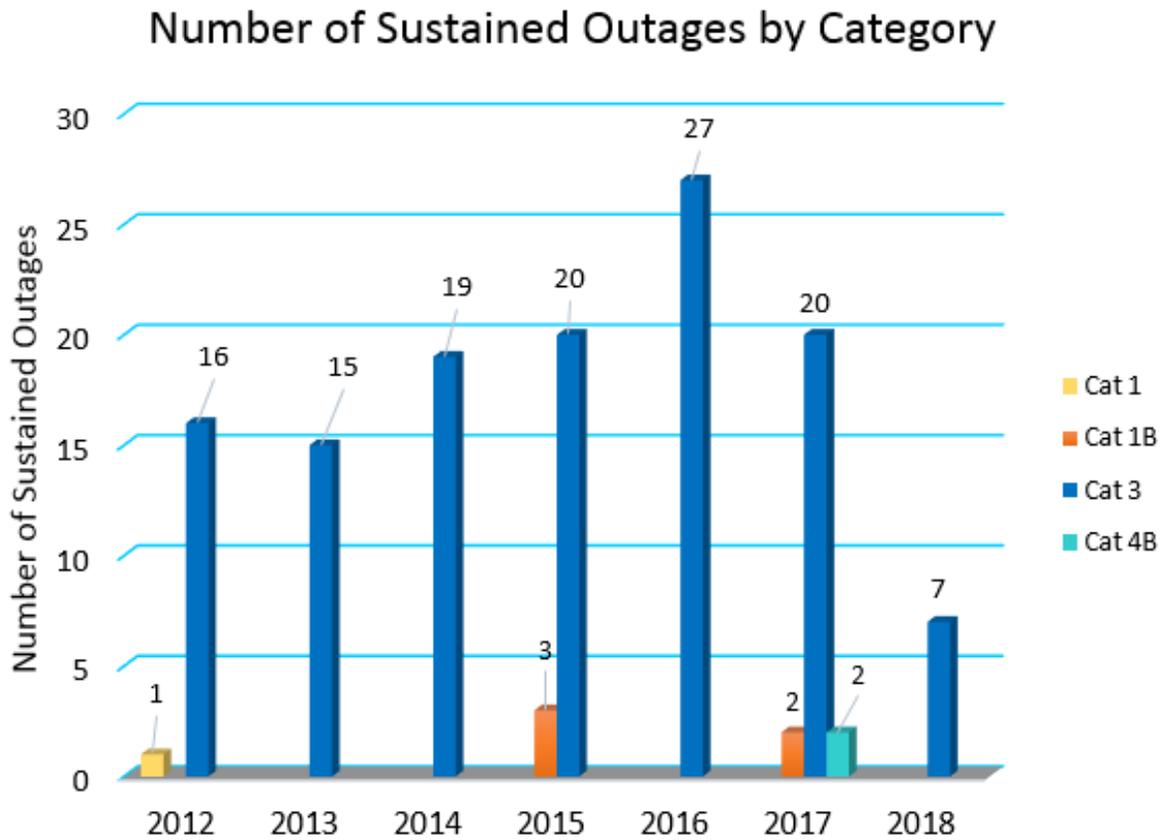


Figure A.7: Vegetation-related Outages by Category

<sup>20</sup>Vegetation-related outage information is consolidated on a delayed quarterly basis. Information related to Q2 2018 will be available in Q3 2018.

### Violations Posing a Serious Risk

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

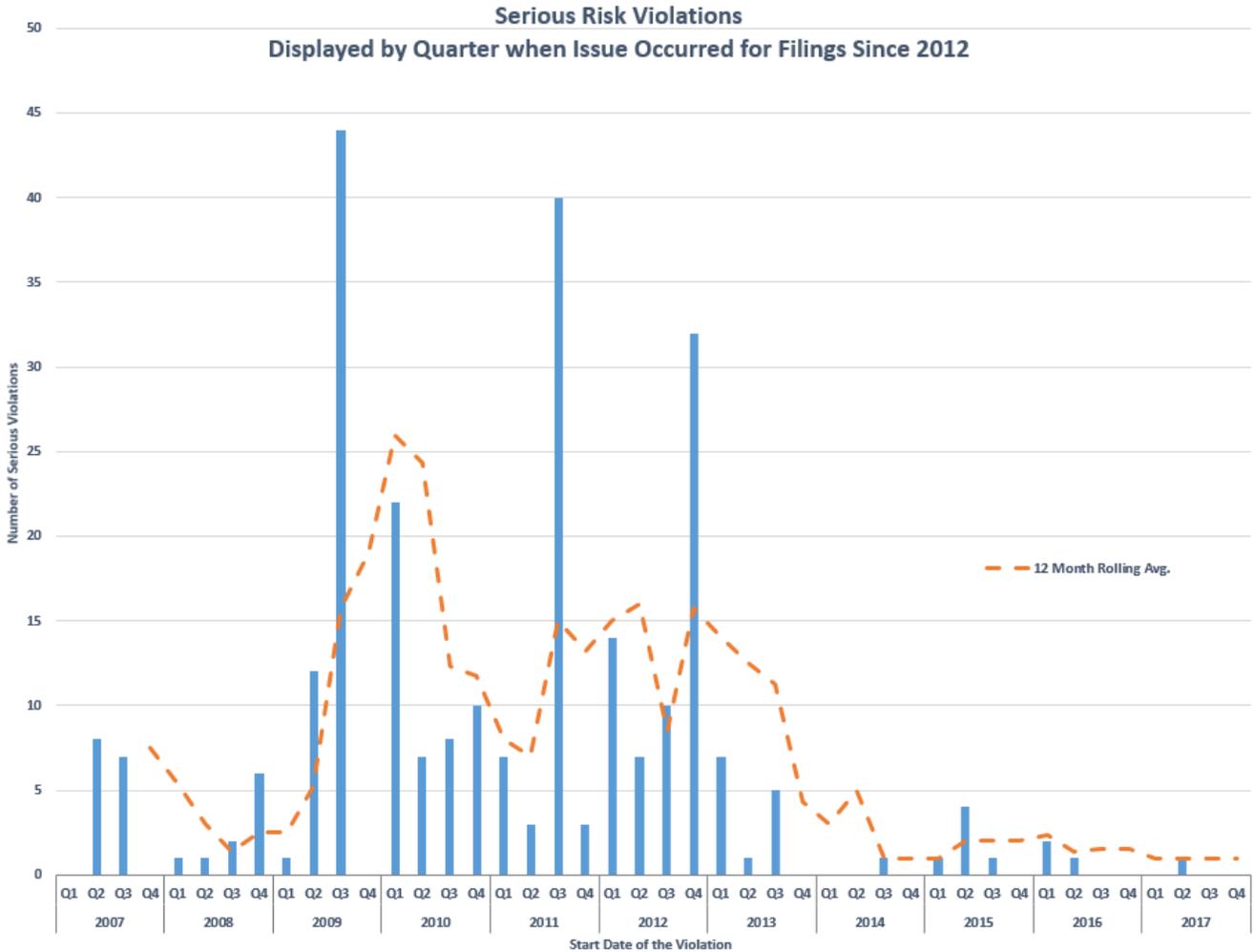


Figure A.8: Serious Risk Violations by Date of Occurrence for Filings Post-2012

### Violations with a Measured Reliability Impact

NERC gathers enforcement data using metrics that measure reliability impact to the BPS. Figure A.9 represents the occurrence dates of noncompliance filed since 2014 that had some observed impact on reliability. This is a quarterly count of the number of noncompliance with observed reliability impact, regardless of the risk assessment.<sup>21</sup> The moving averages provide an indicator of the rate of impactful noncompliance. Figure A.9 illustrates that impactful noncompliance appears to be decreasing and is better controlled. The impact chart saw no significant changes in the first half of 2018.

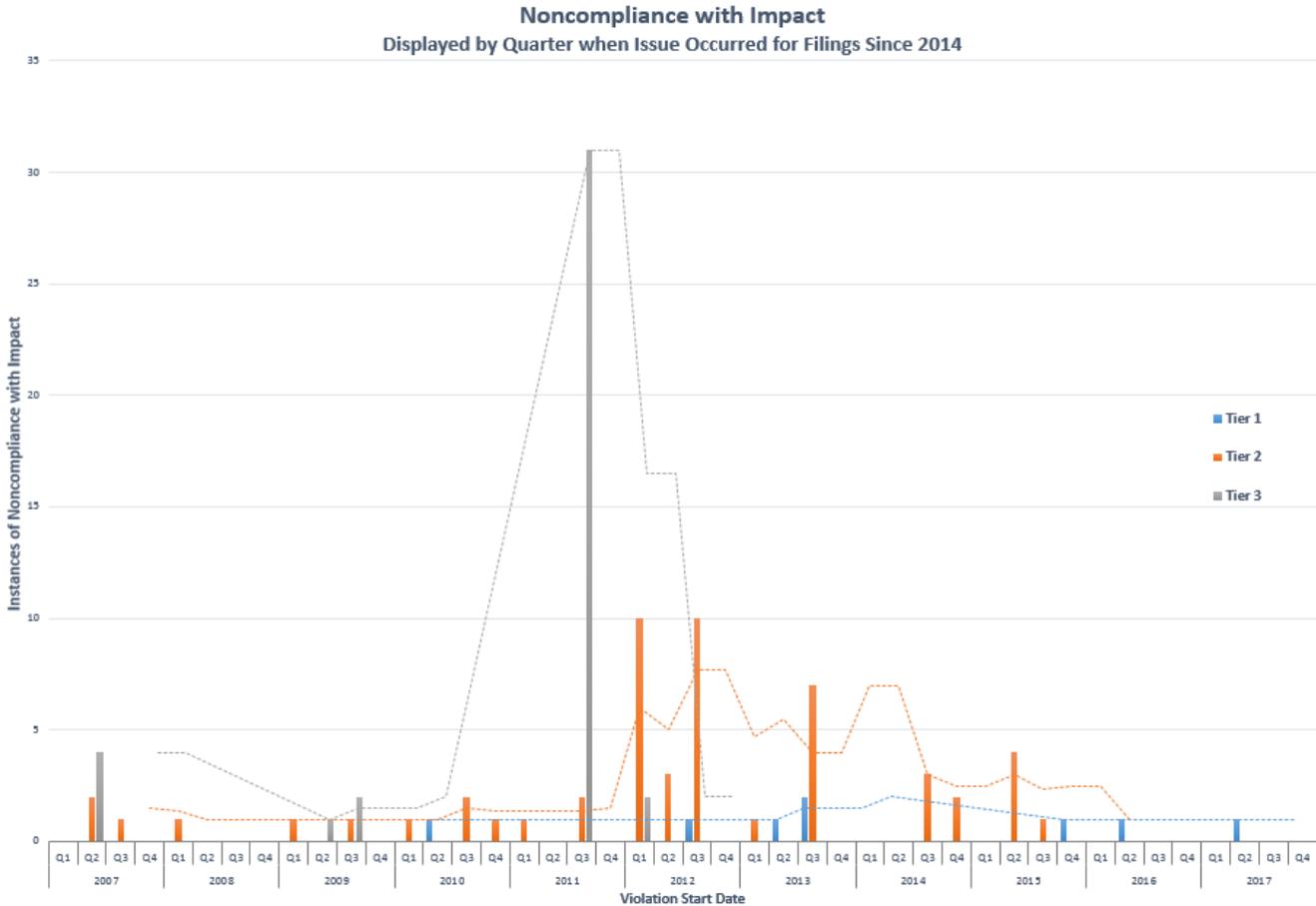


Figure A.9: Noncompliance with Impact by Quarter

<sup>21</sup> Tier 0 observations (no observed impact) are not depicted. Tier 1 violations are minor impacts of lesser magnitude. Tier 2 violations are moderate impact noncompliance, such as Interconnection Reliability Operating Limit exceedances or unexpected BES facility trips. Tier 3 violations caused or contributed to a major BES disturbance. Because of the subjectivity inherent in the definitions of observable impacts and the establishment of the tiers, it is expected that the definitions of the tiers will evolve over time based on experience.

### Serious Risk Averages

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

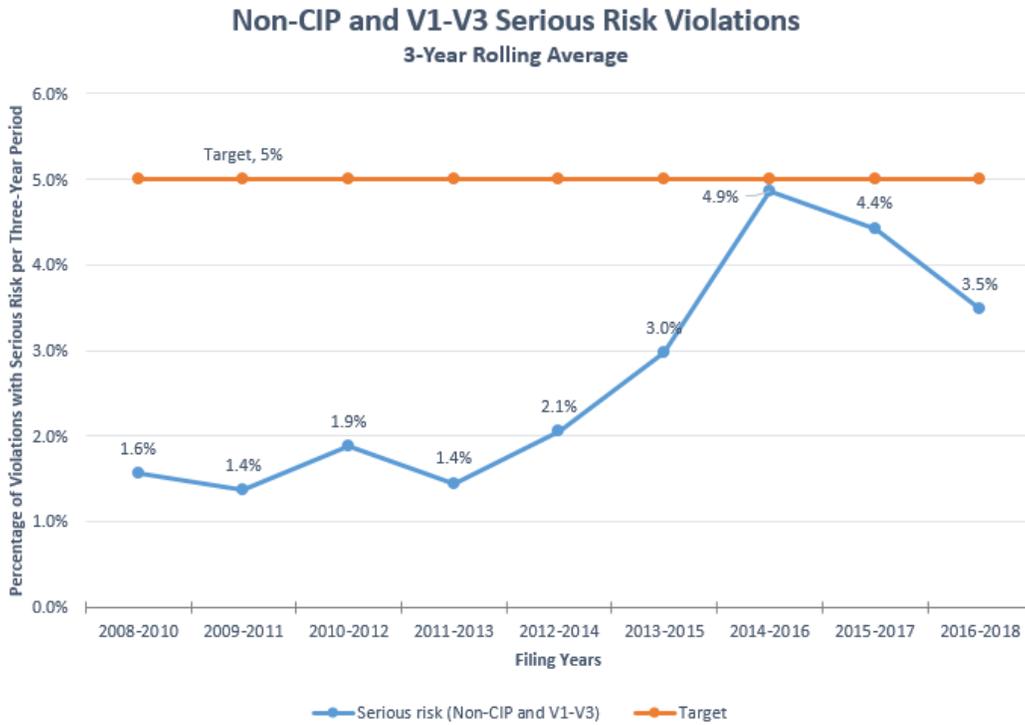


Figure A.10: Rolling Average of Serious Risk Violations (Excluding CIP Version 5)



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

### Compliance Severity Risk Index

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

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

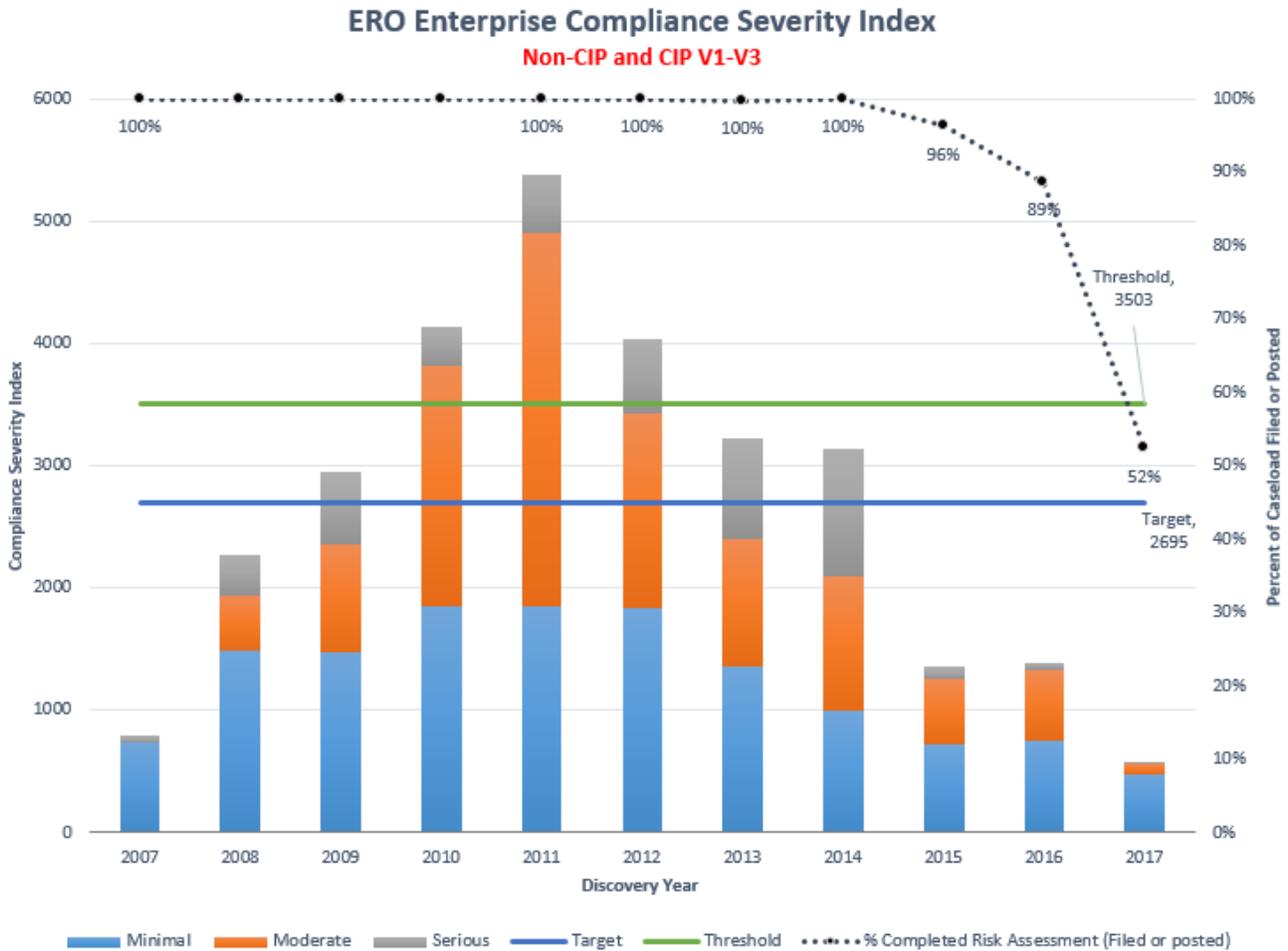


Figure A.12: Compliance Severity Risk Index for non-CIP and CIP V1 through V3

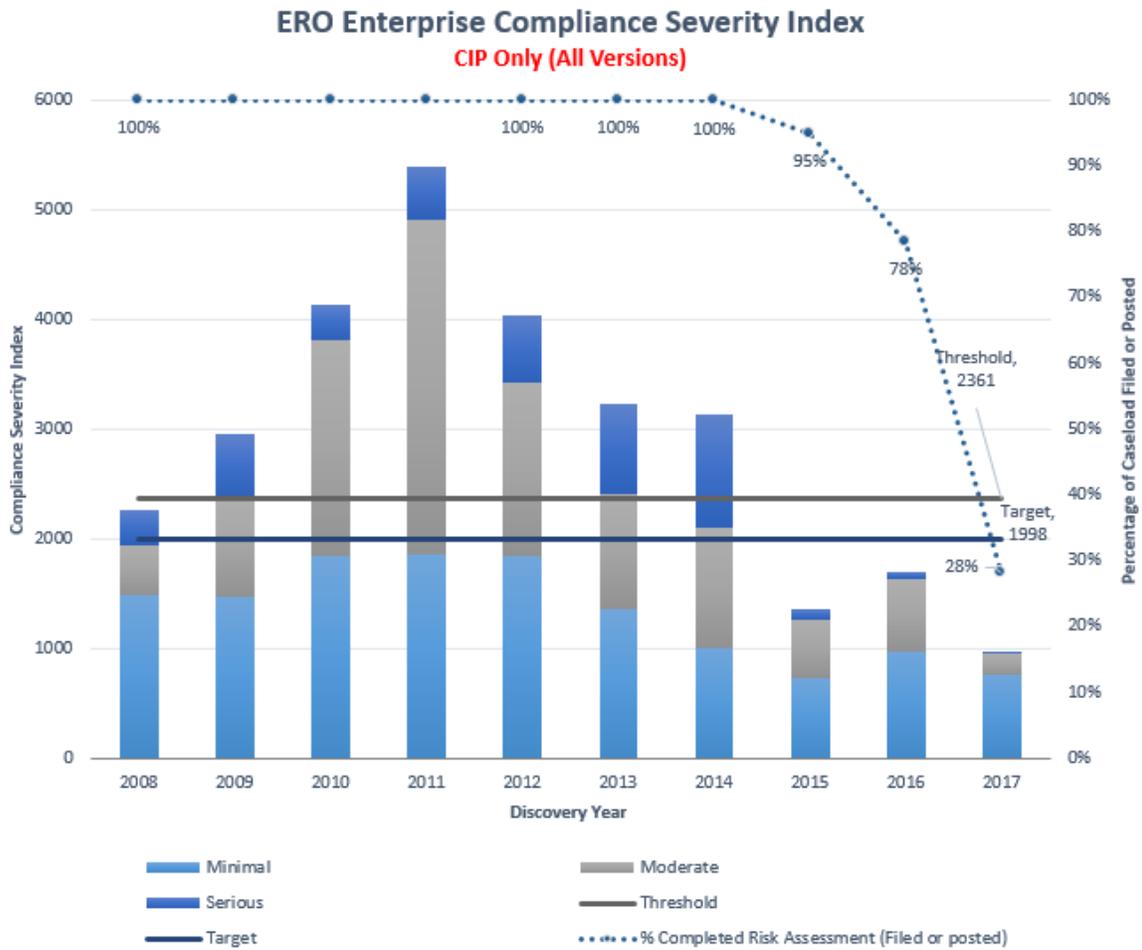
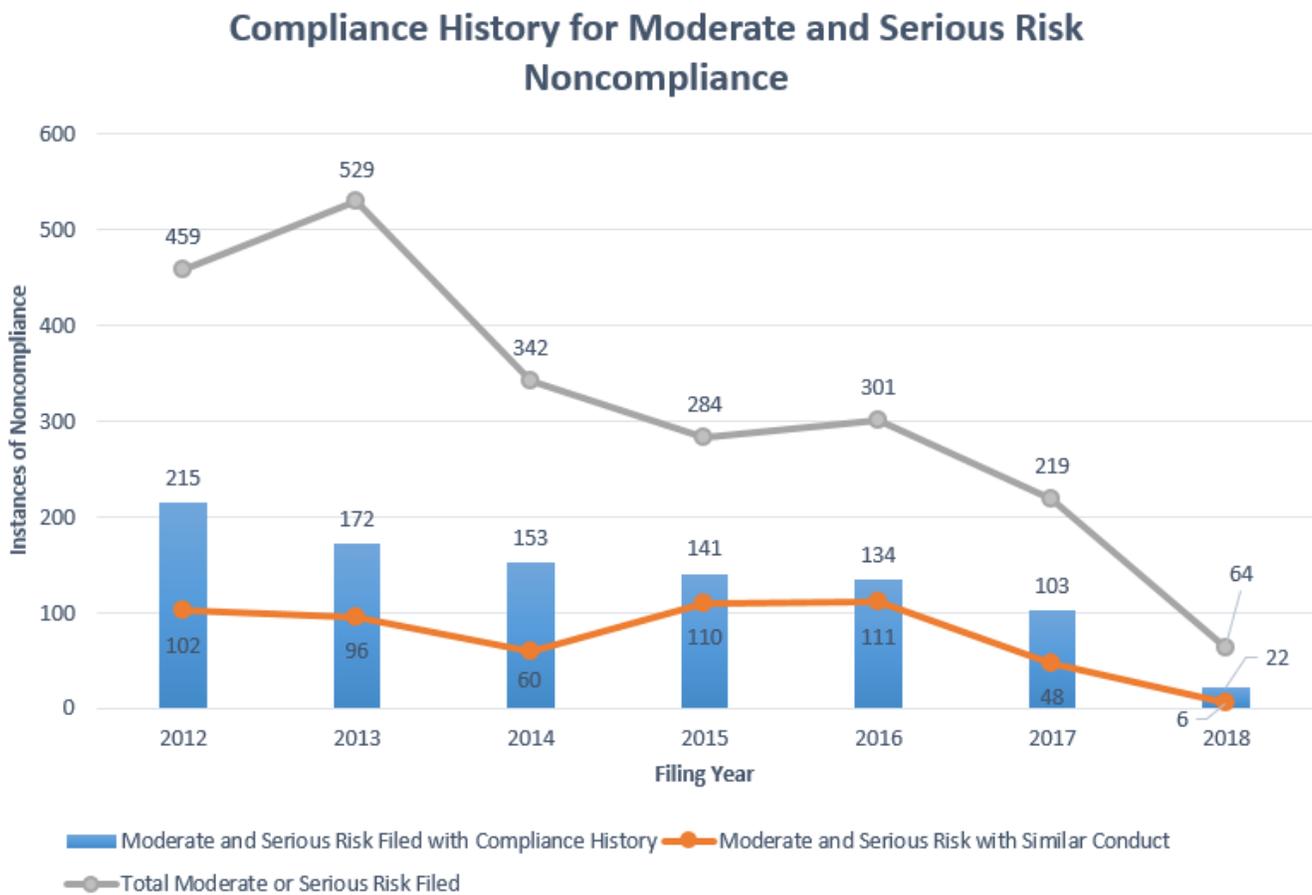


Figure A.13: ERO Enterprise Compliance Severity Risk Index for all CIP Violations

### Reduced Repeat Moderate and Serious Risk Violations

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

Figure A.14 juxtaposes three categories of moderate and serious risk noncompliance: noncompliance with compliance history (blue columns), noncompliance with compliance history involving similar conduct (orange line), and all filed moderate and serious risk noncompliance (gray line). Noncompliance with similar conduct is a subset of the wider group of repeat noncompliance. The total moderate and serious noncompliance, shown by the gray line, includes both “new” noncompliance and repeat noncompliance. Out of 64 moderate and serious risk violations filed in the first half of 2018, there have been 22 moderate or serious risk violations with compliance history and 6 with similar prior conduct.



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

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

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

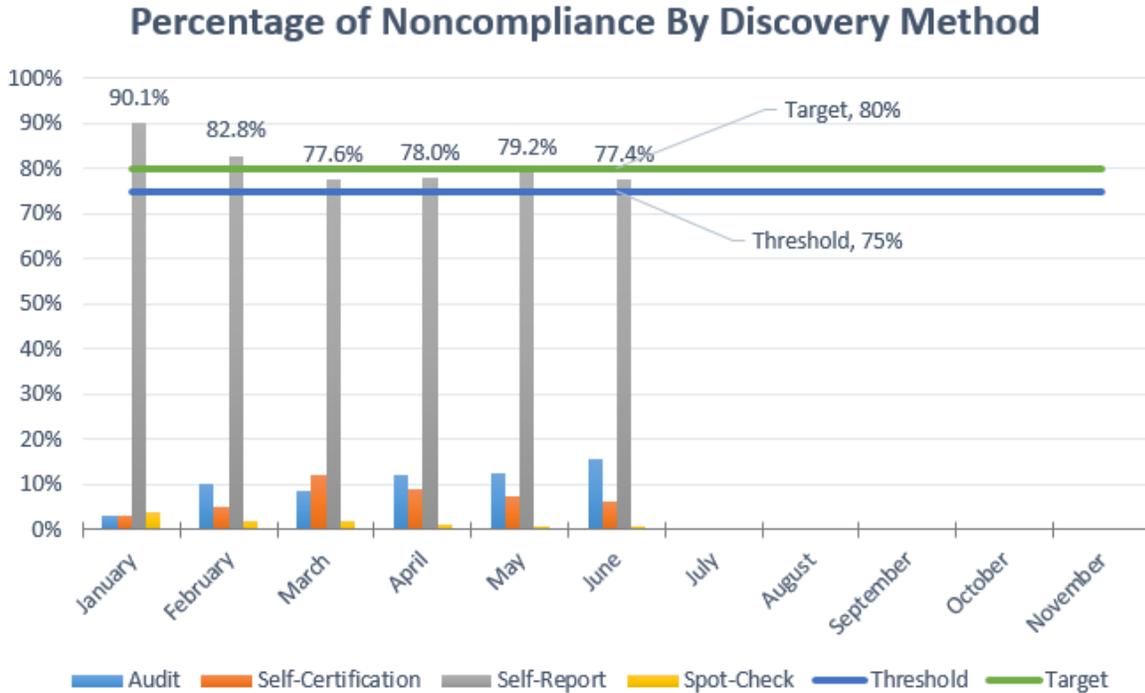


Figure A.15: Percent of Noncompliance by Discovery Method

## Appendix B: Compliance Assurance

### Coordinated Oversight Program for MRREs

Figure B.1 represents the distribution of the 49 MRRE groups by LRE, comprised of 222 MRREs. Figure B.2 represents the distribution of MRREs by registered function.

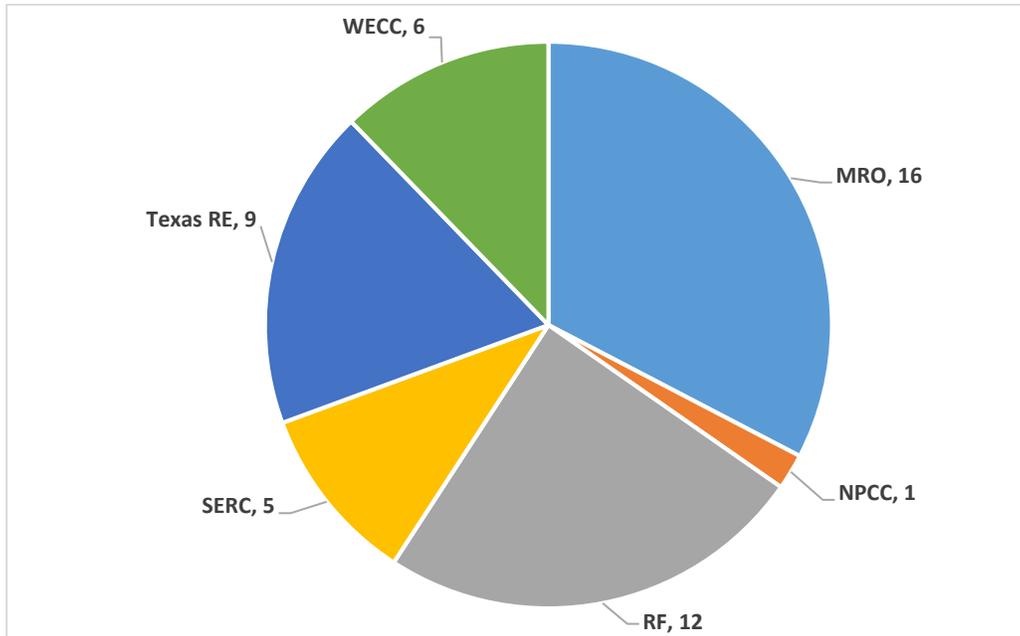


Figure B.1: Percentage of MRREs under Coordinated Oversight by LRE

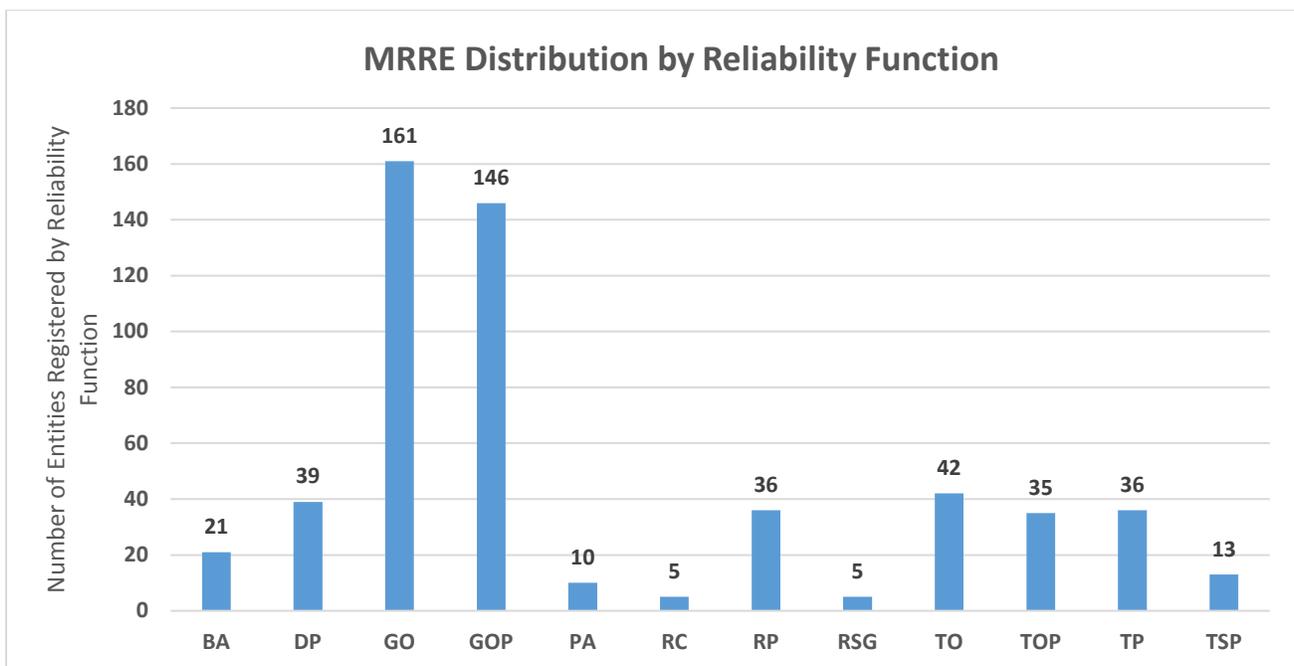


Figure B.2: Coordinated Oversight Distribution by Registered Function

## ERO Enterprise Completion of Initial IRAs

Figure B.3 identifies the number of IRAs completed by each RE. Since beginning the assessments in Q2 2018, the REs have completed 1,178 IRAs for 1,495 registered entities.<sup>22</sup> The ERO Enterprise completed IRAs for approximately 79 percent of the total number of registered entities.<sup>23</sup> All REs have completed IRAs for all registered entities registered as Reliability Coordinators and Balancing Authorities with two recently registered Transmission Operator entities scheduled for completion in 2018. NERC and the REs anticipate registration changes that will affect overall IRA completion. Therefore, IRA activity prioritization will consider registered functions and registration changes to ensure IRAs are completed.

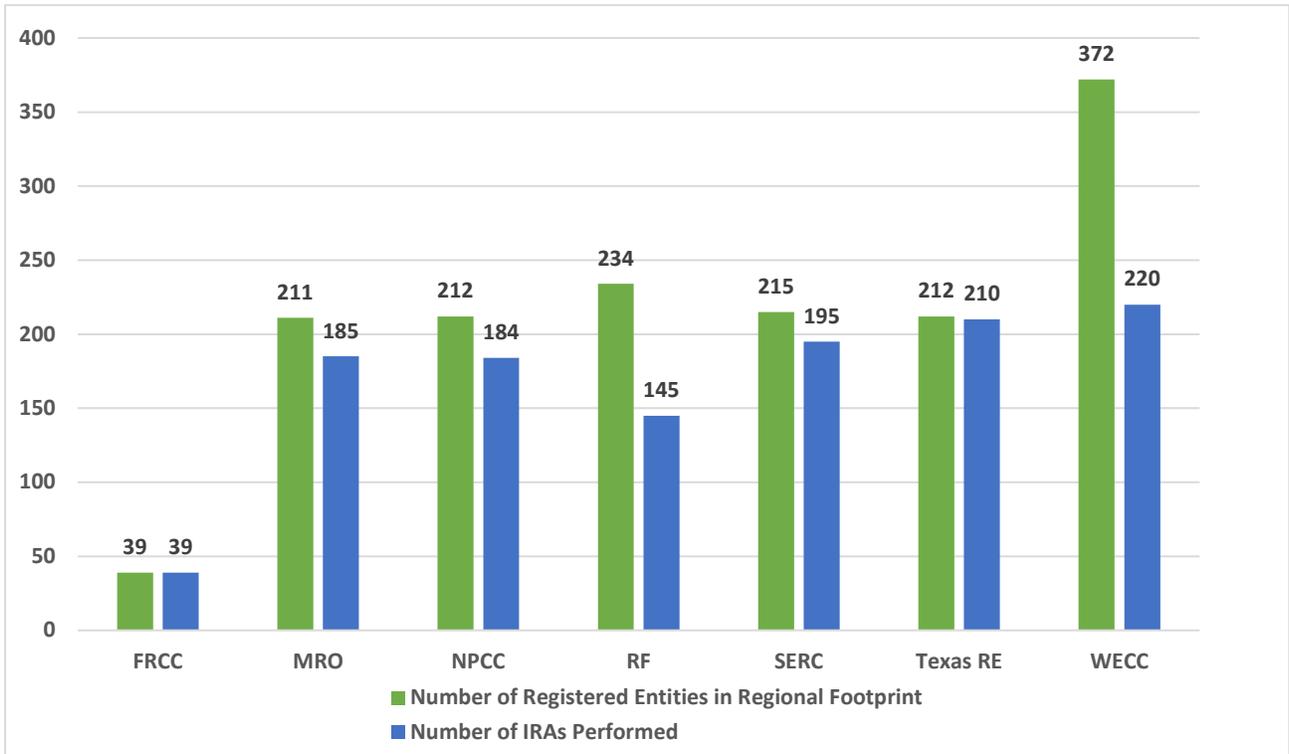


Figure B.3: RE Completion of IRAs

<sup>22</sup> NERC bases the number of registered entities on the registration cut-off date in Q2 2018, which includes all newly registered entities. NERC does not include deregistered entities.

<sup>23</sup> Some of the registered entities are MRREs in the Coordinated Oversight Program. As such, until the LRE completes the IRA for that MRRE Group, the numbers do not update for the AREs. Therefore, some of the REs included in Figure B.3 do not receive credit until their IRAs are completed.

## Appendix C: Registration

The following charts depict Q2 2018 registration change activity by function.

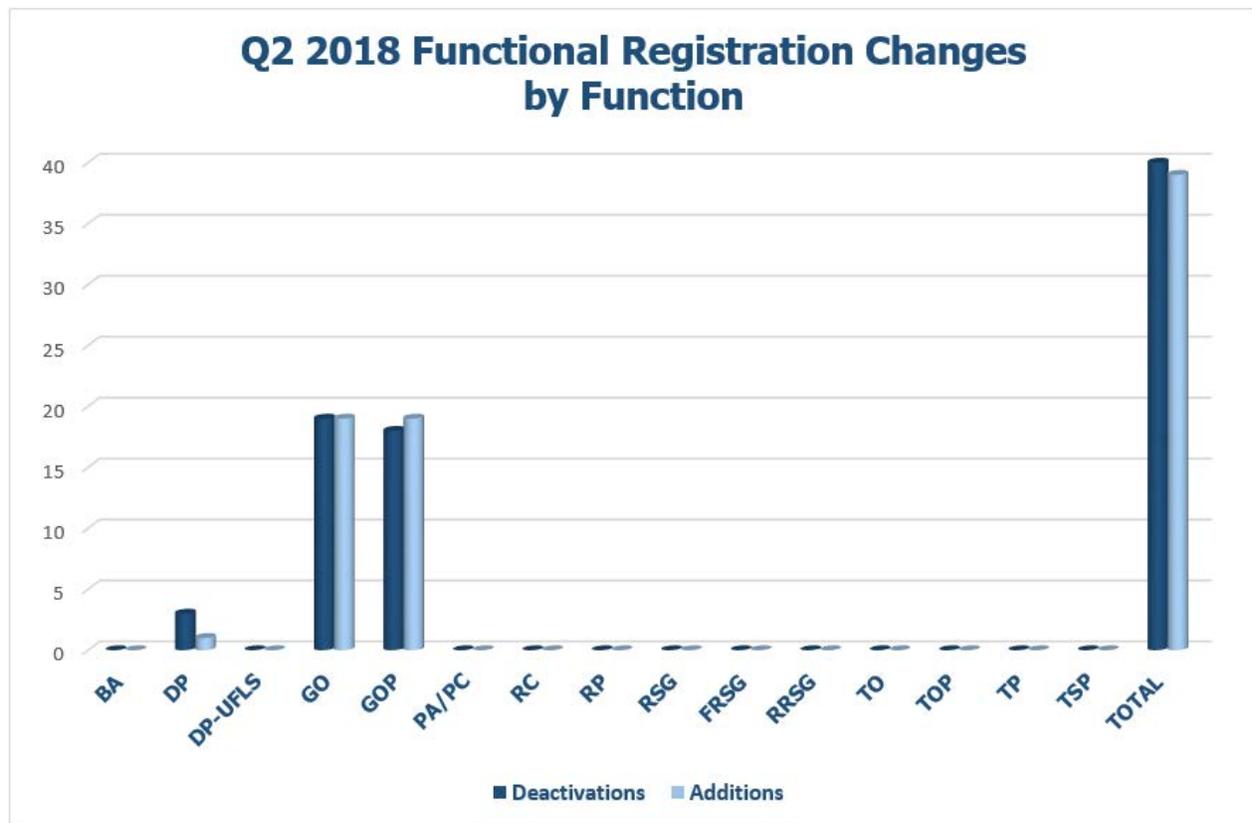


Figure C.1: Q2 2018 Registration Change Activity by Function

	BA	DP	DP-UFLS	GO	GOP	PA/PC	RC	RP	RSG	FRSG	RRSR	TO	TOP	TP	TSP	TOTAL
<b>Deactivations</b>	0	3	0	19	18	0	0	0	0	0	0	0	0	0	0	40
<b>Activations</b>	0	1	0	19	19	0	0	0	0	0	0	0	0	0	0	39

REs provide justification when approving registration change activity, as shown in Table C.3.

Compliance responsibility assumed by another Registered Entity	7
Consolidated to another mutually-owned Registered Entity	24
Facility shut down	2
Registered Entity assets sold to another registered entity	3
Determined to not meet registration criteria	4

# NERC

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# Compliance Monitoring and Enforcement Program Quarterly Report

Q2 2018

Ed Kichline, Senior Counsel and Director of Enforcement Oversight

Ken McIntyre, Vice President of Standards and Compliance

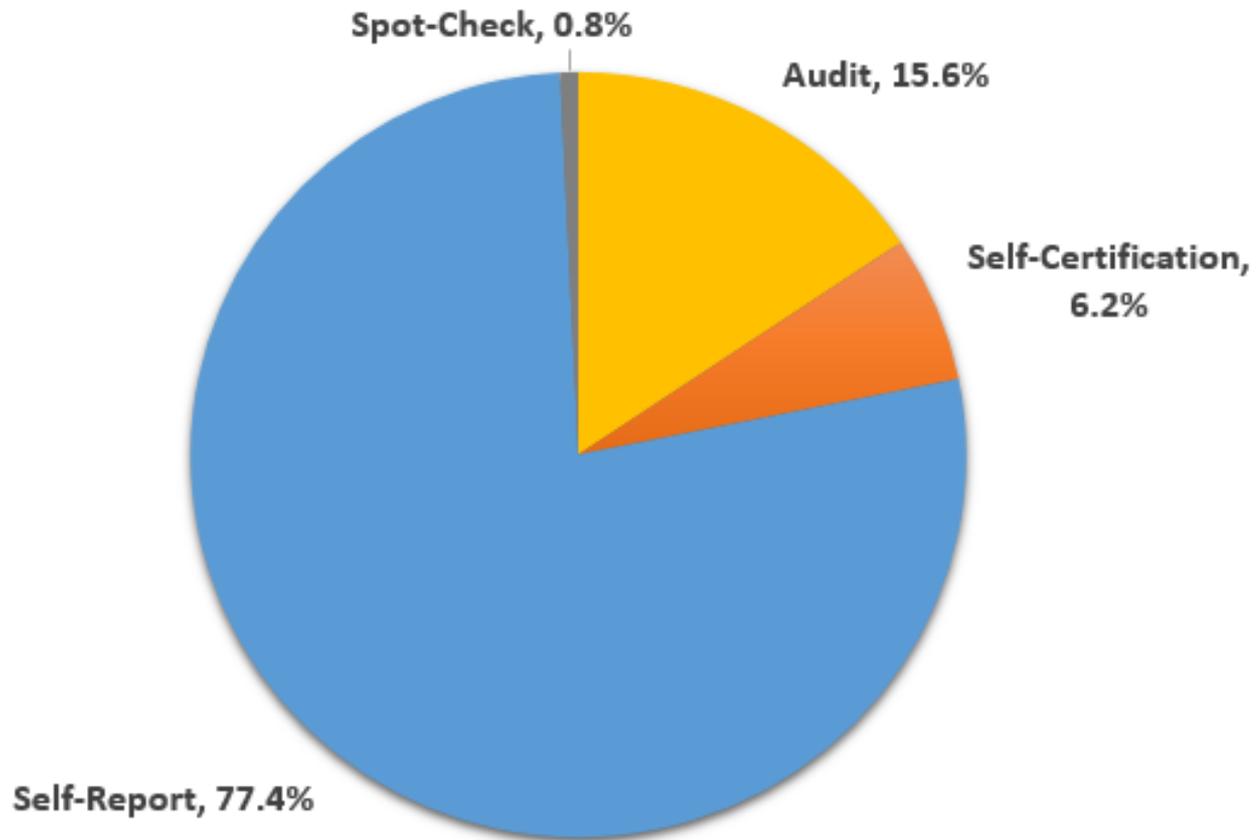
Board of Trustees Compliance Committee

August 15, 2018

**RELIABILITY | ACCOUNTABILITY**



**Percentage of Noncompliance by Discovery Method  
in Q1 and Q2 2018**



Ongoing Mitigation by Discovery Year

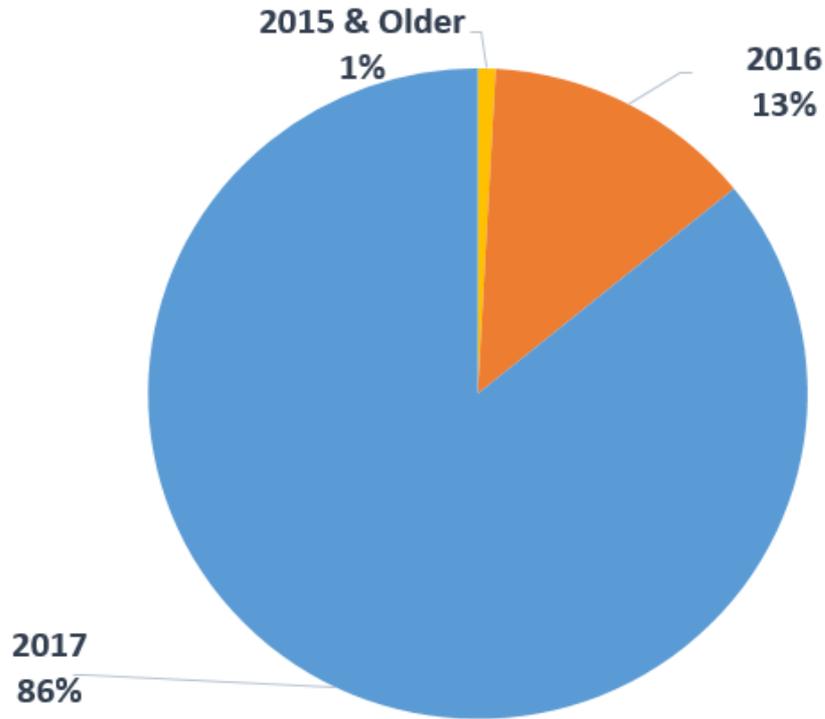
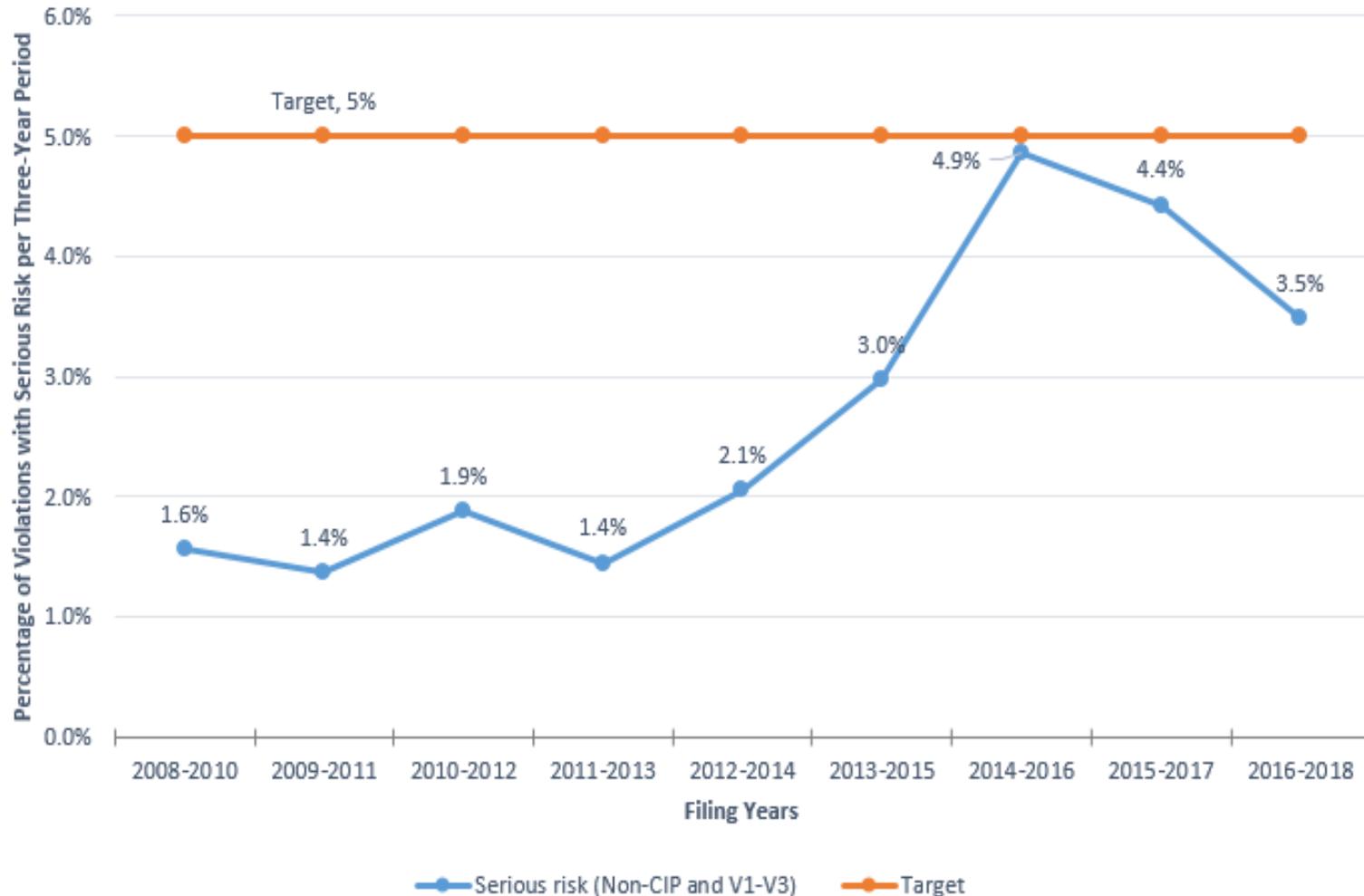


Table A.1: Mitigation Completion Status

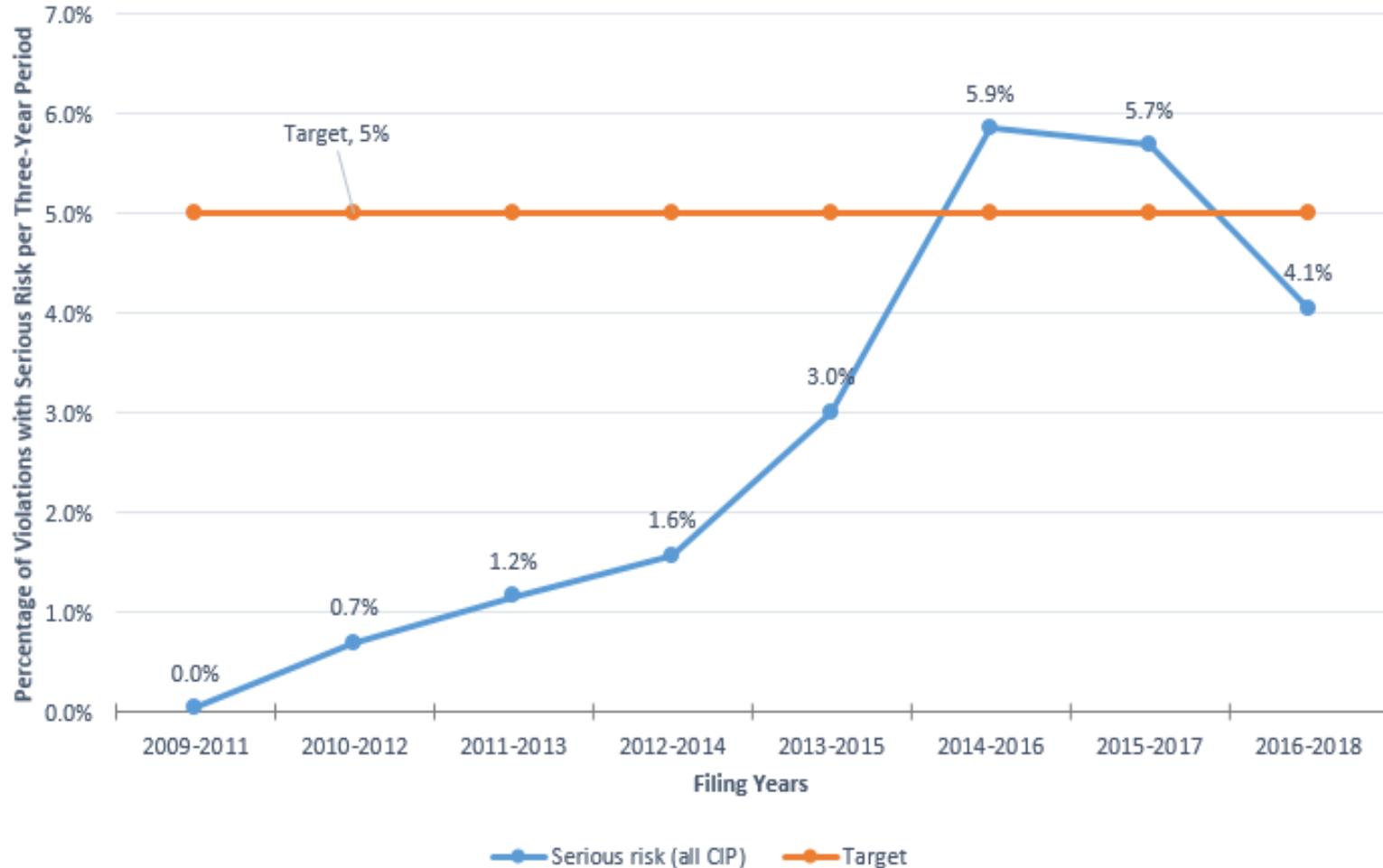
Time Frame	Required Mitigation	On-going	Progress Toward Goal	Threshold	Target	Progress Since Last Quarter
2015 and Older	10206	9	99.91%	99%	100%	0.01%
2016	1153	129	88.8%	85%	90%	3.36%
2017	2020	868	57.0%	70%	75%	10.9%

## Non-CIP and V1-V3 Serious Risk Violations 3-Year Rolling Average

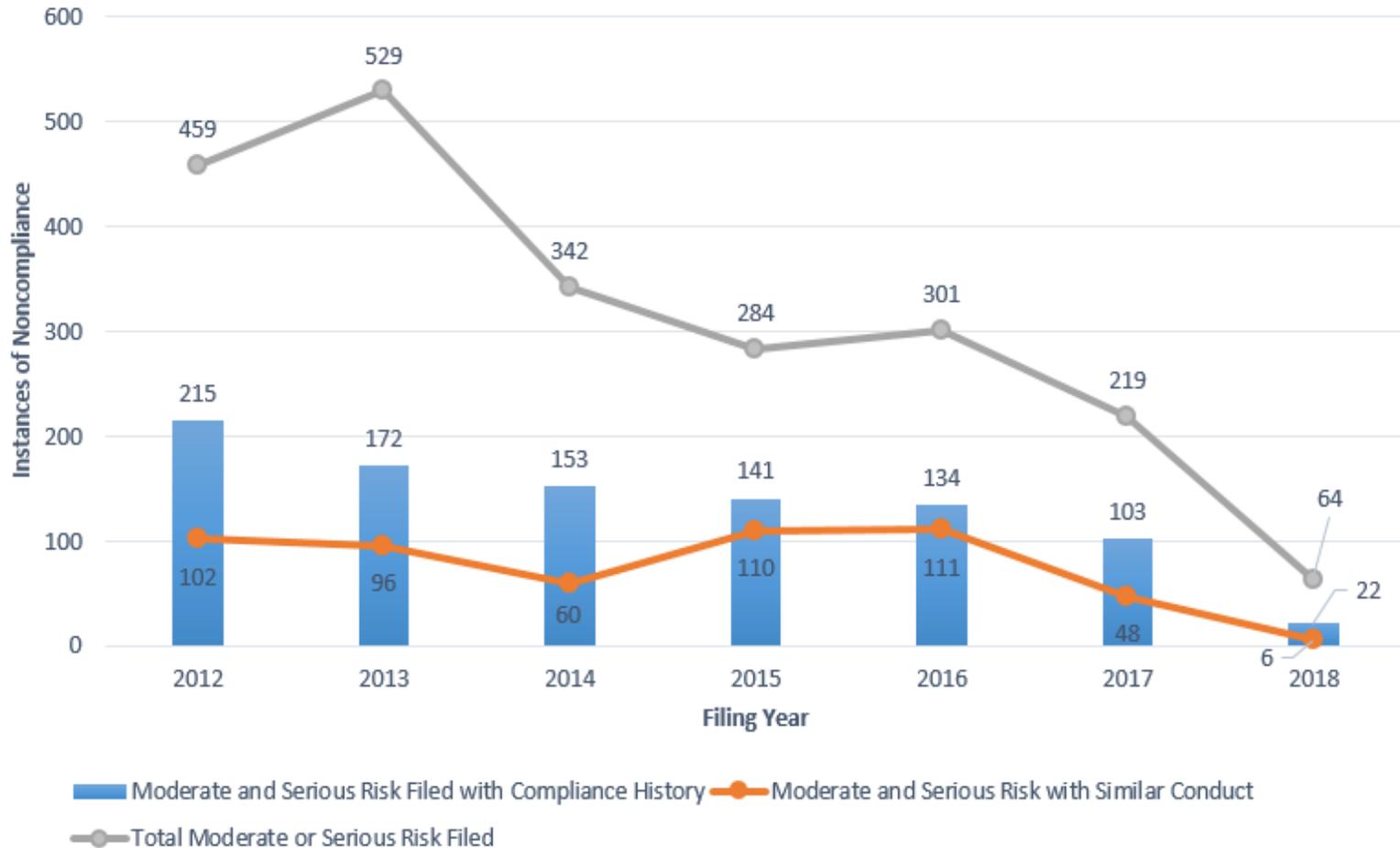


# Tracking Risk of CIP Noncompliance

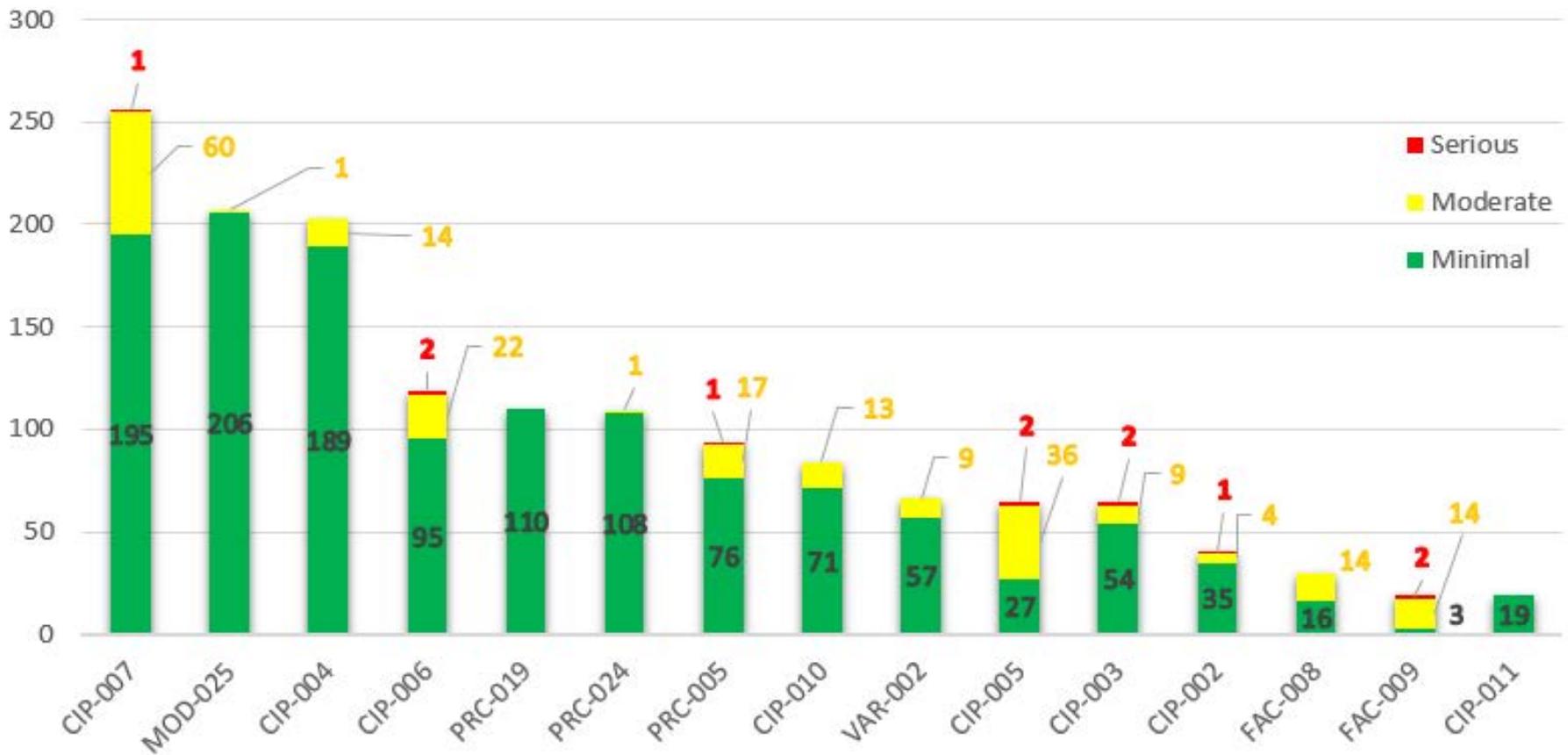
## CIP Only Serious Risk Violations 3-Year Rolling Average



## Compliance History for Moderate and Serious Risk Noncompliance

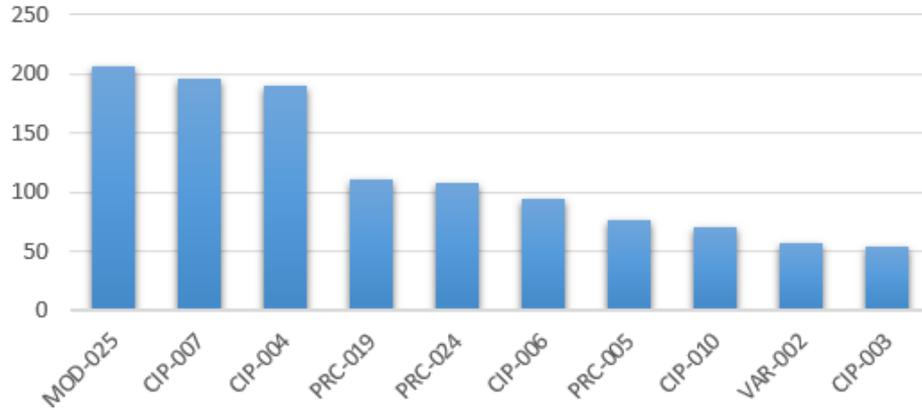


## Most Violated Standards by Risk Filed in 2017-2018

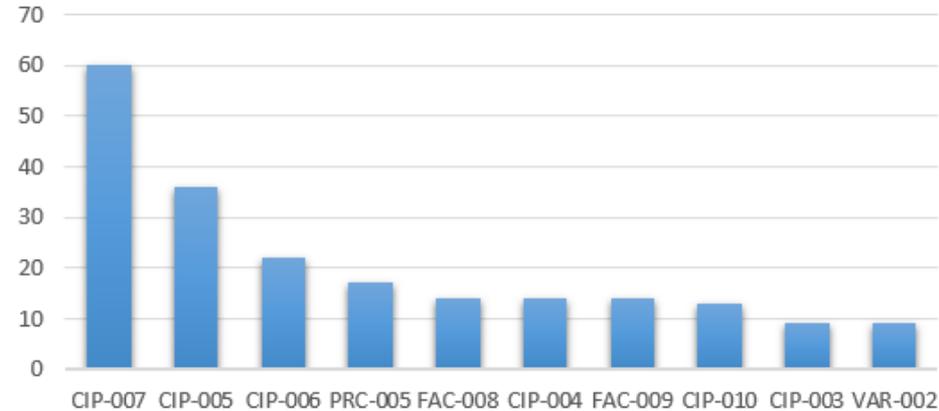


# Most Violated Standards by Risk

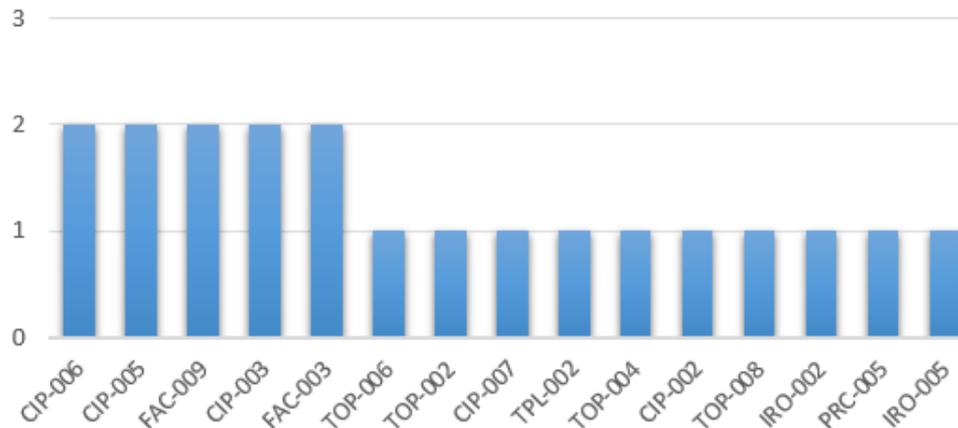
**Most Violated Standards by Minimal Risk  
 Filed in 2017-2018**



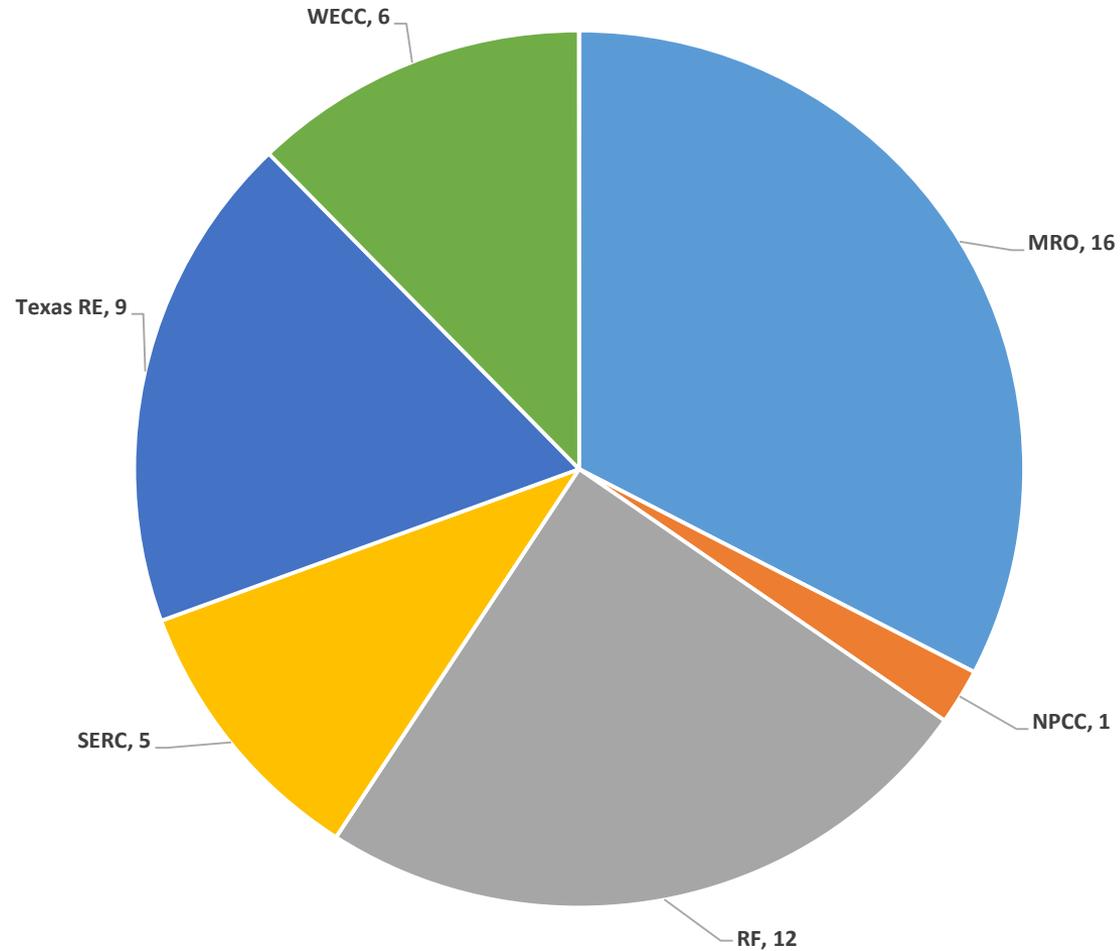
**Most Violated Standards by Moderate Risk  
 Filed in 2017-2018**



**Most Violated Standards by Serious Risk  
 Filed in 2017-2018**



- Implementation Guidance
  - Three endorsed, one non-endorsed, and one currently under review



**Percentage of MRREs under Coordinated Oversight by Lead RE**

- Program Alignment Items:
  - Twelve completed and
  - Six in progress.
- Continued outreach in collaboration with CCC Alignment Working Group at Regional Entity workshops



# Questions and Answers