



REGIONAL ENTITY TRUSTEES MEETING
JANUARY 29, 2018
Oklahoma City, Oklahoma
A G E N D A
8:00 a.m. – 3:00 p.m.

1. Call to Order/Introductions.....Dave Christiano
2. Antitrust GuidelinesDave Christiano
3. Approval of Meeting Minutes – 10/30/2017Dave Christiano
4. Transition Discussion Ron Ciesiel
5. 2017 Annual Report.....Ron Ciesiel
6. Accept 2017 Goals and Metrics Performance * *Action item* Ron Ciesiel
7. Approve 2018 Goals and Metrics * *Action item* Ron Ciesiel
8. CIP Update..... Kevin Perry
9. 2017 System Events Review Alan Wahlstrom
10. Enforcement ReportJoe Gertsch
11. President’s Report Ron Ciesiel
12. Financial Report..... Debbie Currie
13. Outreach ActivityEmily Pennel
14. NERC Compliance Committee Jennifer Flandermeyer
15. NERC COMMITTEE REPORTS – Comments or Questions
 - a. Planning.....Noman Williams
 - b. Critical Infrastructure Protection.....Eric Ervin
 - c. Operating.....Jim Useldinger
 - d. System Protection and Control.....Louis Guidry
16. New Action Items..... Emily Pennel
17. Future MeetingsDave Christiano
Discuss June 2018 Budget Meeting (face-to-face or phone, date)

SPP Regional Entity Antitrust Guidelines

It is SPP RE'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 which 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.



REGIONAL ENTITY TRUSTEES MEETING

OCTOBER 30, 2017

SPP Corporate Center Little

Rock, Arkansas

A G E N D A

8:00 a.m. – 3:00 p.m.

1. **Call to Order/Introductions.....Dave Christiano**
Chairman Christiano called the meeting to order at 8:01 a.m. He introduced Darrell Piatt with FERC. SPP Board Chair Jim Eckelberger and SPP Board member Julian Brix were also present.
2. **Antitrust Guidelines.....Dave Christiano**
The group reviewed the guidelines.
3. **Approval of Meeting Minutes – July 24, 2017.....Dave Christiano**
The minutes were approved.
4. **Trustees Discussion of Transition Issues.....Dave Christiano**
Tomorrow is the deadline for Registered Entities to declare which Regional Entity they wish to join. It is likely the dissolution will be finalized by mid-2018, but it could take until the end of next year. If a company doesn't make a declaration, NERC will make assign the company to an RE. Trustee Maher said his understanding is that NERC is not concerned if SPP RE Registered Entities go to multiple REs. The REs are not supposed to be taking a stand on this issue. Trustee Burrows encouraged Registered Entities to let us know if they are not getting the information they need from NERC. Trustee Whitley encouraged Registered Entities to align with their Reliability Coordinator.
5. **Winter Reliability Assessment / Winter PreparednessAlan Wahlstrom**
Action Item: Endorse the report
SPP is a summer peaking region, so our reserve margin of 67% is very good for winter. On-peak capacity is 46% gas and 38% coal. Mr. Wahlstrom reviewed the typical problem areas utilities experience in winter. Winter is coming, and SPP and NERC do a lot of work encouraging companies to prepare. Mr. Ciesiel reminded companies that if there are problems due to lack of winter preparedness, NERC could create new standards on this issue. The Trustees endorsed the winter reliability assessment.
6. **NERC Critical Infrastructure Protection Committee (CIPC)Eric Ervin**
Mr. Ervin discussed plans for the upcoming GridEx IV and several other meetings. He reviewed the CIPC's strategic plan and work plan. The E-ISAC launched a new portal platform with significant improvements. He described three of the E-ISAC's tools: the Cyber Hygiene program,

Relationship-Based • Member-Driven • Independence Through Diversity

Evolutionary vs. Revolutionary • Reliability & Economics Inseparable



Risk and Vulnerability Assessment program, and Cybersecurity Risk Information Sharing Program (CRISP). SPP is looking into the use of CRISP.

In 2018, NERC will continue to focus on a risk-based approach to compliance. The new CIP standards are still highly violated. SPP RE has provided good outreach to help Registered Entities understand the standards. A study is underway on CIP-014.

7. SPP RE 2017 Trustee Self-AssessmentDave Christiano

Action Item: Approve for submission to SPP, Inc. Corporate Governance Committee

There were no comments on the assessment. The Trustees approved submitting the assessment to SPP, Inc.

8. 2017 Stakeholder Satisfaction Survey Results Ron Ciesiel

In September, SPP RE issued the 2017 Stakeholder Satisfaction Survey to the 145 Primary Compliance Contacts and Authorizing Officers registered in webCDMS. The survey had a 41% response rate. Of the 23 respondents who interact with other Regional Entities, none rated SPP *much worse* or *somewhat worse*, 52% rated SPP RE *about the same*, 22% rated SPP RE *somewhat better*, and 26% rated SPP RE *much better*.

When asked how well SPP RE’s programs and services meet expectations, respondents rated all with average scores in the *meets expectations* range between 3.4 and 3.8. All ratings were higher than in 2016. When asked to rate employees’ customer service ability or programs’ responsiveness to needs, respondents rated all with average scores between *good* and *excellent*, from 4.0 to 4.4. Five of the six programs were rated the same or higher than in 2016. The 2017 overall satisfaction rating of 4.1 is slightly higher than the 2016 rating of 4.0.

Trustee Maher noted SPP RE should continue working to improve the ICE/IRA processes.

9. 2018 Implementation Plan Jim Williams and Sushil Subedi

Mr. Williams and Mr. Subedi reviewed the 2018 ERO Implementation Plan, which includes a section on SPP RE’s plan. In 2018 the ERO will continue risk-based monitoring. SPP RE did not expand on NERC’s 2018 risk elements, but we did add standards and requirements to those risk elements. There are about 220 entities in multi-regional oversight.

NERC has a new “program alignment” process for reporting inconsistencies. Jennifer Flandermeyer noted this new process uses a third-party to ensure anonymity, if requested. Issues submitted through the process will be triaged at NERC.

Mr. Ciesiel noted that, as of now, SPP RE is planning to be fully engaged with our CMEP work through the end of June 2018. Self-certifications should be complete by June. Typically, an audit is about a five-month process. We are now committed through March 2018 with our on-site work. We can engage a company’s “new” RE to join us in audit efforts. The transition on the compliance side should be relatively straightforward. The enforcement transition may be a bit more complicated and will need to be managed carefully.

- 10. CIP Update.....Kevin Perry**
Mr. Perry gave an update on new/revised CIP standards, concepts for virtualization, and recent CIP violations. We are seeing issues with access management and patch management. Best practices include patching Control Center systems at least monthly, eliminating unnecessary access permissions and privileges, frequently scanning the National Vulnerability Database for vulnerability announcements, and frequently visiting US-CERT and E-ISAC for threat advisories.

Mr. Perry reviewed several recent cyber-attacks including WannaCry, Industroyer / CrashOverride, NotPetya, “Nuclear 17”, CCleaner, and the Equifax breach. “Spear phishing” attacks are presenting a very high risk.

Trustee Burrows asked how Registered Entities can share information about attacks to prevent it happening from other companies. Mr. Perry noted that if a Registered Entity detects a reportable incident, it is obligated to report it to E-ISAC. The E-ISAC will send the report to DHS, correlate it with other issues, and publish an alert if needed. Companies need to have the tools to recognize attacks and should report events.

- 11. 3 Q Event Analysis..... Alan Wahlstrom**
Mr. Wahlstrom reviewed SPP RE system events that occurred in the third quarter. All events were in the lowest assignable risk category of category 1a. *loss of three or more elements* and category 1h. *partial loss of EMS*. He also reviewed recent NERC lessons learned and event analysis statistics across the ERO.

- 12. Enforcement Report.....Joe Gertsch**
Mr. Gertsch updated the group on enforcement activities through the end of September. There were 12 incoming non-compliance issues in Sept.; this brings the annual total to 154. Almost 90% of these issues were self-reported. The MRRE program continues to mature and the number of MRRE violations has increased. We have processed 164 non-compliance issues this year; 103 were processed as compliance exceptions. An increasing number of entities are using Mitigating Activities in lieu of a Mitigation Plan. SPP RE will work as many violations as we can before turning issues over to the “new” REs.

- 13. President’s Report/Compliance Report Ron Ciesiel**
It is the Registered Entity’s responsibility to keep contacts updated in webCDMS to ensure you are getting information from NERC. SPP RE is still the compliance and enforcement authority for SPP RE Registered Entities until NERC and FERC approve the transition. The SPP RE delegation agreement will be terminated and the other RE agreements will have to be edited. The PRC and MOD standards have dropped off SPP RE’s Top Ten Most Violated standards list; CIP-007 is the most violated. Trustee Burrows noted positive developments arising from the recent misoperations summit.

- 14. SPP RE Third Quarter Financial ReportDebbie Currie**
The Trustees approved a transition plan to continue operations until SPP RE’s effective termination date.



15. Staff Goals and Metrics..... Ron Ciesiel
Staff is generally on track with on goals and metrics.

16. Outreach ActivityEmily Pennel
About 170 people attended the fall workshop in person or via WebEx. Survey results were very positive.

17. NERC COMMITTEE REPORTS – Comments or Questions

- a. Planning CommitteeNoman Williams
- b. Operating Committee Report..... Jim Useldinger
- c. System Protection and Control..... Louis Guidry
- d. Compliance and Certification Jennifer Flandermeyer

18. Existing and New Action Items Emily Pennel
There were no new action items.

19. Future MeetingsDave Christiano
Jan. 29, 2018 - Oklahoma City, OK
Apr. 23, 2018 - Kansas City, MO

The meeting was adjourned at 3:15 p.m.

Respectfully,

Emily Pennel

SPP RE Trustees Secretary



SPP RE TRUSTEE MEETING

October 30, 2017 8 am – 3 pm

Southwest Power Pool Corporate Office – Little Rock, AR

• ATTENDANCE LIST •

Name	Company
Monica Evans	SPP RE
Emily Penwell	SPP RE
Jim Eckelberger	SPP Director
JULIAN JIRIX	SPP DIRECTOR
Stephan Whitley	SPP Trustee
GERRY BURROWS	SPP TRUSTEE
DAVE CHRISTIANO	"
MARK MAHER	"
RON CIESIEL	SPP RE
CHRIS LANG	GSEC
DARRELL PIATT	FERC
Paul Mehlhaff	Sunflower Electric Power
Patrick Smith	Wester
John Olsen	nl
Debbie Currie	SPP RE
Alan Wahlstrom	SPP RE
Joe Gertsch	OPPRE
Jim Williams	SPP RE
Kevin B. Perry	SPP RE
Noman Williams	SCMCM
Trent Carlson	SCMCM

Transition Discussion

January 29, 2018

Oklahoma City, OK

Ron Ciesiel

SPP RE President

SPP RE Dissolution & Transition

- In Dec. NERC issued its list assigning SPP RE Registered Entities to another Regional Entity
 - Most were assigned to MRO; some to SERC
- NERC Trustees and FERC must approve final distribution
- We hope transition will wrap up around July 1, but it could continue through end of 2018
- Next major milestone: NERC board meeting Feb. 8, 2018
- NERC is managing transition; email ryan.stewart@nerc.net or nerc.registration@nerc.net with questions



2017 SPP RE Annual Report

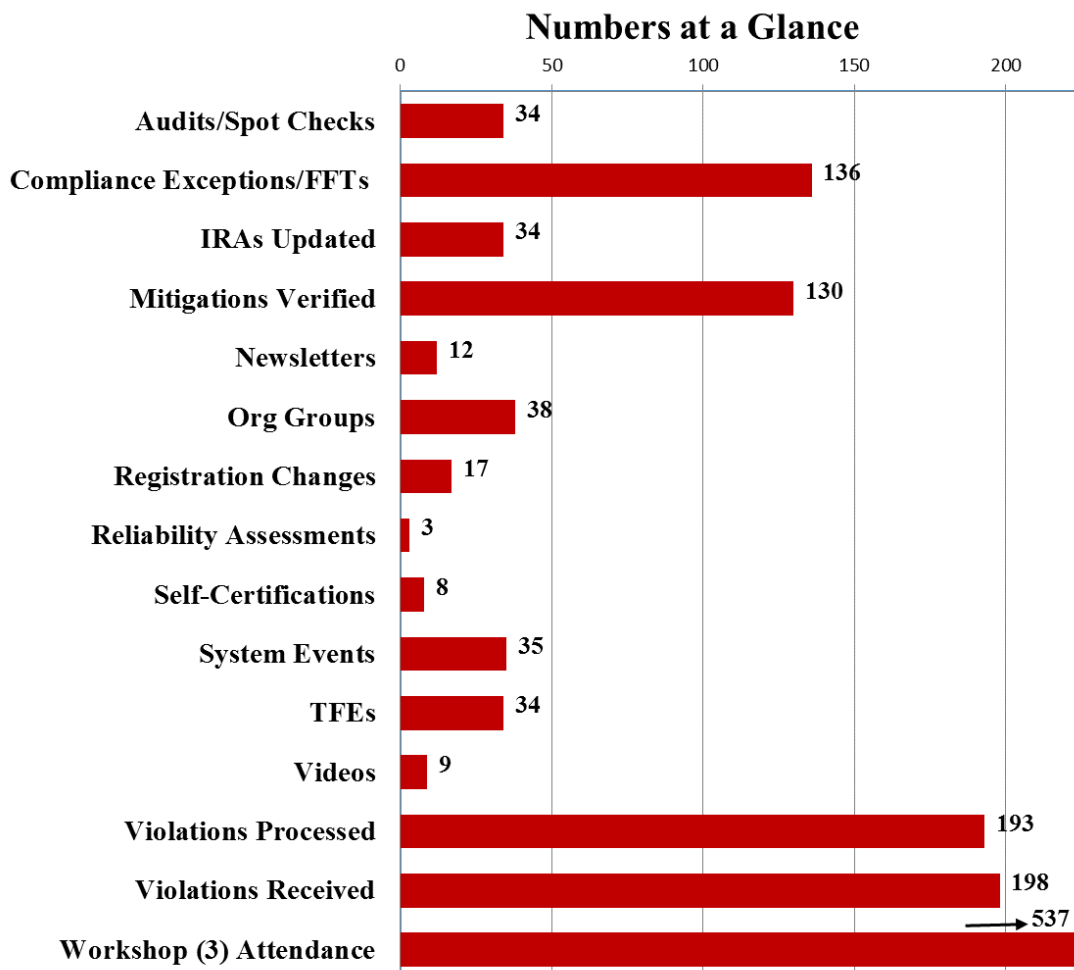
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Executive Summary

In 2017, SPP RE staff had a weighted total metrics achievement of 119%. Other highlights include:

- Improved audit processes, resulting in decreased audit times and team sizes
- Conducted targeted outreach on CIP V5/6 transition and misoperations
- Continued implementing risk-based processes including Inherent Risk Assessments and the Coordinated Oversight program
- 90% of incoming violations were self-identified, denoting strong compliance cultures at SPP RE Registered Entities
- System events were at the lowest level of severity
- All line discrepancies found under the Facilities Ratings program have been mitigated
- Participated in a wide range of SPP and Electric Reliability Organization (ERO) organizational groups
- Published three Regional Reliability Assessments
- Received positive feedback from NERC and FERC observers of SPP RE audits
- Received favorable ratings on the annual stakeholder survey



Budget Performance

SPP RE's 2017 actual expenses were \$11.1 million, compared to the 2017 budget of \$10.9 million. The budget variance of ~\$190 thousand was driven primarily by a retention plan payout necessitated by the termination of SPP, Inc.'s Regional Delegation Agreement and planned dissolution of SPP RE by December 31, 2018. The completion of the Engineering Data Validation Tool also contributed to the positive budget variance.

SPP RE ended the year with six open staff positions, which impacts personnel and travel expenses. The primarily fixed SPP, Inc. charge was not a major contributor to the overall budget performance, and the use of Engineering Shared Staff was very close to budget.

Compliance Monitoring

SPP RE and the ERO continue to implement risk-based programs, including Inherent Risk Assessments (IRA), Internal Control Evaluations (ICE), and Coordinated Oversight for Multi-Region Registered Entities (MRRE). IRAs identify the areas of focus and the level of oversight needed to monitor compliance with enforceable NERC reliability standards. IRAs are used to develop a Registered Entity's Compliance Oversight Plan, which includes the monitoring interval, scope, and monitoring method (including audits, spot checks, self-certifications, and self-monitoring).

In 2017, SPP RE developed or refreshed the IRAs for the 34 Registered Entities that were on the 2017 monitoring schedule; this includes all Registered Entities for which SPP RE is responsible for leading oversight activities.

In 2017, SPP RE conducted four Operations & Planning (O&P) off-site audits, four combined O&P/CIP off-site audits, and four CIP off-site audits. Twelve off-site audit reports were published. Audit teams conducted six O&P on-site audits and five CIP V5/6 on-site audits. Eleven on-site audit reports were published. One CIP report will be completed in early 2018. A sixth planned CIP onsite audit was converted to an outreach activity due to the Registered Entity's deregistration. Based on the Registered Entity's IRAs, SPP RE conducted five spot checks (one O&P and four CIP) and three self-certifications that were entity-specific. CIP and O&P staff participated as observers in one FERC-led CIP-014 audit.

In 2017, the average time to issue on-site audit reports was 44 days, compared to our goal of 65 days. No reports for which SPP RE was the Lead Regional Entity (LRE) exceeded the 65-day goal. The average time to issue off-site audit reports was 26 days, compared to our goal of 40 days; however, one report exceeded the 40-day goal.

SPP RE is the LRE for 23 Registered Entities in five MRRE groups. SPP RE is the Affected Regional Entity for 25 other Registered Entities in the MRRE program. SPP RE was the LRE for one MRRE O&P/CIP off-site audit and participated as Affected Regional Entity in one O&P offsite audit, one combined O&P/CIP off-site audit, and three onsite CIP audits.

In 2017, SPP RE conducted three quarterly self-certifications and two annual self-certifications (one for O&P and one for CIP). Registered Entities self-identified and certified to 19 non-compliance issues. SPP RE's periodic data submittals included TPL assessments and vegetation management. The vegetation management data submittal resulted in a few issues of non-compliance, which hasn't been seen in SPP RE for several years. Misoperation data is collected by NERC in the MIDAS portal and reviewed by SPP RE staff for accuracy.

Audit Improvements

The O&P and CIP audit teams continued to implement process and performance improvements in 2017. Compliance staff continued use of the NERC Auditor Handbook and associated checklist to verify consistency of audit documentation and work papers.

The average time to publish audit reports remained consistent with 2016. The O&P team continued to enhance their pre-audit evidence reviews. These reviews allow the team to work more efficiently and effectively once the official audit period begins, and allow them to make assessments on some standards without further action during the audit. Based on the results of the pre-audit review, the audit team leaders were able to reduce the amount of time spent on-site for some audits, and in some cases reduced the size of the on-site audit team.

The CIP audit team continued its comprehensive, multi-week, pre-audit evidence review for on-site audits. The CIP audit team has not seen a significant reduction in questions and possible findings requiring follow-up during the on-site audit; therefore, the CIP team has not been able to take advantage of the pre-audit reviews to eliminate a meaningful number of on-site requirements. However, the CIP team's comprehensive pre-audit work that includes issuance of both evidence requests and questions, along with ad-hoc conference calls with the audited Registered Entity, resulted in the ability to reduce the onsite work from the planned two weeks to one week or less on each audit.

Compliance with CIP Low Impact BES Cyber Systems became effective April 1, 2017. This increased the number of offsite audits to be completed. However, with the deferral of the requirements for physical and electronic security controls to September 1, 2018, the impact of the additional requirements was minimal. The offsite CIP audits and spot checks were generally able to be conducted in one or two days.

The CIP and O&P teams continued to emphasize outreach and internal controls during the audit field work, as permitted by Generally Accepted Government Auditing Standards. Outreach efforts were coordinated with the audited Registered Entity's Primary Compliance Contact throughout the audit, starting with the 90-day audit notice, to ensure the level of outreach was acceptable to and met the Registered Entity's expectations.

The O&P audit team outreach focused on reducing misoperations due to communication failures, discussing upcoming enforceable standards, explaining Risk-Based Compliance Monitoring and Enforcement processes, and suggesting internal control activities for specific requirements. The team continued on-site FAC-008/PRC-005 substation field reviews to validate underlying evidence. CIP outreach focused primarily on improving Registered Entity performance under the CIP Version 5 (revised) Standards and preparing Registered Entities for compliance with the Low Impact requirements.

We enhanced audit staff training through several mechanisms. In conjunction with NERC and the other REs, audit staff and SPP RE contractors participated in a NERC-sponsored auditor workshop. The CIP auditors participated in a multi-day workshop on auditing compliance with CIP-005, including use of NP-View. The NP-View training was jointly led by NERC and SPP RE staff.

FERC and NERC observers attended one CIP audit in 2017. FERC and NERC observers attended one O&P audit. The general tone of the feedback sessions from observers was very positive and the FERC observers had no recommendations for improvement from the CIP audit.

Technical Feasibility Exceptions

The Technical Feasibility Exception (TFE) program related to CIP standards completed its eighth year in 2017. We have processed 1,103 new or amended TFE requests since the program's inception, including 34 new or amended TFEs submitted in 2017. This is a significant drop from 2016, when 108 new or amended TFEs were submitted, reflecting the continuing beneficial effect of the CIP Version 5 standards on the TFE process.

Of the 34 TFEs submitted in 2017, 13 were approved, four were disapproved, two disapproved TFEs were revised and resubmitted, eight were amended before they could be acted on, and five remained pending approval at the end of the year. Five TFEs were terminated by the Registered Entities. The active TFE caseload at the end of 2016 was 41, a net increase of 1 over 2016.

Enforcement

Violations and Compliance Exceptions

The upward trend in new violations continued in 2017, with the identification of 198 new violations in the SPP RE region. Violations of the CIP standards accounted for 74% (146) of all new violations, a 324% increase over the CIP violations identified in 2016 (45). Notably, 106 of the new CIP violations were for the new V5/6 CIP Reliability Standards, which became enforceable on July 1, 2016.

Of the 198 incoming violations, 179 or 90% were self-identified (self-reports, self-logging or self-certifications submitted by Registered Entities). This is a continuation of the trend which began in 2016 and exceeds the NERC *Compliance Monitoring and Enforcement Oversight Plan* threshold (70%) and target (75%) for self-identified non-compliance.

SPP RE violations identified by other REs under the NERC Coordinated Oversight Program increased dramatically in 2017. In 2017 there were 85 MRRE violations affecting SPP RE. All but eight of these were reported in other REs. In comparison, in 2016 there were 83 MRRE violations with 57 in SPP RE. The shift in where these violations were reported can be attributed to the large number of PRC-019, MOD-02,4 and MOD-025 MRRE violations (44) identified in SPP RE in 2016 and the identification of a large number of CIP MRRE violations (67) in other REs in 2017.

The SPP RE Enforcement group closed 193 violations in 2017, exceeding its 2017 metric goal (169) by 24 violations. Similar to 2016, an overwhelming number (126) of the violations closed were processed as Compliance Exceptions, a disposition method reserved for noncompliance issues that pose a minimal risk to the Bulk Power System (BPS). The Find, Fix and Track (FFT) process, a disposition method reserved for violations that pose a moderate risk to the BPS, was utilized to close

10 violations. The remaining 56 violations processed in 2017 were either dismissed (26) or processed utilizing the Spreadsheet Notice of Penalty process (10) or Full Notice of Penalty process (20). Dismissals, resulting from the consolidation of multiple violations, accounted for the majority (18) of the 26 dismissals.

Due to the large number of CIP MRRE violations identified in 2017, the Enforcement caseload at year's end increased to 171, as compared to 154 in 2016. The number of violations older than one year (25) is down significantly from the beginning of 2017 (44), because Enforcement was successful in closing 14 pre-2015 violations in early 2017. The contentious nature of these violations contributed to extended settlement negotiations and delays.

The average age of all open SPP RE violations is 258 days, below the 12-month target established in NERC's *Compliance Monitoring and Enforcement Oversight Plan*. The Enforcement caseload at year's end includes 88 MRRE violations. The average age of the 79 MRRE violations in which SPP RE is not the LRE is 253 days.

Mitigation Plans

There is now an option to submit "mitigating activities" in lieu of a mitigation plan when a violation is mitigated at or shortly after discovery. This mitigating activities process was successfully utilized to mitigate 54 violations in 2017, up significantly from 2016 (40). As a result, the number of mitigation plans submitted in 2017 (53) decreased significantly from 2016 (82). In addition to verifying the completion of the 54 mitigating activities, Enforcement verified the completion of 76 mitigation plans in 2017. Collectively, 130 mitigation plans and mitigating activities were verified as completed in 2017, as compared to 87 in 2016.

At the end of 2017, the number of violations without mitigation plans was down slightly from 2016. There were 42 violations without mitigation plans or mitigating activities at the end of 2017, compared with 50 at the end of 2016. The average age of violations without mitigation plans at year's end was 180 days, up significantly from 2016 (127 days). Self-identified CIP violations accounted for 88% of the violations without mitigation plans that are older than 180 days.

Event Analysis Program

The Electric Reliability Organization (ERO) Event Analysis Process is a structured and consistent approach to reviewing and analyzing events that occur on the Bulk Power System. The Event Analysis process promotes a culture of reliability excellence and serves as a learning opportunity by disseminating valuable information to industry. There are five event categories in the Event Analysis program, ranging from the least severe category 1 to the most severe category 5.

In 2017, SPP RE's Event Analysis staff engaged with the ERO program and processed 35 reportable events. Of the 35 reportable events, 24 rose to Category 1, the least severe category. The other 11 events were not significant enough to classify.

The 24 events fell under Category 1, classifications 1a and 1h:

1a – An unexpected outage that is contrary to design of three or more BES Facilities caused by a common disturbance

1h – Loss of monitoring or control at a Control Center such that it significantly affects the entity’s ability to make operating decisions for 30 continuous minutes or more.

In 2016 there were 28 reportable events, of which 15 events were categorized. While there was an increase in reportable events in 2017, all of the events were at the lowest level of severity.

After categorizing an event, SPP RE works with the impacted Registered Entities and NERC to assign a cause code to the event. Cause codes provide a systematic, measurable approach to understanding what occurred and how to reduce risk in the future. SPP RE cause coded 18 events in 2017.

Facility Ratings Alert Program

NERC launched a Facility Ratings alert program at the end of 2010, with a goal of having all BES lines checked for clearances and ratings by the end of 2013 and remediation of discrepancies complete by the end of 2014. Eight companies were granted extensions beyond the 2014 deadline due to LIDAR contractor availability, outage scheduling conflicts, and retaining resources.

As of July, 2017 all companies have remediated their line discrepancies. The Facility Ratings Alert took seven years to complete. In the SPP RE region, over 2,000 lines were assessed and over 7,000 discrepancies were corrected.

Outreach

SPP RE holds three public compliance workshops annually. Members, Registered Entities, and other interested parties are invited to attend in-person or via webinar to learn more about SPP RE and NERC processes, emerging issues, compliance best practices, and more. In addition to presentations by SPP RE staff, guests from NERC and Registered Entities were invited to speak on topics of interest. The three compliance workshops had 537 participants.

SPP RE posts training videos to capture basic compliance education presented at webinars and workshops. In 2017 we posted 9 new videos and received 1,475 “plays” on all 60 videos. We issued 12 monthly e-newsletters that included feature articles, meeting invitations, and updates on SPP RE and ERO activities.

Organizational Group Participation

In 2017, SPP RE staff continued to participate in the following SPP organizational groups:

- Board of Directors
- Critical Infrastructure Protection Working Group
- Market and Operations Policy Committee
- Model Development Working Group
- Operating Reliability Working Group
- Reliability Compliance Working Group
- SPP RE Trustees
- System Protection and Control Working Group
- Transmission Working Group

SPP RE staff participate in the following ERO groups:

- Board of Trustees
- Budget/Finance Group
- Certification Registration Working Group
- CIP Committee
- CIP Compliance Task Force
- Compliance Monitoring Group
- Compliance Oversight Task Force
- Coordinated Oversight Task Force
- DADS (Demand Response Data System) Working Group
- Enforcement Group
- ERO Legal Group
- Event Analysis Subcommittee
- GADS (Generator Availability Data System) Working Group
- Inherent Risk Assessment Task Force
- Manual Task Force
- Misoperations Group
- Operations Leadership Team
- Operations and Planning Compliance Task Force
- Performance Analysis Subcommittee
- Reliability Standard Audit Worksheet (RSAW) Task Force
- Regional Entity Managers Group
- Reliability Assessment Subcommittee
- RAPA (Reliability Assessment Performance Analysis) Group
- TADS (Transmission Availability Data System) Working Group
- TFE Task Force

Staff also serve on the Board of the Energy Bar Association and Arkansas chapters of ISACA, Institute of Electrical and Electronic Engineers, and InfraGard Members Alliance.

Registration

SPP RE started 2017 with 120 Registered Entities. In 2017, SPP RE added 9 new Registered Entities and deactivated 6 Registered Entities. SPP RE currently has 123 Registered Entities.

SPP RE conducted two Certification reviews for TOPs in 2017, each resulting in a determination that a full recertification was not required.

Reliability Assessments

SPP RE develops annual winter, summer, and long-term reliability assessments. The summer and winter assessments provide a high-level overview of seasonal reliability, including demand growth, capacity adequacy, and operational reliability. The 2017 winter and summer assessments found reserve margins to be adequate.

The long-term reliability assessment is a 10-year, qualitative outlook on the SPP RE region's reliability. The 2017 report found that reserve margins for the SPP RTO footprint are expected to remain above 12% through the year 2027. Installed wind generation capacity increased in 2016 alone by more than 30%, up 4,000 MW from 12 GW to 16 GW. SPP's maximum simultaneous wind generation peak rose from 9,948 MW in 2015 to 13,342 MW in 2017. Wind penetration, the amount of total load served by wind at a given time, has increased from a 38% peak in 2015 to 54% in 2017.

As renewable resources are added to the system, SPP will eventually reach a point at which it can no longer reliably utilize this generation for SPP's own internal demand needs, even with additional transmission infrastructure. At that point, those future renewables will have to be delivered to other regions.

Stakeholder Survey

SPP RE strives to continuously improve its performance of its NERC-delegated functions. Each year SPP RE asks its Registered Entities to provide anonymous input on the organization's programs and customer service to stakeholders.

SPP RE issued the 2017 Stakeholder Satisfaction Survey in September to the 145 Primary Compliance Contacts and Authorizing Officers who are registered in SPP RE's compliance database (webCDMS). The survey had a 41% response rate. Of the 60 respondents, 12 opted out of the survey.

Respondents were asked to assess seven SPP RE programs on their importance, how well they meet expectations, and customer service/responsiveness. Stakeholders were also asked to assess SPP RE's performance in relation to other Regional Entities, to rate overall performance, and to provide qualitative comments.

Of the 23 respondents who interact with other Regional Entities, none rated SPP *much worse* or *somewhat worse*, 52% rated SPP RE *about the same*, 22% rated SPP RE *somewhat better*, and 26%

rated SPP RE *much better*.

When asked how well SPP RE's programs and services meet expectations, respondents rated all with average scores in the *meets expectations* range between 3.4 and 3.8. All ratings were higher than in 2016. When asked to rate employees' customer service ability or programs' responsiveness to needs, respondents rated all with average scores between *good* and *excellent*, from 4.0 to 4.4. Five of the six programs were rated the same or higher than in 2016. The 2017 overall satisfaction rating of 4.1 is slightly higher than the 2016 rating of 4.0.

2017 Metrics Performance

Metric	Actual Performance	Performance With Survey Multiplier
1. Maintain caseload of no more than one year	110.06%	117.76%
2. Accept or reject Mitigation Plans within 30 days of submission by Registered Entity or within 10 days of resubmission.	100.00%	107.00%
3. Complete Mitigation Plan completion reviews within 20 days of Registered Entity notification of completion	126.55%	135.41%
4. Process pre-2016 violations and send to NERC by 11/6/17	100.00%	107.00%
5. Complete incoming possible violation triage within 30 days of Compliance staff sending the possible violations to Enforcement	144.75%	154.88%
6. Complete documentation close-out of all violations within 45 days of issuance of the NCEA	100.00%	107.00%
7. Publish non-public off-site audit report to NERC (40 days)	70.60%	75.54%
8. Publish non-public on-site audit report to NERC (65 days)	120.00%	128.40%
9. Publish internally completed assessment of Self Certification/periodic data submittals	84.62%	90.54%
10. Process incoming Possible Violations to NERC through webCDMS in 5 business days or less	100.00%	107.00%
11. Control out-of-pocket expenses for on-site/off-site audits (contractor billings and travel)	150.00%	160.50%
12. Conduct Outreach on protection system misoperations	100.00%	107.00%
13. Complete outreach production goals	100.00%	107.00%
14. 2017 Stakeholder Survey Results: 4.1 Rating	107.00%	
ACTUAL WEIGHTED TOTAL	110.75%	118.50%

2017 Goals and Achieved Performance

The following goals were outlined in the 2016 annual report. Each of these is listed below with its status.

- 1. Continue working with NERC and other Regional Entities to streamline and standardize CMEP processes through tools and initiatives such as an ERO-wide template for Registered Entity compliance oversight plans (based on their IRA)**
In 2017 the Compliance Monitoring Group approved an audit notice letter template and audit/spot-check report template. These templates were incorporated into SPP RE's compliance programs to better drive consistency ERO-wide.
- 2. Manage intense CIP V5 monitoring schedule in 2017 and possible influx of enforcement issues from the new standards**
All CIP audits, spot checks, and self-certifications were completed on time and within budget. The CIP audit team provided assistance to the Enforcement staff, primarily with reviewing mitigation plans for CIP violations. The CIP team also conducted a Registered Entity-requested assist visit, providing outreach on the application of CIP standards for Low Impact BES Cyber Systems.
- 3. Continue focus on monitoring and mitigating relay misoperations**
SPP RE presented on misoperation issues and statistics 18 times during 2017. SPP RE was also involved in the Misoperation Summit held at KCP&L.
- 4. Ensure Registered Entities have remediated all Facility Ratings Alert discrepancies by the end of 2017**
All discrepancies have been remediated.
- 5. Achieve a favorable rating on all NERC and FERC spot checks**
Due to SPP RE's pending dissolution, some spot checks were cancelled. Other spot check reports were carried over into 2018.

2018 Goal

Successfully handle CMEP workload while managing the dissolution of SPP RE, including transferring Registered Entities and pending enforcement issues to other REs.

2017 Metrics Performance

Metric	Actual Performance	Performance With Survey Multiplier
1. Maintain caseload of no more than one year	110.06%	117.76%
2. Accept or reject Mitigation Plans within 30 days of submission by Registered Entity or within 10 days of resubmission.	100.00%	107.00%
3. Complete Mitigation Plan completion reviews within 20 days of Registered Entity notification of completion	126.55%	135.41%
4. Process pre-2016 violations and send to NERC by 11/6/17	100.00%	107.00%
5. Complete incoming possible violation triage within 30 days of Compliance staff sending the possible violations to Enforcement	144.75%	154.88%
6. Complete documentation close-out of all violations within 45 days of issuance of the NCEA	100.00%	107.00%
7. Publish non-public off-site audit report to NERC (40 days)	70.60%	75.54%
8. Publish non-public on-site audit report to NERC (65 days)	120.00%	128.40%
9. Publish internally completed assessment of Self Certification/periodic data submittals	84.62%	90.54%
10. Process incoming Possible Violations to NERC through webCDMS in 5 business days or less	100.00%	107.00%
11. Control out-of-pocket expenses for on-site/off-site audits (contractor billings and travel)	150.00%	160.50%
12. Conduct Outreach on protection system misoperations	100.00%	107.00%
13. Complete outreach production goals	100.00%	107.00%
14. 2017 Stakeholder Survey Results: 4.1 Rating	107.00%	
ACTUAL WEIGHTED TOTAL	110.75%	118.50%

2018 Staff Goals and Metrics

In July 2017, the SPP, Inc. Members Committee and Board of Directors voted to dissolve the SPP Regional Entity, which is anticipated to occur in 2018. For this reason, the metrics have been designed to allow for calculation on a monthly or quarterly basis. If a metric has no population at the time of dissolution, that metric may be eliminated and the weighting of other metrics may be increased on a pro-rata basis.

When the metrics were developed in January 2018, SPP RE’s staffing was already reduced from approved compliment levels. We anticipate staffing to be further reduced as we progress through the year. The SPP RE Trustees have the discretion to adjust the goals and metrics based on staff reduction or other transition issues that arise.

1. Maintain a caseload of no more than one year

Objective: Maintain violation processing capability and efficiency so as to process 88 violations by 12/1/18

As of 12/1/17, the SPP RE caseload¹ is 88 violations. To achieve the metric by 12/1/18, SPP RE will send to NERC completed dispositions (i.e. compliance exceptions, settlements, notice of confirmed violations, find fix & track, spreadsheet notice of penalty, or dismissals²) for 88 violations.

Measure: If scored before a cutoff date of 6/30/18, the calculation of this metric will be based on completing 6 dispositions per month:

(Number of completed dispositions / (6 x # months)) = percent caseload completed

If scored between 6/30/18 and 12/1/18, this metric will be based upon completing dispositions according to the following table:

Month	July	August	September	October	November
Dispositions	8	8	10	10	10

(Number of completed dispositions / (42 + ∑ table dispositions for applicable months)) = percent caseload completed

Performance contribution	80%	100%	150%
Percent completed	80%	100%	120%

Weight: 10%

¹ The metric caseload does not include MRRE violations where SPP RE is not the lead region; two SPP RE violations in which the mitigation is not scheduled for completion until after 12/1/18; and two violations by a Registered Entity that is a foreign entity and is unresponsive to notices and request for information.

² The number of dismissals shall include those dismissals not requiring NERC approval but approved by the SPP RE Sanction Review Team.

- Comments:**
- i. MRRE violations, where SPP RE is not the lead region, are not included in this metric.
 - ii. This metric indirectly supports the following ERO strategies, goals, and metrics:³
 - a) *ERO Operating Plan: Goal 2 – Objective, Risk-Informed Compliance Monitoring, Mitigation, Enforcement, and Entity Registration*
 - b) *ERP Operating Plan: Goal 6 – Effective and Efficient Operations*

2. Accept or reject Mitigation Plans within 30 days of submission/10 days of resubmission by the Registered Entity

Objective: To accept submitted Mitigation Plans (MP) in accordance with the Compliance Monitoring and Enforcement Program (CMEP) Section 6.5: “Unless the time period is extended by the Compliance Enforcement Authority, it will complete its review of the Mitigation Plan, and will issue a written statement accepting or rejecting the Mitigation Plan, within thirty (30) days of receipt . . . The Compliance Enforcement Authority will notify the Registered Entity within ten (10) business days after receipt of a **revised** Mitigation Plan whether the Compliance Enforcement Authority will accept or reject the revised Mitigation Plan . . .”

Measure: (number of MPs accepted or rejected in <= required number of days that are due in a month) / (number of MPs submitted/resubmitted due in the month) = percent MPs accepted/rejected <= required number of days each month⁴

accept/rejected days = (“submitted on date” in webCDMS) – (“accepted by region on” or “date of email requesting resubmission” in webCDMS)

To be able to calculate the metric in December 2018, the metric applies to all MPs submitted/resubmitted between 12/1/17 and 12/1/18

The performance contribution cannot exceed 100%.

Performance Contribution ⁵	$\sum \text{Months where } 100\% \text{ MPs accepted/rejected } \leq \text{required number of days} / (\# \text{ of months}) * 100\%$
Goal	100% MPs accepted/rejected <= required number of days / month

Weight: 5 %

Comments:

- i. This metric indirectly supports the following ERO strategies, goals, and metrics:
 - a) *ERO Operating Plan: Goal 2 – Objective, Risk-Informed Compliance Monitoring, Mitigation, Enforcement, and Entity Registration*
 - b) *ERP Operating Plan: Goal 6 – Effective and Efficient Operations*

- ii. “# of months” is the number of full months when the metric is calculated, starting with 12/1/17, up to a maximum of twelve months

³ SPP RE’s goals and metrics support NERC’s strategic and operating goals and metrics. The documents can be found at this link: <http://www.nerc.com/AboutNERC/Pages/Strategic-Documents.aspx> and include the 2018 ERO Enterprise Metrics, the ERO Enterprise Long-Term Strategy and the ERO Enterprise Operating Plan approved by the NERC Board on November 9, 2017.

⁴ For example, if an MP is submitted in February 2017, the review of that MP is required to be completed in March 2017. Failure to perform the review results in a failure to meet the requirement for the month of March, not February.

⁵ The performance contribution is based on the number of months 100% of submitted/resubmitted MPs are accepted/rejected within the required number of days identified in the CMEP. For example, if Enforcement accepts/rejects 100% of the MPs initially submitted within 30 days and accepts/rejects 100% of the resubmitted MPs within 10 days for 11 of 12 months, then the performance contribution would equal 11/12 x 100% or 91.6%.

3. Complete review of mitigation completion within 30 days of Registered Entity notification of completion

Objective: To complete the review of MP and Mitigating Activity (MA) completions in accordance with SPP RE requirements

Measure: Average MP/MA completion review days

Days = (“certification received by region”) – (“mitigation verified on” date in webCDMS)

To be able to calculate the metric in December 2018, the metric applies to all MP certifications submitted between 12/1/17 and 12/1/18. To calculate this metric for a partial year (before 12/1/18), only MP certifications submitted 30 days in advance of the cutoff date will be considered.

Performance Contribution	50%	100%	150%
Avg. days for review of MP/MA completion	40	30	20

Weight: 5%

Comments: i. The average days for this metric was increased from 20 to 30 to reflect the loss of a mitigation engineer in 2017. Due to the pending dissolution of SPP RE, this position will not be filled.

ii. This metric indirectly supports:

a) *ERO Operating Plan: Goal 2 – Objective, Risk-Informed Compliance Monitoring, Mitigation, Enforcement, and Entity Registration*

b) *ERP Operating Plan: Goal 6 – Effective and Efficient Operations*

4. Process pre-2017 noncompliance issues and send to NERC by 12/1/18

Objective: Process 23⁶ pre-2017 violations by 12/1/18

As of 12/1/17, the SPP RE metric caseload includes 23 pre-2017 violations. To achieve the metric by 12/1/18, SPP RE will send to NERC completed dispositions (i.e. compliance exceptions, settlements, notice of confirmed violations, find fix & track, spreadsheet notice of penalty, or dismissals⁷) for 23 violations.

Measure: If scored before a cutoff date of 6/30/18, the calculation of this metric will be based upon completing 2 dispositions per month:

(Number of completed dispositions / (2 x # months)) = percent caseload completed

⁶ Two pre-2017 violations have been removed from the metric because the Registered Entity is a foreign entity that is unresponsive to notices and requests for information.

⁷ The number of dismissals shall include those dismissals not requiring NERC approval but approved by the SPP RE Sanction Review Team.

If scored between 6/30/18 and 12/1/18, this metric will be based upon completing dispositions according to the following table:

Month	July	August	September	October	November
Dispositions	2	2	3	1	1

(Number of completed dispositions / (14 + \sum table dispositions for applicable months) = percent caseload completed

The performance contribution cannot exceed 100%.

Performance contribution	80%	90%	100%
Percent sent to NERC	80%	90%	100%

Weight: 10%

Comments:

i. This metric indirectly supports:

a) *ERO Operating Plan: Goal 2 – Objective, Risk-Informed Compliance Monitoring, Mitigation, Enforcement, and Entity Registration*

b) *ERP Operating Plan: Goal 6 – Effective and Efficient Operations*

ii. A pre-2017 violation may be removed from this metric for cause if approved by the Sanction Review Team.

5. Complete documentation close-out of all violations within 45 days of issuance of the Notice of Completion of Enforcement Action⁸

Objective: To ensure Enforcement case records and webCDMS are complete and include all documentation necessary to support the processing of a noncompliance issue

Measure: Violation documentation close-out has successfully occurred when:

- (1) SPP RE File Clerk has synced a notice of completion of enforcement action (NCEA) to NERC, causing the violation status to shift to “closed” status within webCDMS;
- (2) Case Manager and MP Engineer review the violation case record and the case record folder is complete;
- (3) Substantive and relevant violation documentation has been copied to the violation enforcement docket folder and the folder is complete;
- (4) Documents required for sync with NERC have been uploaded to webCDMS;
- (5) webCDMS data fields have been completed and verified as accurate;
- (6) Encrypted file transfer (EFT) server files are deleted from the EFT server folder and copied to the appropriate time matters pool and enforcement docket folders; and

⁸ A violation is closed when the NCEA is issued or the 60-day clock for NERC’s and FERC’s review of the Compliance Exception or FFT has run. For a dismissal, the NCEA is issued with the Letter of Dismissal. For an MRRE for which SPP RE is not the lead region, the period for close-out begins upon receiving notice from the lead region that the violation is closed. For metric purposes, the closed violations subject to this metric will be derived from NCEAs issued between 11/16/17 and 11/16/18.

(7) SPP RE File Clerk verifies staff completion of the close-out, signs the certification of case record close-out, and saves the case record and the certification to the enforcement docket folder.

Average number of days to completed violation documentation close-out following issuance of the NCEA or expiration of the NERC and FERC review period = (Total number of days to complete documentation close-out for all violations, Compliance Exceptions / (Total number of violations closed as of 11/16/18)

To calculate this metric for a partial year (before 11/16/18), only violations closed out 45 days in advance of the cutoff date will be considered.

Performance contribution	50%	150%
Averaged close-out completion (days)	55	45

Weight: 7.5%

Comments: This metric indirectly supports *ERO Operating Plan: Goal 6 – Effective and Efficient ERO Enterprise Operations*

6. Publish non-public off-site audit/spot check reports to NERC in less than 40 days

Objective: To ensure non-public off-site audit and spot check reports are issued in a timely manner

Measure: For off-site audits, the number of days⁹ is measured from the exit presentation to submission of the non-public audit report to NERC. For spot checks, the number of days is measured from closeout in webCDMS or the exit presentation, whichever is later, to submission of the spot check report to NERC.

(Non-public off-site audit and spot check reports published in less than or equal to 40 days) / (non-public off-site audit and spot check reports published)

To be able to calculate the metric in December 2018, the metric applies to all non-public off-site audit/spot check reports completed between 12/12/17 and 10/22/18. To calculate this metric for a partial year, only off-site audits/spot checks completed 40 days in advance of the cutoff date will be considered. To calculate this metric for a full year (12/12/17 to 12/1/18), only off-site audits/spot checks completed 40 days in advance of the cutoff date, or by 10/22/18, will be considered.

Performance contribution	80%	100%	120%
Percent published in <= 40 days	90%	100%	35¹⁰
Average number of days			

Weight: 7.5%

⁹ Unless stated otherwise, “day” refers to a calendar day, not a business day.

¹⁰ To achieve 120% performance contribution, the average time to publish non-public on-site audit reports must be less than or equal to 35 days.

- Comments:**
- i. To achieve > 100% performance contribution, based on the average number of days to publish off-site audit and spot check reports, the RE must publish 100% of the off-site audit and spot check reports in <= 40 days.
 - ii. To achieve 120% performance contribution, based on the average number of days to publish off-site audit and spot check reports, the RE must publish 100% of reports in <= 40 days, and the average must be <=35 days.
 - iii. This metric directly supports the following ERO strategies, goals, and metrics:
 - a) *ERO Enterprise Long-term Strategy: Focus Area 2-Being More Effective and Efficient*
 - b) *ERO Operating Plan: Goal 6- Effective and Efficient Operations*
 - c) *2018 ERO Metrics: Metric 7-ERO Enterprise Efficiency and Effectiveness*
 - iv. This metric indirectly supports *Goal 5-Effective and efficient ERO Enterprise operations* in the *ERO Enterprise Strategic Plan 2017-2020*.
 - v. Audit reports which are not the responsibility of SPP RE ((e.g. SPP RE serving in a non-lead role for Multi-Regional Registered Entity (MRRE) audits)) shall be excluded from the metric.

7. Publish non-public on-site audit report to NERC in less than 65 days

Objective: To ensure non-public on-site audit reports are issued in a timely manner

Measure: The number of days as measured from last day of the audit to submission of the non-public audit report to NERC

Non-public on-site audit reports published in less than or equal to 65 days / non-public on-site audit reports published in 2017

To be able to calculate the metric in December 2018, the metric applies to all non-public on-site audit reports for audits completed between 12/12/17 and 9/27/18. To calculate this metric for a partial year, only on-site audits completed 65 days in advance of the cutoff date will be considered. To calculate this metric for a full year (12/12/17 to 12/1/18), only on-site audits completed 65 days in advance of the cutoff date, or by 9/27/18, will be considered.

Performance contribution	80%	100%	120%
Percent published in <= 65 days	90%	100%	55¹¹
Average number of days			

Weight: 7.5%

Comments: i. To achieve > 100% performance contribution, based on the average days to publish on-site audit reports in <= 65 days, the RE must publish 100% of the non-public on-site audit reports in <= 65 days.

¹¹ To achieve 120% performance contribution, the average time to publish non-public on-site audit reports must be less than or equal to 55 days.

ii. To achieve 120% performance contribution, based on the average days to publish on-site audit reports in ≤ 65 days, the RE must publish 100% of the non-public on-site audit reports in ≤ 65 days, and the average must be ≤ 55 days.

iii. This metric directly supports the following ERO strategies, goals, and metrics:
 a) *ERO Enterprise Long-term Strategy: Focus Area 2-Being More Effective and Efficient*
 b) *ERO Operating Plan: Goal 6-Effective and Efficient Operations*
 c) *2018 ERO Metrics: Metric 7-ERO Enterprise Efficiency and Effectiveness*

iv. This metric indirectly supports *Goal 5 – Effective and efficient ERO Enterprise operations in the ERO Enterprise Strategic Plan 2017-2020*

v. Audit reports which are not the responsibility of SPP RE (e.g., SPP RE serving in a non-lead role for MRRE audits) shall be excluded from the metric.

8. Publish internally completed assessment of Self-Certification/ periodic data submittals

Objective: Complete and publish internal assessments of Self-Certification and periodic data submittals by the due dates established by NERC or SPP RE procedures

Measure: (number of assessments completed by the due date) / (total number of assessments due) = percent completed on time

The performance contribution cannot exceed 100%.

Performance contribution	60%	80%	100%
Percent completed on time	80%	90%	100%

Weight: 7.5 %

Comments: i. This metric indirectly supports *Goal 5 – Effective and efficient ERO Enterprise operations in the ERO Enterprise Strategic Plan 2017-2020*.

ii. This metric directly supports the following ERO strategies, goals, and metrics:
 a) *ERO Enterprise Long-term Strategy: Focus Area 2-Being More Effective and Efficient*
 b) *ERO Operating Plan: Goal 6-Effective and Efficient Operations*
 c) *2018 ERO Metrics: Metric 7-ERO Enterprise Efficiency and Effectiveness*

9. Perform preliminary screening of potential noncompliance issues in webCDMS in 5 business days or less

Objective: To ensure the preliminary screen for potential noncompliance issues is performed in webCDMS in a timely manner

Measure: The number of business days to enter potential noncompliance issues into webCDMS as measured from the date of: (1) for compliance audits - the Registered Entity exit presentation; (2) for spot checks - closeout in webCDMS or the exit presentation, whichever is later; (3) for investigations -

the issuance of the engagement report; (4) for a self-certification, or self-logging spreadsheet as applicable – the date logged in webCDMS; all to completion of the preliminary screen

(number of incoming potential noncompliance issues processed in less than or equal to 5 business days) / (number of incoming violations)

The performance contribution cannot exceed 100%.

Performance contribution	50%	100%
Percent potential noncompliance issues processed in <= 5 business days	90%	100%

Weight: 2.5%

Comments: i. This metric is a CMEP requirement.¹² The metric indirectly supports *Goal 5 – Effective and efficient ERO Enterprise operations* in the *ERO Enterprise Strategic Plan 2017-2020*.

- ii. This metric directly supports the following ERO strategies, goals, and metrics:
- a) *ERO Enterprise Long-term Strategy: Focus Area 2-Being More Effective and Efficient*
 - b) *ERO Operating Plan: Goal 6-Effective and Efficient Operations*
 - c) *2018 ERO Metrics: Metric 7-ERO Enterprise Efficiency and Effectiveness*

iii. Exclude MRRE violations where SPP RE is not the lead region, and violations which are assigned or transferred to another region as part of the SPP RE dissolution

10. Maintain RE expenses within FERC-Approved Budget

Objective: Control RE operational expenses¹³ within budget through SPP RE’s effective termination date based on the most recently completed quarter, allowing for an adjustment due to one-time payments if the effective termination date occurs before 12/31/18 (trustees annual retention, vendor annual costs, etc.).

Annual 2018 Budget: \$10,793,195

Quarterly 2018 Budget: \$2,698,298

Measure: Budget Variance: [(2018 actuals) - (2018 adjusted budget)] / [2018 adjusted budget] = percent difference (positive/negative)¹⁴

¹² CMEP Section 3.8. “The Preliminary Screen shall be conducted within five (5) business days after the Compliance Enforcement Authority identifies the potential noncompliance...”

¹³ SPP RE’s operational expenses do not include any costs associated with the early termination of SPP RE’s Regional Delegation Agreement (RDA). Such costs may include, but not be limited to, employee retention pay, early payout of performance compensation, or transition costs that may occur before or after the effective termination date of the RDA.

¹⁴ Adjusted budget = quarterly budget plus one-time payment adjustment. If termination date is at the end of the first quarter, add ¾ of one-time payment amount. If termination date is at the end of the second quarter, add ½ of one-time payment amount. If termination date is at the end of the third quarter, add ¼ of one-time payment amount. If termination date is at the end of the year, then no adjustment.

Performance contribution¹⁵	80%	100%	120%
Budget Variance (positive) – percent difference¹⁶	> 5%	3% to 5%	0% to 3%
Budget variance (negative) – percent difference	N/A	0% to -3% or > -5%	-3% to -5%

Weight: 10%

Comments: i. This metric tracks the efficiency and effectiveness of SPP RE to operate within the annual financial performance parameters established by SPP RE’s Trustees and the FERC-approved 2018 Business Plan and Budget.

- ii. This metric directly supports the following ERO strategies, goals, and metrics:
- a) *ERO Enterprise Long-term Strategy: Focus Area 2-Being More Effective and Efficient*
 - b) *ERO Operating Plan: Goal 6-Effective and Efficient Operations*
 - c) *2018 ERO Metrics: Metric 7-ERO Enterprise efficiency and effectiveness*

iii. This is a new metric for 2018 and the weighting is set at 12.5% to reflect the relative importance of this metric.

11. Outreach

Objective: Complete 15 newsletters and workshops

Measure: Percent completion:

Performance Contribution	80%	100%
January to June (6 newsletters, 2 workshops)	80%	100%
July to December (6 newsletters, 1 workshop)	80%	100%

Weight: 7.5%

Comments: i. “# of months” is the number of full months when the metric is calculated, starting with 1/1/18, up to a maximum of twelve months.

ii. This metric directly supports the following ERO strategies, goals, and metrics:

¹⁵ The performance contribution is not symmetrical around a 0% budget variance. If actuals exceed budget (positive variance), the higher the percentage variance, the lower the performance contribution. If budget exceeds actuals (negative variance), the closer the variance is to zero indicates the budget was reasonable. A stretch goal would be to manage costs between 3%-5% below budget. Due to the termination of SPP RE’s RDA during 2018, there will be no reduction in performance contribution should the budget exceed expenses by more than 5%. If the budget variance is within +/- \$50k, then the default performance difference will be considered a 0% positive variance.

¹⁶ If the percent difference (positive or negative) exactly equals an endpoint, the performance contribution will be the higher value. For example, a positive variance percent difference of exactly 3% results in a performance contribution of 120% and a negative variance of exactly 3% will result in a performance contribution of 120%.

a) *ERO Enterprise Long-term Strategy: Focus Area 5-Knowledge Transfer and Effective Communications*

iii. This metric indirectly supports the following ERO strategies, goals, and metrics:

b) *ERO Operating Plan: Goals 1, 2, 3, 5, 6 to effectively communicate with industry and registered entities to achieve NERC’s operating goals*

c) *2018 ERO Metrics: Metric 7-ERO Enterprise Efficiency and Effectiveness*

12. Transition Close-out

Objective: To ensure that SPP RE completes a smooth and orderly transition of Registered Entities to other regions and to close-out operations at the corporate campus.

Measure: [Develop Checklists] x [RE-wide checklist complete] x [Individual checklist complete]

- By March 12th, develop a transition/dissolution checklist to include RE-wide tasks (such as transferring work papers to other Regional Entities) and; by April 1st develop a transition/dissolution checklist for individual tasks (such as cleaning out workspaces and working with IT on access changes).
- Completion of RE-wide checklist on/before the dissolution date
- Completion of individual checklists on/before the dissolution date

Because the management team scoring the metrics must have at least three weeks to score the metrics before the dissolution date, any checklist items that must occur in the final weeks or days (such as turning in badges) will not be counted toward the metric. The checklist will denote which items will be counted toward the metrics.

The performance contribution cannot exceed 150%.

Performance Contribution	80%	150%
Develop checklists	No	Yes
RE-wide checklist complete	No	Yes
Individual checklists complete	No	Yes

Weight: 15%

Comments: i. This metric indirectly supports the following ERO strategies, goals, and metrics:
a) *ERO Enterprise Long-term Strategy: Focus Area 5-Knowledge Transfer and Effective Communications*

iii. This metric indirectly supports the following ERO strategies, goals, and metrics:

a) b) *ERO Operating Plan: Goal 6-Effective and Efficient Operations*

b) *2018 ERO Metrics: Metric 7-ERO Enterprise Efficiency and Effectiveness*

13. Close-out of System Events

Objective: As of January 1, 2018 SPP RE has twenty-five (25) open system events. Close-out and reduce the number of system events in which fifteen (15) open events will remain by December 1, 2018.

Measure: The number of events remaining open at the end of the designated periods.

NERC provides the “RRM Dashboard Report” to the Regions on a quarterly basis. The Report displays “Event Status by Region” that indicates the number of events, number of events closed, number of events ready for cause coding and number of events opened.

Performance Contribution	80%	100%	120%
Events Remaining Open by June 30, 2018	23	20	17
Events Remaining Open by December 1, 2018	18	15	12

Weight: 5%

Comments: i. This metric directly supports the following ERO strategies, goals, and metrics:
 b) *ERO Operating Plan: Goal 4-Identification and Assessment of Emerging Risks*

14. 2018 Dissolution Year Multiplier

Objective: The dissolution of SPP RE is expected to occur no later than December 31, 2018. As of mid-January 2018, SPP RE’s staffing is at 71%. As we move forward into 2018, staffing is likely to continue to decrease. With this declining workforce, SPP RE must continue to carry out its delegated authority (audits, processing mitigation plans, event analysis, etc.); meet stakeholders’ expectations; and transfer its Registered Entities’ registrations, audit records and enforcement actions to other Regional Entities.

In recognition of the RE staff’s efforts during this transitional year, a dissolution year multiplier will be applied to the aggregate metric score (Metrics 1-13) based on the following:

- Transition Year Accomplishment
- A limited stakeholder satisfaction survey focused on transfer/dissolution

Measure: Dissolution Year Multiplier = [Transition Year Accomplishment] x [Stakeholder Satisfaction Rating]

The Dissolution Year Multiplier cannot exceed 120% and the final metric score cannot exceed 150% after application of the multiplier.

Performance contribution	80%	100%	120%
Transition Year Accomplishment	< 95%	95% to 105%	>105%
Stakeholder Satisfaction Rating	2 Rating	3.25 to 3.75 Rating	5 Rating

Weight: N/A

- Comments:**
- i. This metric adjustment adds a qualitative measure to all metrics.
 - ii. An overall average survey rating of 1 is *poor*, 2 is *below average*, 3 is *average*, 4 is *good*, and 5 is *excellent*.
 - iii. This metric indirectly supports the following ERO strategies, goals, and metrics:
 - d) *ERO Enterprise Long-term Strategy: Focus Area 2-Being More Effective and Efficient*
 - e) *ERO Operating Plan: Goal 6-Effective and Efficient Operations*
 - f) *2018 ERO Metrics: Metric 7-ERO Enterprise efficiency and effectiveness*

Metric Approvals

Metric Development Team Members	Date Presented to SPP RE President and General Manager
Debbie Currie, Joe Gertsch, Mike Hughes, Emily Pennel, Robert Vaughn	1/11/2018

Approval by SPP RE President	Date Approved
Ron Ciesiel	1/11/2018

Approval by SPP RE Trustees	Date Approved
Dave Christiano, Mark Maher, Steve Whitley	1/29/2018

CIP Update SPP RE Trustees Meeting January 29, 2018

Kevin B. Perry, CISA, CRISC

Director, Critical Infrastructure Protection

CIP Standards Development

CIP-003-7 (Security Management Controls)

- FERC issued NOPR proposing to approve CIP-003-7 and its Implementation Plan (Low Impact BCS controls), with comments on additional proposed revisions due December 26, 2017
 - Commenters generally supported approval of CIP-003-7 and the Implementation Plan
 - Commenters generally disagreed with additional modifications
 - Current Standard addresses Commission's concerns
 - Should determine effectiveness of new Standard first
- Implementation Plan, if approved, will “obsolete” CIP-003-6 and delay implementation of CIP-003 revisions from September 1, 2018 until late 2019 or early 2020, depending on timing of FERC approval order
- Now pending FERC action

CIP-008-5 (Incident Reporting and Response Planning)

- FERC issued NOPR on December 21, 2017, proposing to direct NERC to modify the Cyber Security Incident reporting requirements to include mandatory reporting of Cyber Security Incidents that *“compromise, or attempt to compromise, a responsible entity’s Electronic Security Perimeter or associated Electronic Access Control or Monitoring Systems for high and medium impact BES Cyber Systems.”*
 - Expands beyond reporting only if the incident compromised or disrupted one or more reliability tasks
 - Reports would be required to be submitted to the E-ISAC and additionally to the Industrial Control Systems Cyber Emergency Response Team (ICS-CERT)
- Comments due February 26, 2018

CIP-013-1 (Supply Chain Management)

- FERC issued NOPR proposing to approve CIP-013-1, with additional proposed revisions
- Includes companion modifications to CIP-005-6 and CIP-010-3
 - Proposes to direct additional modifications
 - Reduce Implementation Plan effective date by six months
 - Include EACMS associated with High/Medium Impact BCS
 - Direct NERC to evaluate the cyber security supply chain risks presented by PACS and PCAs in the BOT-requested study and to file the interim (12-month) and final (18 month) reports with the Commission
 - NERC BOT-directed study specifically included only risks of Low Impact BCS
- Comments due 60 days after publishing in the Federal Register

Standards Under Development

- **CIP-002-6 (BES Cyber System Categorization)**
 - Initial ballot concluded October 30, 2017
 - Vote resulted in 66.78% approval, barely above the required 2/3 majority
 - Standards drafting team is reviewing all responses and will determine the next steps of the project
- **CIP-012-1 (Communications between Control Centers)**
 - Second ballot concluded December 11, 2017
 - Voted down – 63.91% approval
 - Standards drafting team is reviewing all responses and will determine the next steps of the project

CIP V5 Compliance History

CIP V5 Compliance History

Standard	Self-Reported	Audit/Spot Check
CIP-002-5.1a	3	1
CIP-003-6	2	2
CIP-004-6	16	
CIP-005-5	4	10
CIP-006-6	9	1
CIP-007-6	22	5
CIP-008-5	2	
CIP-009-6	2	
CIP-010-2	10	3
CIP-011-2	4	
	74	22

CIP V5 Compliance History

Requirement	Self-Reported	Audit/Spot Check
CIP-002-5.1a R1	1	1
CIP-002-5.1a R2	2	
CIP-003-6 R1		1
CIP-003-6 R2		1
CIP-003-6 R3	1	
CIP-003-6 R4	1	
CIP-004-6 R2	2	
CIP-004-6 R3	3	
CIP-004-6 R4	5	
CIP-004-6 R5	6	

CIP V5 Compliance History

Requirement	Self-Reported	Audit/Spot Check
CIP-005-5 R1	4	8
CIP-005-5 R2		2
CIP-006-6 R1	4	
CIP-006-6 R2	5	1
CIP-007-6 R1	2	1
CIP-007-6 R2	12	1
CIP-007-6 R3	1	
CIP-007-6 R4	5	2
CIP-007-6 R5	2	1

CIP V5 Compliance History

Requirement	Self-Reported	Audit/Spot Check
CIP-008-5 R1	1	
CIP-008-5 R3	1	
CIP-009-6 R1	2	
CIP-010-2 R1	9	3
CIP-010-2 R2	1	
CIP-011-2 R1	1	
CIP-011-2 R2	3	

In The News...

Meltdown / Spectre Vulnerabilities

- Both vulnerabilities are enabled as a result of the intrinsic design feature characteristics of modern CPU processors
 - Modern processors rely upon speculative (out of order) processing for speed
 - Operating system bugs are not the root of the vulnerability as the issue is with the behavior of the processor hardware
 - Vulnerable on all major operating systems (Microsoft Windows, Linux, and OS X)
 - Intel, AMD, and ARM processors are vulnerable, affecting billions of devices

Meltdown / Spectre Vulnerabilities

- Meltdown
 - Works by causing an exception (processing error) that is handled or suppressed
 - Code following the exception point is executed in anticipation of need
 - Race condition to retrieve cached data from look-ahead processing before the CPU erases the data from the processor's cache following the exception
 - Look-ahead data is not bounds checked before the fetch
 - Can read all of physical memory, regardless whether memory pages are in use by the operating system or other application processes
 - Breaks the most fundamental isolation between an application program and the operating system

Meltdown / Spectre Vulnerabilities

- Spectre

- Works by causing CPU to take an unpredicted branch path when executing a target victim application process
- Anticipatory data fetched by pre-processing the predicted, not-followed path branch is not removed from the cache
 - Attacker can retrieve unneeded anticipatory data before cache is reused
- Can read all of a victim application process' memory
- Can be exploited using specifically crafted exploit code or via JavaScript

Meltdown / Spectre Vulnerabilities

- Spectre is harder to exploit than Meltdown, but it is also harder to mitigate
- Meltdown vulnerability can be mitigated but not entirely removed by operating system patch
- Spectre vulnerability may be able to be mitigated by installing patches that slow down processing or halt speculative execution on potentially sensitive paths

Meltdown / Spectre Impact

- Devices with processors from 2015 or earlier are more likely to exhibit slowdowns due to mitigation efforts
 - I/O-intensive applications are most impacted by performance reduction
 - Predictions range between 20 and 30 percent slowdown
- Cloud services seeing significant performance slowdowns
- Industrial Control Systems generally have low processing and bandwidth requirements, minimizing potential for significant performance slowdowns

Meltdown / Spectre Recommendations

- Test thoroughly, including stress testing, before installing operating system patches to mitigate Meltdown and Spectre vulnerabilities
- Verify isolation of BES Cyber Systems and associated EACMS, PACS, and PCAs from the Internet
- Do not use same authentication credentials for CIP-protected and corporate Cyber Assets
- Avoid mixed-trust virtual system environments

4Q 2017 System Events

Alan Wahlstrom
Lead Engineer

January 29, 2018

SPP Regional Events (October 1 –December 31)

- Three events in SPP region 4Q 2017
- All in lowest assignable risk category
 - Two category 1a. *Loss of three or more elements*
 - One category 1h. *Partial loss of EMS*
- 24 events in 2017, compared to 15 events in 2016

First 1a Event: 115 kV Line Fault

- ACCVT “Capacitive couple voltage transformer” failed
 - Event duration was 297 cycles (4.95 seconds)
 - One 115 kV breaker failed to trip on faulted line
 - Seven 115 kV breakers tripped to clear the fault
 - 115 kV breaker misoperated due to an overreaching ground instantaneous element
 - No load was lost





**Lightning
arrester**



Second 1a. Event - 138 kV Switch Station

- Three breakers at 138 kV station opened
- Two lines opened and reclosed at remote ends of the line
- Third line breaker did not open at the station end but at the remote end
- Fault on a potential transformer B phase



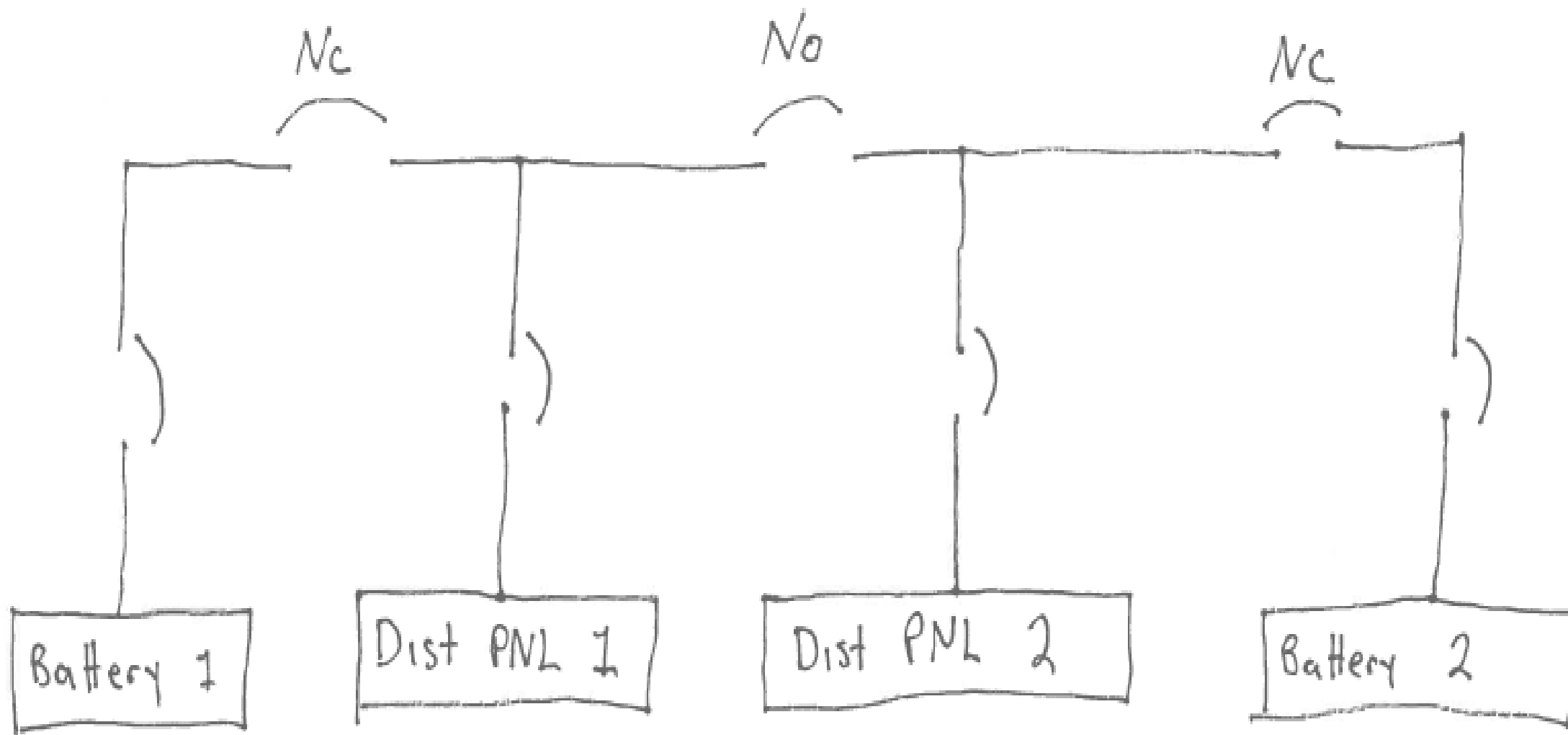
1h. Event - Network outage impacting SCADA communications

- SCADA communications was lost for 3 hours
- Outage impacted the primary control center, back up control center, distribution center, and generation dispatch
- Outage was due to a duplicate “Media Access Control” in the internal network causing a routing loop
- Reviewed the settings on all core network ports and configured all core end use ports as recommended by Manufacturer

NERC Lessons Learned

Inadequate Battery Configuration Management Damaged Generating Station & Tripped HVDC Conversion Station

- Technicians were doing maintenance on batteries
- Technicians failed to close breaker back after work was complete
- Distribution Panel #2, which feeds monitoring of all units and control/protection of half of the units, was not supplied with power
- An hour after panel loss, progressive voltage drops started to occur on transmission lines connecting generating station to AC-DC conversion station



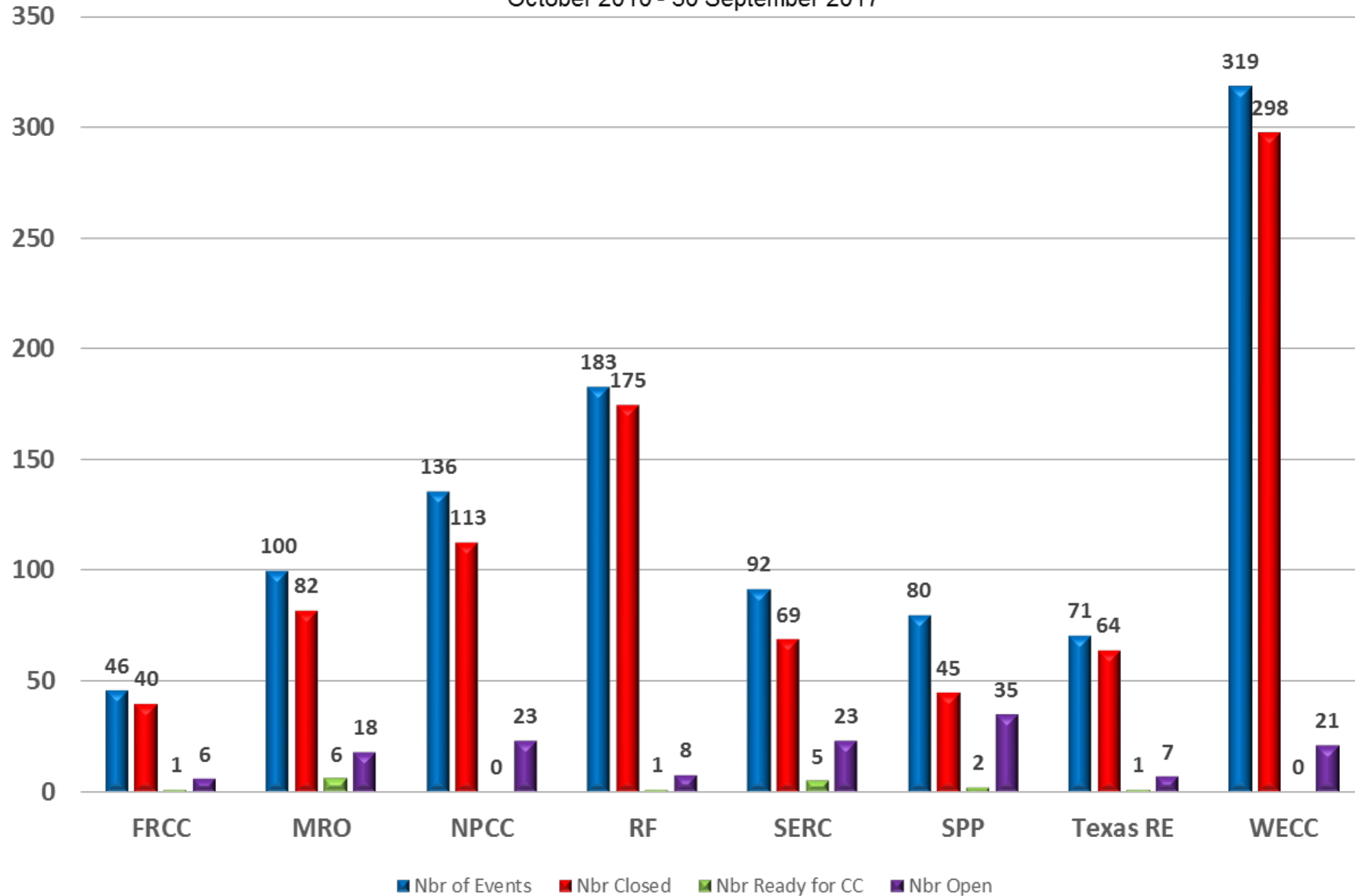
Lesson Learned

- For maintenance activities, establish internal controls commensurate with the criticality of the work
- Ensure the criticality of the work, including network configuration, is understood
- Emphasize the importance of clear and prompt communication between generation station operators and control centers, specifically when there is a change in critical equipment status and availability
- Improve generating station operator awareness re: risks of DC supply in generating stations
- Stress the importance of communication by adding it to written procedures

NERC Oversight Metrics System Events

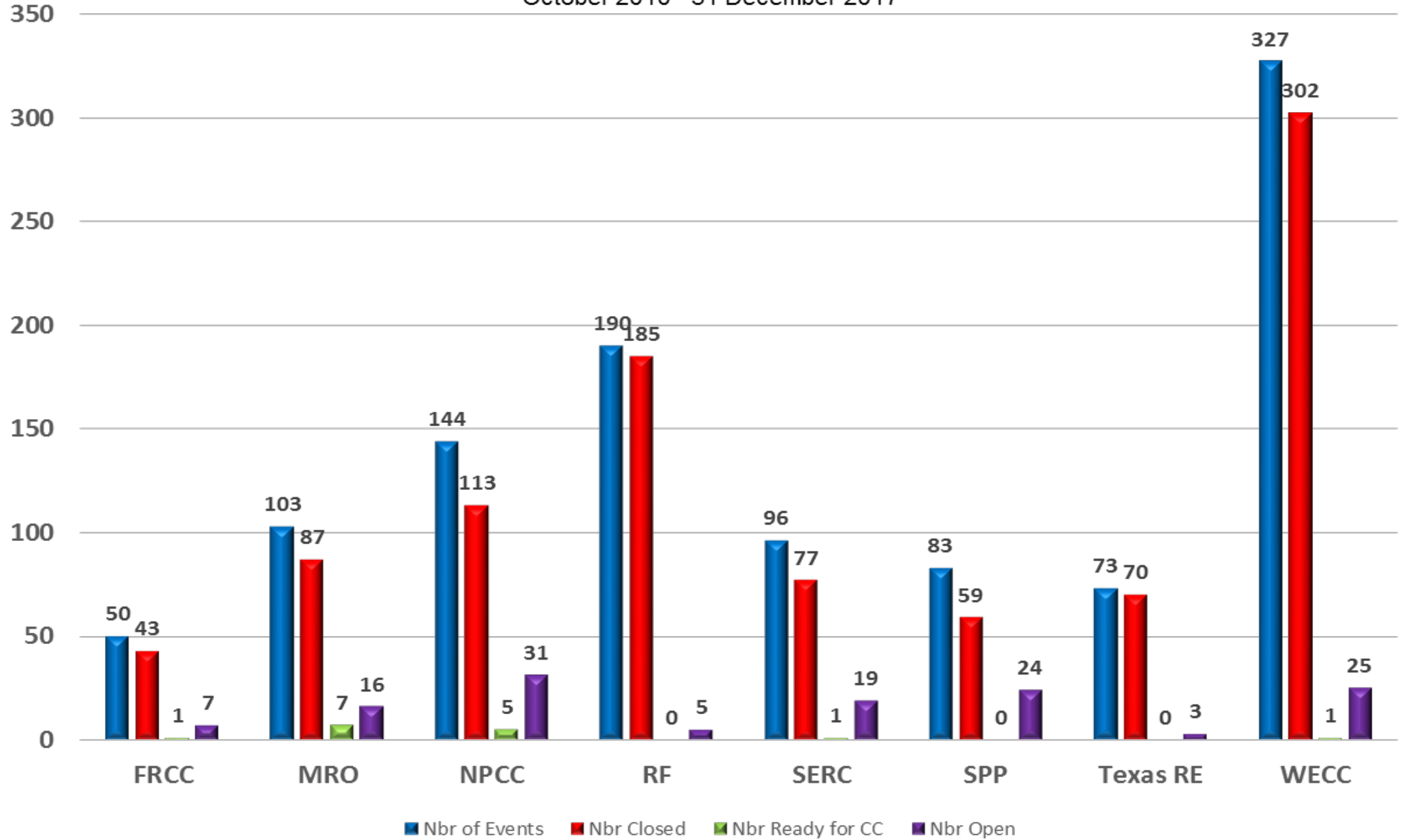
Event Status by Region

October 2010 - 30 September 2017



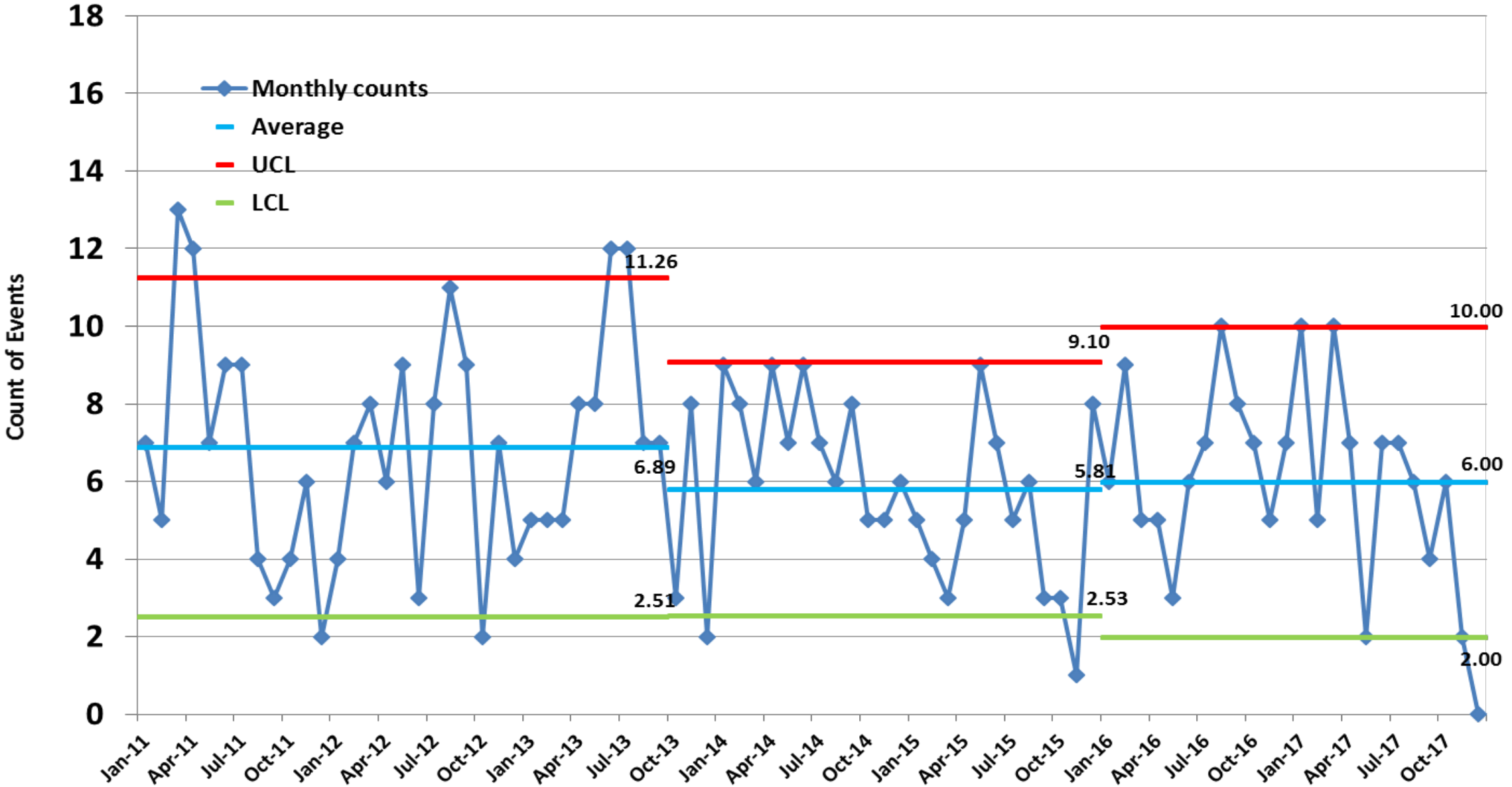
Event Status by Region

October 2010 - 31 December 2017



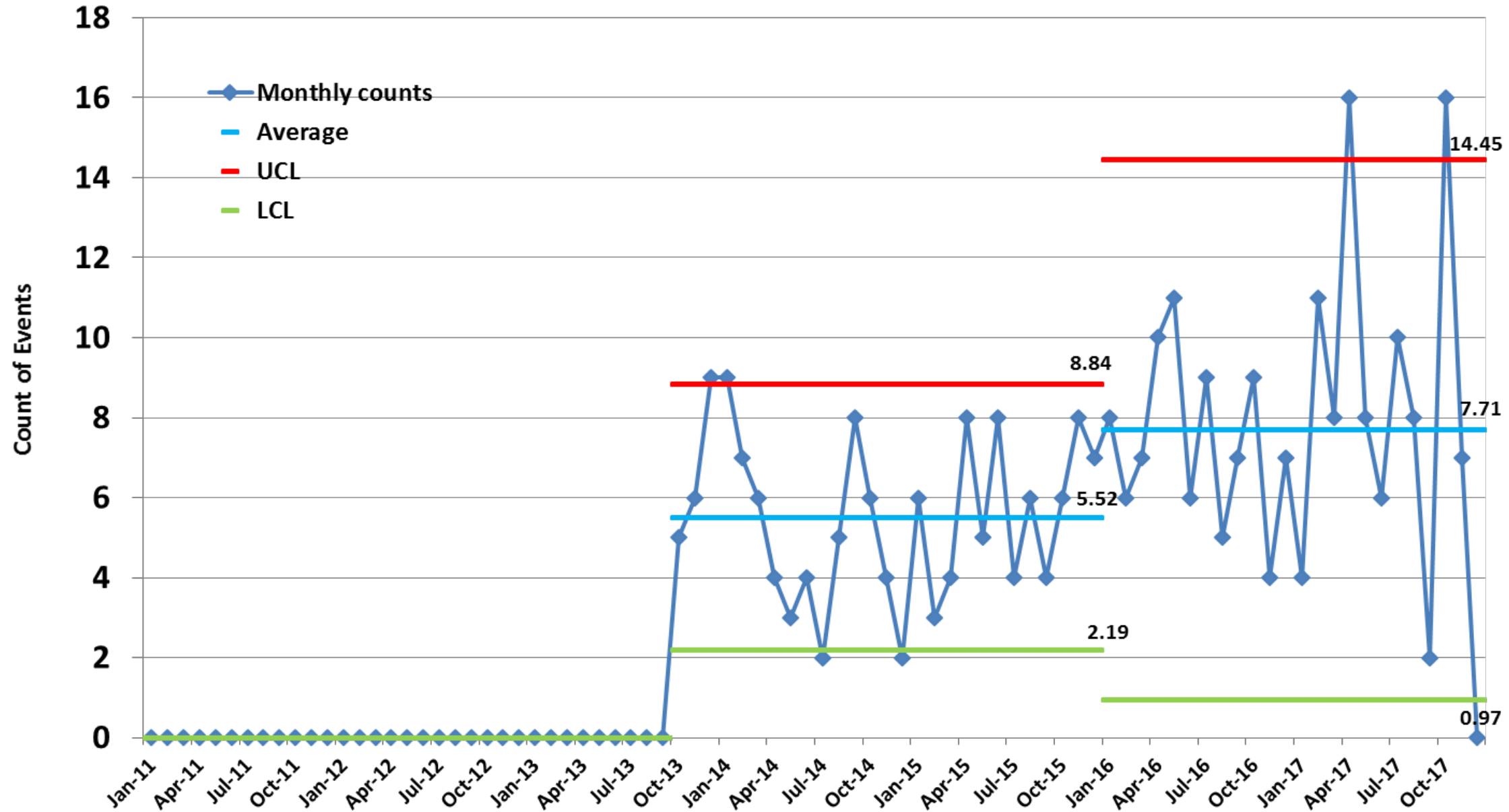
Category 1 Events

(non-EMS Events)



Category 1 Events

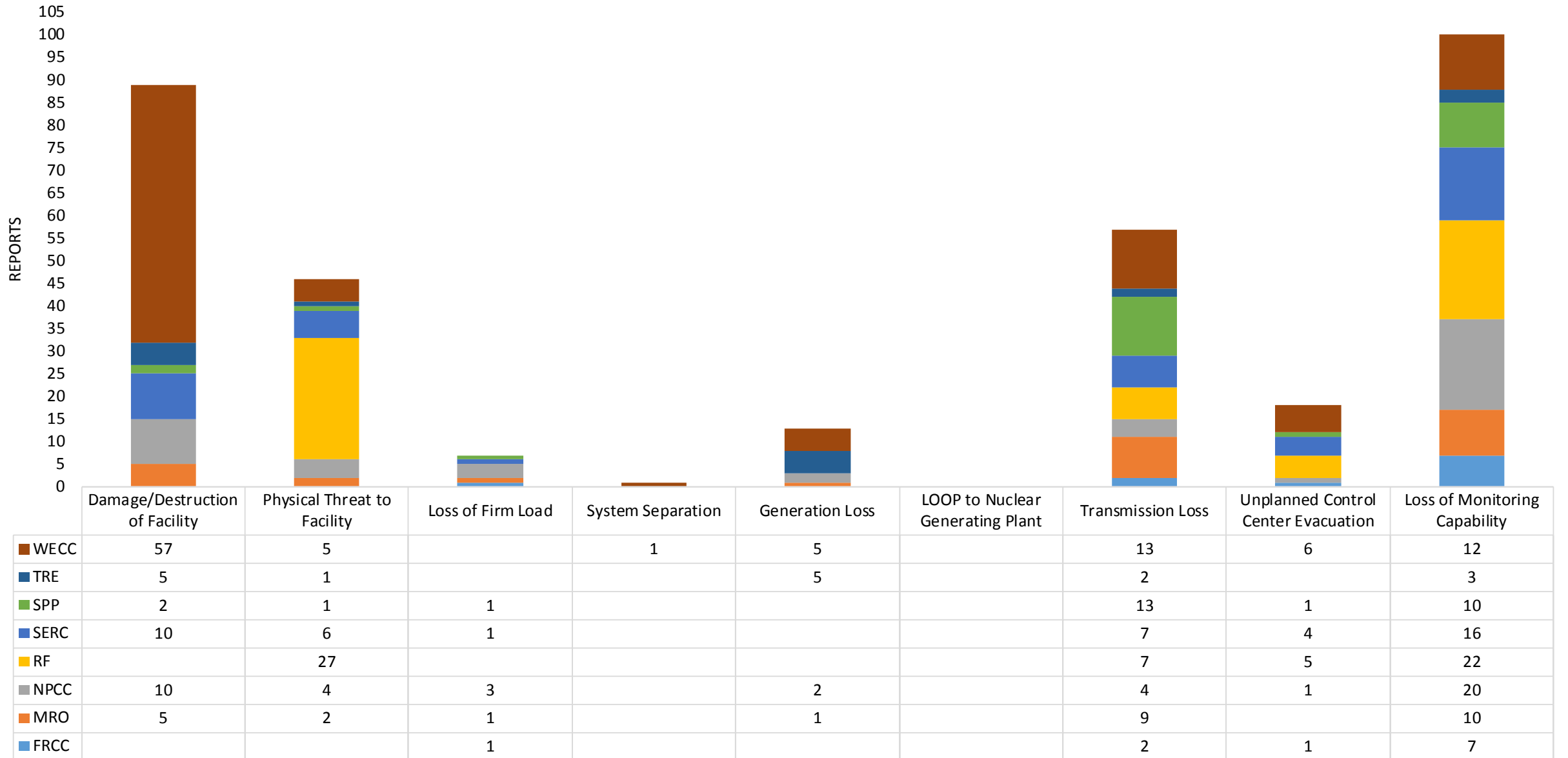
(EMS Events)



EOP-004 Submissions

2017 YTD through December 31

FRCC MRO NPCC RF SERC SPP TRE WECC



Enforcement Update

January 29, 2018

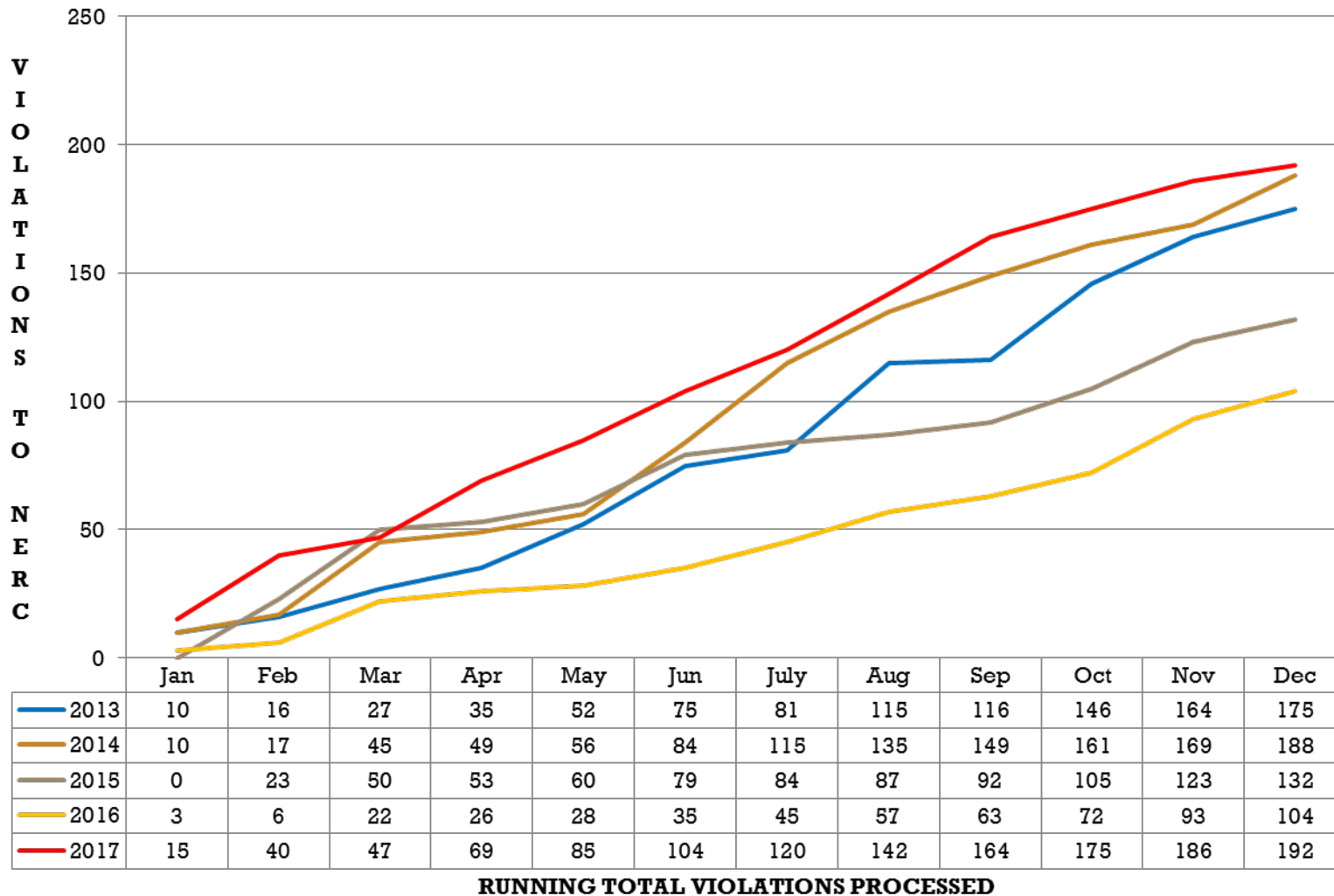
Joe Gertsch
Manager of Enforcement
jgertsch.re@spp.org
501.688.1672

Enforcement Activity Summary

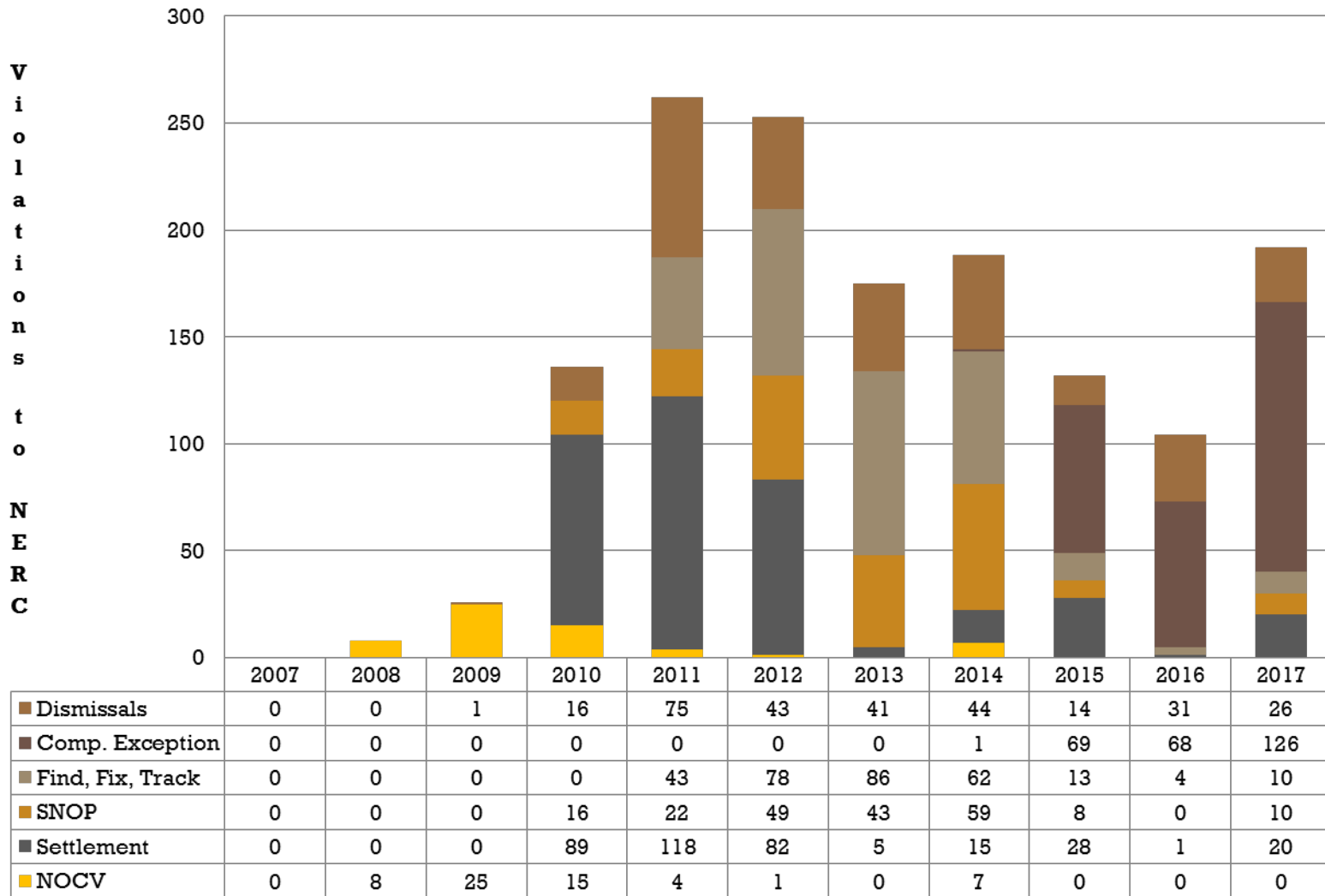
SPP RE Enforcement Activities December 31, 2017	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	First Quarter	Second Quarter	Third Quarter	October	November	December	Total 2017
Notice of Preliminary Screen Issued	6	56	132	254	239	173	189	121	89	174	63	50	45	14	19	7	198
Notice of Alleged Violation (NAVAPS)																	
NAVAPS Issued	6	45	10	7	0	2	1	6	0	7	0	0	0	0	0	0	0
Notice of Confirmed Violation (NOCV)																	
NOCV Sent to Entity/NERC	0	8	25	15	4	1	0	1	0	0	0	0	0	0	0	0	0
NOCV BOTCC Approved	0	7	11	29	4	1	0	1	0	0	0	0	0	0	0	0	0
Settlements / Full Notice of Penalty																	
To NERC for Approval	0	0	0	89	118	52	5	15	28	1	6	14	0	0	0	0	20
BOTCC Approved	0	0	0	50	81	103	14	30	24	5	6	13	0	0	1	0	20
Settlements / Spreadsheet NOP																	
To NERC for Approval	0	0	0	16	22	49	43	59	8	0	0	1	6	3	0	0	10
BOTCC Approved	0	0	0	0	38	49	65	46	8	0	0	1	6	0	0	3	10
Find, Fix, Track																	
To NERC for Approval	-	-	-	-	43	78	86	62	13	4	1	4	4	0	1	0	10
BOTCC Approval	-	-	-	-	36	74	95	61	14	4	1	4	0	2	3	0	10
Compliance Exception	-	-	-	-	-	-	-	1	69	68	34	30	39	9	8	6	126
Dismissals																	
To NERC/SPP RE SRT for Approval	0	0	1	16	75	43	41	44	14	31	5	15	4	0	2	0	26
NERC/SPP RE SRT Approved		0	1	16	75	43	41	44	14	31	5	15	4	0	2	0	26
Notice of Penalty																	
Approved by FERC	0	5	13	57	180	184	141	118	15	17	0	6	14	6	0	4	30
Violations Awaiting NERC Approval																	6
Active Violations - Caseload																	171
Caseload Index (months)*																	10.6

* Based on previous 12 months processing (193)

Enforcement Monthly Violation Processing



Enforcement Processing Methods



SPP RE Caseload – December 31, 2017

- 171 - Active SPP RE Violations
 - 16 - Settlement
 - 87 – Multi Region Registered Entity (MRRE) - SPP RE Lead on 8
- 42 - 693 Violations
- 129 - CIP Violations
- Discovery Method
 - 23 - Audit
 - 135 - Self Report
 - 10 - Self Certification
 - 2 – Spot Check
 - 1 - Log

Caseload Aging

- SPP RE – 92 violations
- Average age - 263 days

<u>Age (days)</u>	<u>Violations</u>
> 300	41
201 – 300	12
101 – 200	19
51 – 100	11
1 - 50	9

- Pre-2017 violations: 25
- MRRE: 79 violations, average age - 253 days

SPP RE 2017 Violation Dismissals

Consolidation with another violation	18
Transfer Dismissal.....	2
Self-Report wrong standard and/or requirement	1
Provided exculpatory evidence	2
Incorrect Interpretation of Standard	<u>3</u>
Total	26

December Mitigation Plan Summary

- **Mitigation Plan Status (month/year)**

Submitted	3/53
Accepted	2/49
Certified Complete	2/77
Completion Verified	2/76
Mitigating Activity Completed	4/54
- **Active Violations with no Mitigation Plans**

Initiated	42
-----------	----

Active Violations without Mitigation Plans

- Discovery Method

Compliance Audit	4
Self- Certification	5
Self-Report	31
Spot Check	2

Average age - 180 days

<u>Age (days)</u>	<u>Violations</u>
> 300	12
201 – 300	4
101 – 200	12
51 – 100	5
1 - 50	9



Joe Gertsch
Manager of Enforcement
jgertsch.re@spp.org
501-688-1672

SPP RE President's Report

January 29, 2018

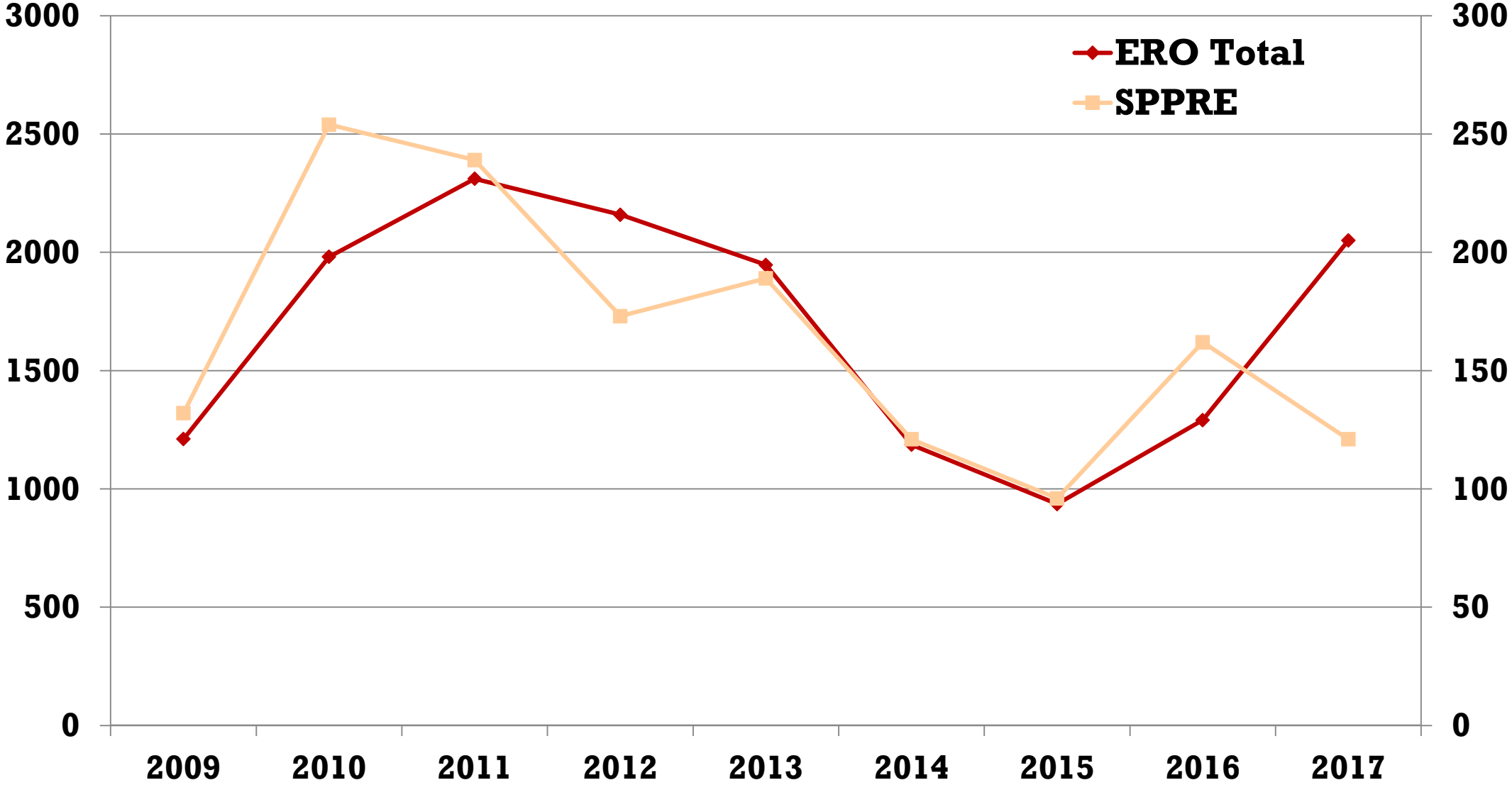
Oklahoma City, OK

Ron Ciesiel

SPP RE President

Violations by Year

Updated 1/4/18



Most Violated Standards

Based on rolling 12 months through 12/31/17 [Represents ~ 84% of total violations]

Rank	Standard	Description	Violations Current	Violations Previous	Δ	Risk Factor
1*	CIP-007	Systems Security Management	28	10	+18	Medium
2	VAR-002	Network Voltage Schedules	12	8	+4	Med./Lower
3*	CIP-010	Change Management	11	3	+8	Medium
4*	PRC-005	Protection System Maintenance	11	16	-5	High/Med
5*	CIP-004	Personnel & Training	10	5	+5	Med./Lower
6*	CIP-006	Physical Security of Cyber Assets	9	2	+7	Medium
7*	CIP-005	Electronic Security Perimeters	8	8	-	Medium
8	CIP-003	Security Management Controls	5	4	+1	Med./Lower
9	MOD-026	Generator Modeling	4	0	+4	Med./Lower
10	TOP-001	Transmission Operations	4	0	+4	High/Med
	All	SPP RE Top 10 Total Incoming	102	56	+46	
		SPP RE Total Violations	121	162	-41	

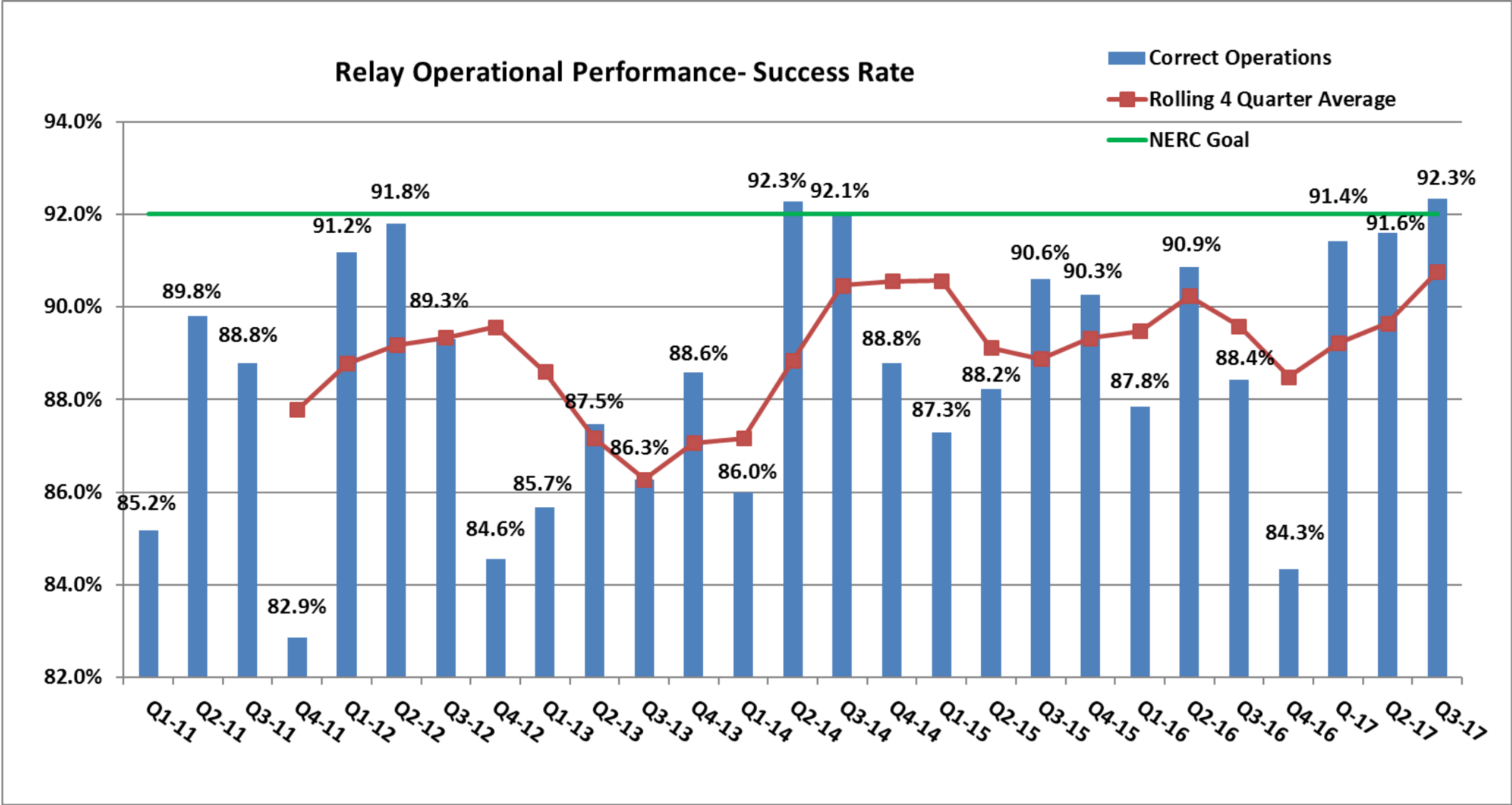
Standards No Longer in Top 10

* Also in NERC Top 10

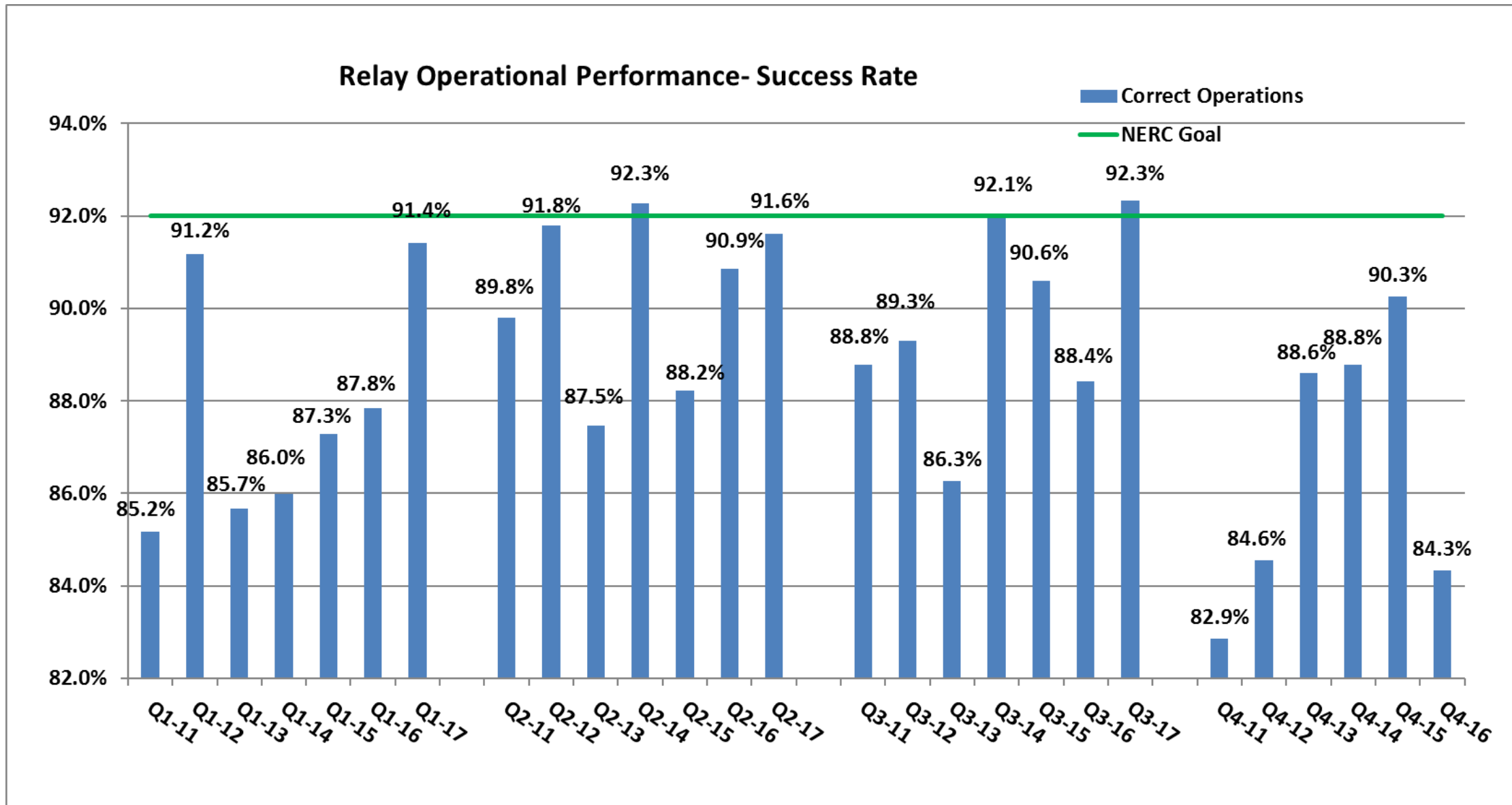
	MOD-025	Security Management Controls	2	34	-32	Medium
	PRC-024	Generator Modeling	0	29	-29	Med./Lower
	PRC-019	Transmission Operations	0	18	-18	Medium



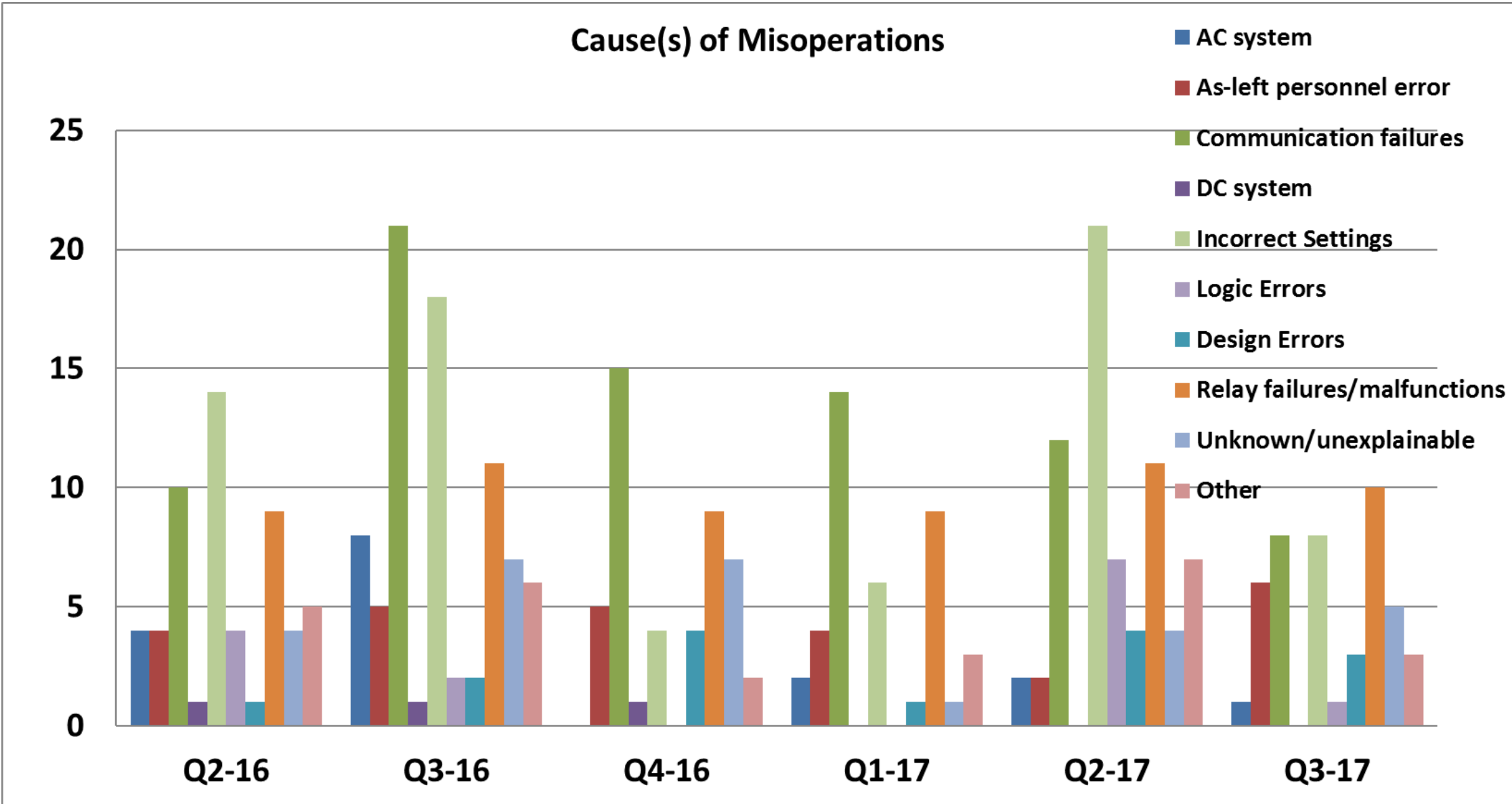
SPP RE Misoperation Report as of Q3-17



Relay Operation Success Rate (Quarter Grouping)

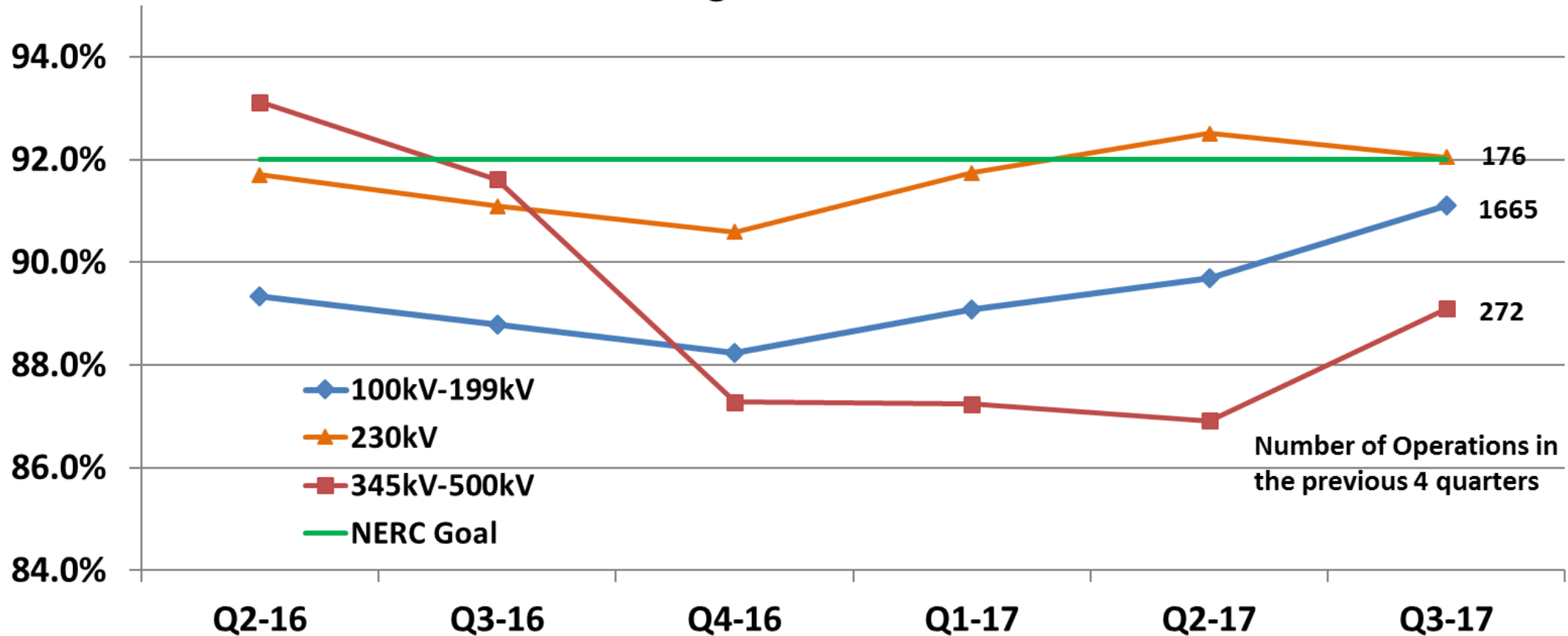


Causes of Misoperations Q2-16 to Q3-17



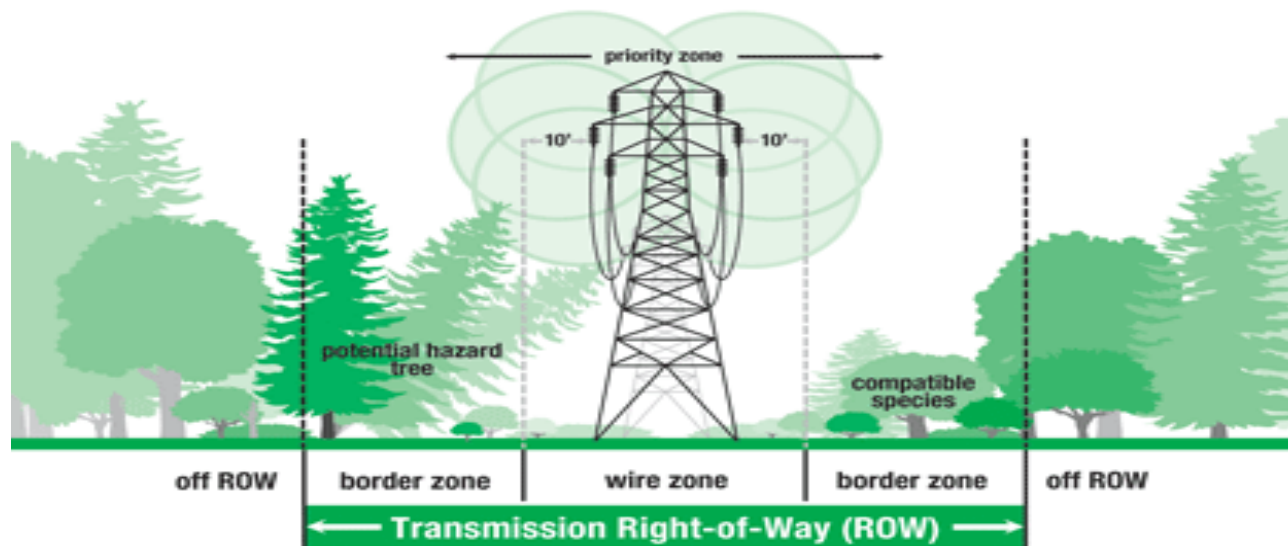
Success Rate by Voltage Category

Rolling 4 Quarter Operation Success Rate by Voltage Category
SPP RE
Ending Third Quarter 2017



Vegetation Contacts

	Reportable	Actionable
NERC (Q3-2017 last report)	Q3-2017	Q3-2017
SPP RE (Q4-2017 last report)	Q3-2017	Q3-2017



Additional Information

New Standards: April 1, 2018

- [IRO-018-1 - Reliability Coordinator Real-time Reliability Monitoring and Analysis Capabilities](#)
- [TOP-010-1 Real-time Reliability Monitoring and Analysis Capabilities](#)

New Standards: July 1, 2018

- CIP-009-6-Cyber Security – Recovery Plans for BES Cyber Systems (Requirement 2.3)
- CIP-010-2-Cyber Security- Configuration Change management and Vulnerability Assessments (Requirements 3.2, 3.2.1, 3.2.2)
- MOD-026-1-Verification of Models and Data for Generator Excitation Control System or Plant Volt/Var Control Functions (Requirement 2, 2.1 – 2.1.6)
- MOD-027-1-Verification of Models and Data for Turbine/Governor and Load Control or Active Power/Frequency Control Functions (Requirement 2, 2.1-2.1.5)
- TOP-001-4-Transmission Operations

New Standards: July 1, 2018

- [TPL-007-1-Transmission System Planned performance from Geomagnetic Disturbance Events \(Requirements 2\)](#)

New Standards: September 1, 2018

- CIP-003-6 – Cyber Security – Security Management Controls (Requirements 2 ATT. 1, Sec. 2 and 3)

New Standards: January 1, 2019

- BAL-002-1 –Balancing Authority Control
- FAC-001-3 Facility Interconnection Requirements
- TPL-007-1 Transmission System Planned Performance for Geomagnetic Disturbance Events (Requirement 5)



SPP RE Financial Report

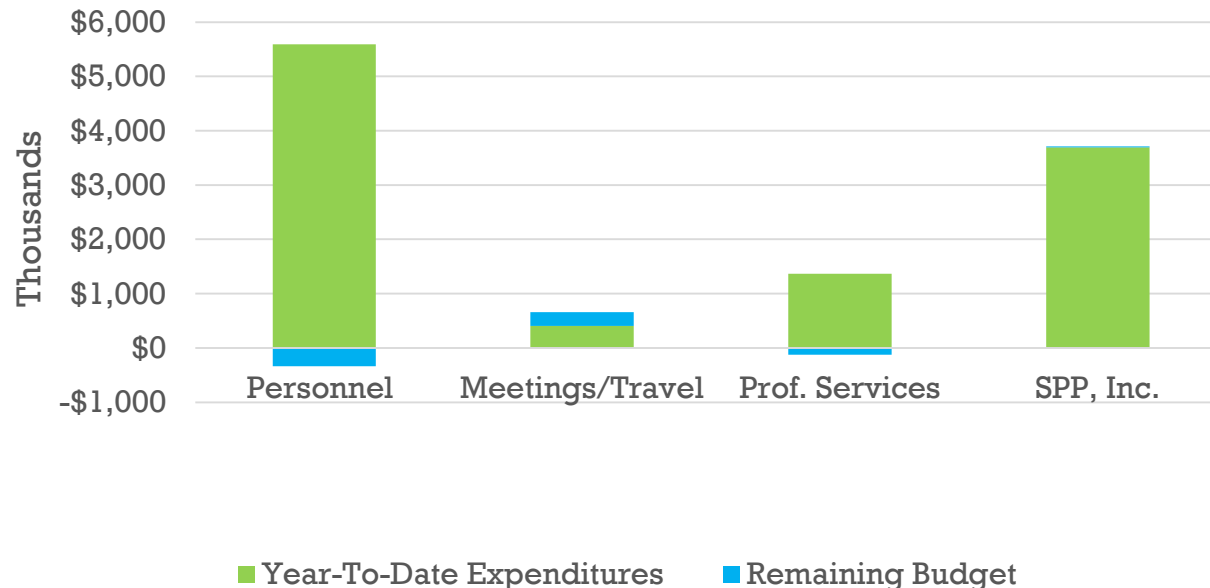
Debbie Currie

Manager, Regulatory Interface and Process Improvement

January 29, 2018

2017 Actuals vs. Budget

- Total Expenditures \$11.1M vs. \$10.9M Budget
- Variance ~\$190k over budget
 - Personnel expenses ~\$335k over budget
 - Meeting/travel expenses ~\$252k under budget
 - Contracts/Professional services ~\$125k over budget
 - SPP, Inc. overhead charge ~\$19k under budget



Overview

- **Personnel**
 - 6 open staff positions (22 actual compared to 28 budget)
- **Meeting/Travel expenses**
 - Open positions
- **Contracts/Professional Services**
 - **Engineering Data Validation Tool**
 - SPP RE funding maximum reached
 - Testing Ongoing; completion expected January 2018
 - No further charges to SPP RE
- **SPP, Inc. Overhead Charge**
 - Engineering shared staff FTEs close to budget (5.0 vs. 5.25 budget)

2018 Budget Highlights

- \$10.8 million compared to \$10.9 million in 2017
 - Reduction of \$72k (less than 1%)
- Assessments (7% increase)
 - Penalty Payment Decline
 - Stabilization of SPP, Inc. Charge
- Headcount
 - Decreases of 0.95 FTE
- Budget impacts of SPP RE dissolution in 2018
 - Assuming a December 31st date, no change needed in budget or assessments



SOUTHWEST POWER POOL REGIONAL ENTITY

STATEMENT OF ACTIVITIES

2017 DECEMBER YTD DRAFT (UNAUDITED)

<i>(In Whole Dollars)</i>	2017 DEC YTD ACTUAL	2017 DEC YTD BUDGET	VARIANCE	VAR %
Funding				
ERO Funding	9,092,553	9,092,553	-	
Penalty Sanctions	369,750	369,750	-	
Total SPP RE Funding	9,462,303	9,462,303	-	
Testing Fees	-	-	-	
Workshops	-	-	-	
Interest	3,415	-	3,415	
Miscellaneous	-	-	-	
Total Funding (A)	9,465,718	9,462,303	3,415	0.0%
Expenses				
Personnel Expenses				
Salaries	4,501,080	4,385,605	115,475	
Payroll Taxes	445,829	335,499	110,330	
Benefits	483,085	358,263	124,822	
Retirement Costs	159,607	175,424	(15,817)	
Total Personnel Expenses	5,589,600	5,254,791	334,809	6.4%
Meeting Expenses				
Meetings	106,989	120,000	(13,012)	
Travel	298,067	537,000	(238,933)	
Conference Calls	-	-	-	
Total Meeting Expenses	405,056	657,000	(251,944)	-38.3%
Operating Expenses				
Contracts & Consultants	1,066,021	1,020,710	45,311	
Office Rent	-	-	-	
Office Costs	13,270	10,000	3,270	
Administrative Costs	-	-	-	
Professional Services	288,927	212,100	76,826	
Computer Purchase & Maint.	-	-	-	
Depreciation	-	-	-	
Miscellaneous/ Contingency	-	-	-	
Total Operating Expenses	1,368,218	1,242,810	125,408	10.1%
Total Direct Expenses	7,362,874	7,154,601	208,273	2.9%
SPP Inc. Indirect Expenses	3,692,143	3,710,910	(18,767)	
SPP RE Indirect Expenses	-	-	-	
Total Indirect Costs	3,692,143	3,710,910	(18,767)	-0.5%
Total Expenses (B)	11,055,017	10,865,511	189,506	1.7%
Net Change in Assets (A-B)	(1,589,298)	(1,403,208)	(186,090)	
Fixed Assets				
Depreciation	-	-	-	
Computer & Software CapEx	-	-	-	
Furniture & Fixtures CapEx	-	-	-	
Equipment CapEx	-	-	-	
Leasehold Improvements	-	-	-	
Increase/(Decrease) in Fixed Assets (C)	-	-	-	
Total Budget (Expenses plus Incr (Dec) in Fixed Assets (B+C))	11,055,017	10,865,511	189,506	1.7%
Change in Working Capital (Total Funding less Total Budget) (A-B-C)	(1,589,298)	(1,403,208)	(186,090)	
FTEs*	28.6	33.25	(4.64)	-14.0%
Beginning WC - 01/01/2017	3,140,957	1,403,208	1,737,749	
Change to WC - 2017 YTD	(1,589,298)	(1,403,208)	(186,090)	
Working Capital as of 12/31/17	1,551,658	-	1,551,658	

Outreach Update

January 30, 2018

Oklahoma City, OK

Emily Pennel

Outreach Coordinator and Trustees Secretary

Outreach

Upcoming Dates:

- [Mar. 27 2018 SPP RE Spring Workshop](#): Little Rock
- [Apr. 23 2018 Trustee Meeting](#): Kansas City
- [June 5 2018 SPP RE CIP Workshop](#): Little Rock

- Future Trustee meetings and fall workshop dates to be determined

Spring Workshop

March 27, 2018

8:15-8:30	Welcome	
8:30-9:15	Transition: Enforcement & Compliance	<i>Jim Williams, Joe Gertsch, Kevin Perry</i>
9:15-9:30	BREAK	
9:30-10:30	Transition Q&A with NERC	<i>Ken McIntyre</i>
10:30-10:45	BREAK	
10:45-11:45	Top 10 Most Violated	<i>Mike Hughes, CIP Team</i>
11:45-12:00	Revised Standard TOP-001-4	<i>Jeff Rooker</i>
12:00-1:00	LUNCH	
1:00-1:20	Misoperations Update	<i>Louis Guidry</i>
1:20-1:50	Line Ratings Projects & Compliance	<i>Doug Bowman</i>
1:50-2:00	BREAK	
2:00-3:00	CIP Update	<i>Kevin Perry</i>
3:00-3:30	NETWORKING BREAK	
3:30-4:15	CIP-003 Low Impact from GO Perspective	<i>Bobby Grey, Luis Zaragoza</i>
4:15-5:00	General Manager Update	<i>Ron Ciesiel</i>

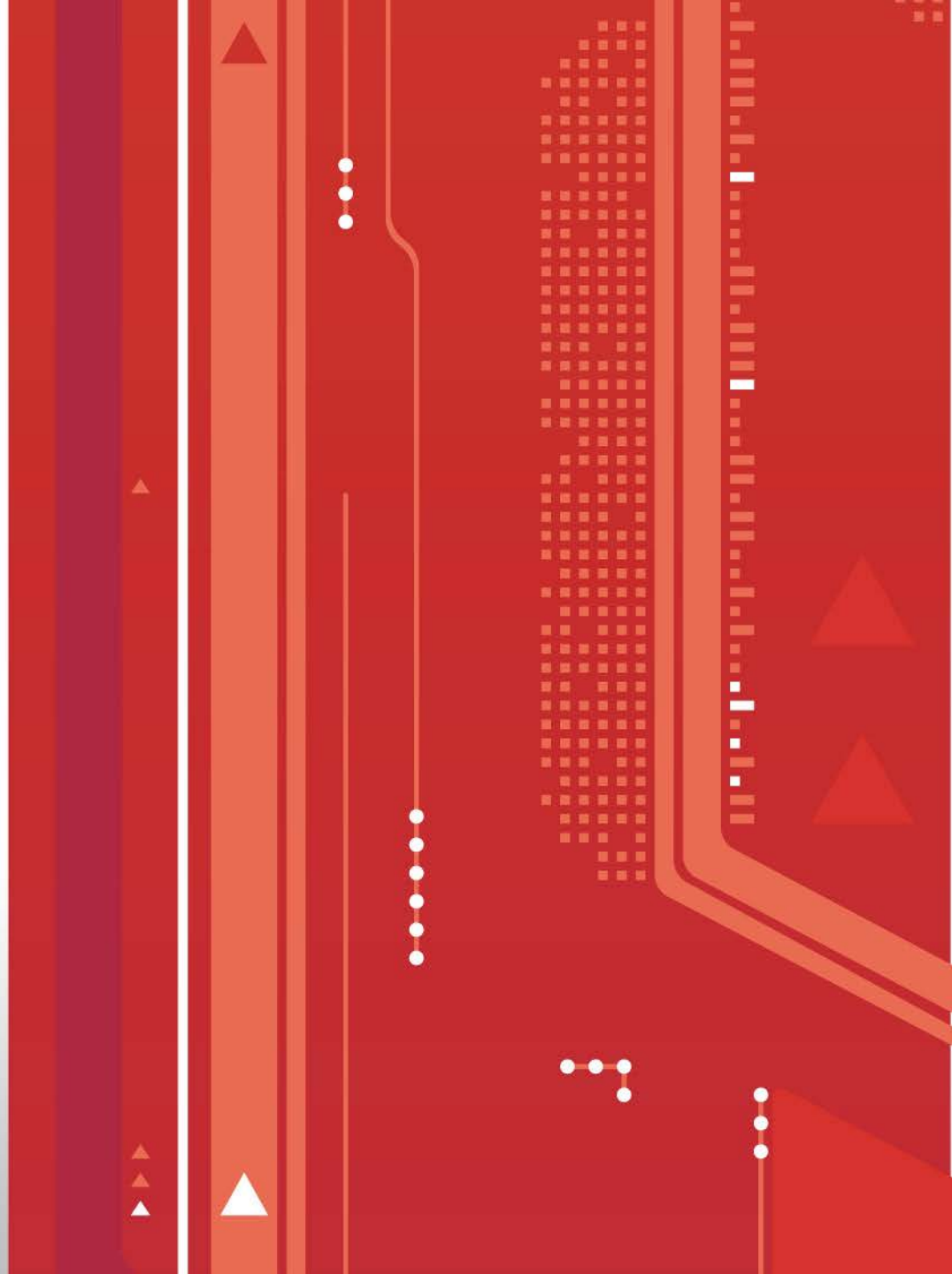
NERC CCC Update

January 29, 2018

Jennifer Flandermeyer



Helping our members
work together to
keep the lights on...
today and in the future



CCC Activities Update

- **Succession Planning and Nominations**
- **ERO Program Alignment Working Group**
- **CFR Tool Update**
- **Pre-Approved Compliance Guidance Entities**
- **Stakeholder Perception Survey**
- **February BOT CCC Approvals**
- **CCC Chartered Task Updates**

NERC CCC Meeting Schedule

- **March 20-21, 2018: Atlanta, GA (NERC offices)**
- **June 12-13, 2018: Sacramento, CA (CAISO Offices)**
- **September 18-19, 2018: Austin, Texas (Texas RE offices)**
- **December 5-6, 2018: Atlanta, GA (NERC offices)**

NERC Critical Infrastructure Protection Committee (CIPC) Report to Southwest Power Pool Regional Entity Trustees

Submitted by Eric Ervin, Chair, SPP SECWG
January 3, 2018

NERC CIPC Meeting

- The NERC CIPC held its quarterly meeting Atlanta, GA December 12-13, 2017.
 - Agenda, Presentations, and Minutes:
 - <http://www.nerc.com/comm/CIPC/Pages/AgendasHighlightsandMinutes.aspx>
 - Next NERC CIPC Meeting will be held in Jacksonville, FL March 6-7, 2018.
 - The meeting was held in conjunction with a FBI classified briefing and the IEEE Distribution Security Workshop.
- Ken McIntyre, Vice President and Director of Standards and Compliance, NERC, provided the opening remarks.
 - Began with thanks for the efforts through 2017.
 - Closer alignment with the OC and PC so that work products achieve the goal holistically.
 - Review of the strategic direction and strategy in September, including the E-ISAC. Also reflected on the emerging technologies, remote access for high-impact areas, etc.
 - Engagement across the industry is essential and must be well represented.
- David Revill and Nathan Mitchell, CIPC Vice-Chair's, provided the opening remarks.
 - Minor updates to acknowledge that security guidelines and standards implementation guidelines are key deliverables to the CIPC.
 - Added IEEE to the list of key collaborative organizations.
 - Added new non-voting member class such as government, oil and natural, etc.
 - Changed format to better to align with ERO strategic goals, appendix removed to reduce redundancy and enhance readability, and organized into six major categories: advisory panel to the NERC Board, cybersecurity risk management, physical security risk management, NERC Standards Implementation input, BES Security metrics, and CIPC training, outreach and industry communications.
- Federal Energy Regulatory Commission Agency Update
 - FERC Led Audit Observations (Report)
 - Approach is comprised of NERC CMEP and FERC audit process in addition to OER and OE FERC employees.
 - Non-public – assigned docket number but not contained within eLibrary. Staff has commenced 5 of 8 planned audits. Audited entities range in size and registered functions, compliance history, significant increase to CIP program to comply to CIPV5 as compared to CIPV3, currently on proposed Regional audit schedule. Transition from CIPV3 to CIPV5 has not been easy.

- Entity notified 120 days before onsite audit. Not utilizing RSAWs for audit record, utilizing staff internal working papers.
- General practices. FERC identified 21 lessons-learned that were common through the first five audits. See report noted above for details. Includes documentation, personnel and training, electronic security perimeters, physical security and logs, configuration management, information protection.
- Mr. Steve Herrin, Director of Operations, NERC E-ISAC, provided an E-ISAC Update
 - Long-term strategic Plan approved on 4/24/2017 and accepted by the BOT.
 - Portal still under development. Much testing underway to ensure security of the portal. Improved look-and-feel, redesign collaboration dashboard, enriched user profile self-service, improved support for user groups.
 - GridSecCon Update– Steve Herrin, Director of Operations, NERC E-ISAC
 - More than 500 attendees. Included training, over 50 speakers and panels on security, and threat briefs and utility tours.
 - GridEx Update – Bill Lawrence, Senior Director, NERC E-ISAC
 - 6,500 participants from 450 organizations. Distributed play across the US, Canada, and Mexico. 40 executive participants in the tabletop. After-action report in the works.
 - Notable cyber incidents past quarter – Steve Herrin, CRISP Manager
 - See the E-ISAC Portal for official reports: Dragonfly, supply chain risk NERC alert, targeted reconnaissance of energy companies, spear-phishing CRISP participants, TOR exit node mask, NERC-themed phishing, targeting the electricity industry.
 - Current activity reports and threat assessments indicate an increased interest in energy industry companies.
 - The activity also appears to be focused on credential harvesting through spear-phishing.
 - Notable physical incidents past quarter – Charlotte de Siebert, Principal Physical Security Analyst, NERC E-ISAC
 - Intentional vandalism, suspicious activity events, copper theft.
 - Industry whitepapers available on the E-ISAC portal.
- Scott R. Mix, Senior Grid Security Project Manager, PNNL, provided a Research Labs Update
 - PACiFiC Overview – Proactive Adaptive Cybersecurity for Control
 - PNNL Grid Cybersecurity Thematically – NIST CSF vs. Roadmap (projects include GridEx, EDS Forensics, ES-C2M2, and CRISP).
 - Many active projects in development.
 - Overview of NERC CIP Compliance Report
 - Impact rating and categorization examples, NERC terms, BES asset level determination, implementation recommendations – focused on synchrophasor cyber assets (PMUs and PDCs).
 - Report available on PNNL’s website or at www.naspi.org/node/663

NERC Operating Committee Update December 2017 Meeting

SPP Regional Entity Trustees

January 29, 2018

Jim Useldinger, South Central MCN

A regular meeting of the NERC Operating Committee (OC) was held on December 12-13, 2017 in Atlanta, GA.

Joint OC/PC Meeting Topics

- Grid Assurance Overview
- Inverter-based Resource Integration and Performance Effort
- Methods For Establishing IROLs Task Force (MEITF) Update
- Comisión Reguladora de Energía – Mexico (CRE) Overview
- Report on the FERC-NERC-Regional Entity Joint Study of Planning Restoration absent SCADA or EMS (PRASE)
- North American Transmission Forum Update
- North American Generator Forum Update
- Standards Efficiency Review

OC Meeting Highlights

- **VOTING/ACTION ITEMS**

- **Reliability Guidelines and Reference Documents – Approval, Authorizations**

- Reliability Guideline: Area Control Error Diversity Interchange (ADI) Process* – Approve – RS Chair Blalock
 - OC approved
 - Reliability Guideline: Operating Reserve Management* – Approve – RS Chair Blalock
 - OC approved based on removal of reference to the Operating Manual
 - Reliability Guideline: Inadvertent Interchange* – Approve – RS Chair Blalock
 - OC approved
 - Pseudo Tie Reference Document* – Approve – ORS Chair Devereaux
 - OC approved
 - Dynamic Tag Exclusion Management Guidelines* - Approve – ORS Chair Devereaux
 - OC approved
 - NERC ORS Gas and Electrical Operational Coordination Considerations Guideline Overview* - Approve – Peter Brandien, New England ISO

- OC approved
- Risks and Mitigation for Losing Energy Management Systems (EMS) Functions Reference Document* – Approve – EAS Chair Hamdar
 - OC approved
- Reliability Guideline: Cyber Intrusion Guide for System Operators* – Authorize posting for 45-day comment period - – ORS Chair Devereaux
 - OC approved

- **TASK FORCE UPDATES / INFORMATION ITEMS**

- **Inverter-baser Resources Performance Task Force (IRPTF)**

- (1) Working with 13 manufacturers
- (2) Sept 2017 event, working with EAS, report in January
- (3) Distribution/sub-transmission connected resources follow distribution requirements, with growing amount starting to have significant impact on BES and relay fault protection.
- (4) Complexity of modeling for accurate study work
- (5) Interconnection requirements
- (6) ERS Measures incorporation

- **Real-time Assessments Task Force (RTATF)**

The RTATF Chair presented the revised Implementation Guidance document. Revision to the guidance were completed with input from NERC Compliance Staff. The 30-minute Real-Time Assessment is the basis of the compliance document. Once approved, it will be submitted to the NERC Compliance program.

The OC approved the document.

- **Methods for the Establishment of IROls Task Force (MEITF)**

The Task Force has proposed definition changes and a framework for the standards drafting team and they will develop the final work product through the standards development process. A draft Reliability Guideline has been developed by the TF.

The OC endorsed the definitions and framework for submittal to the drafting team.

The OC approved posing the Guideline for a 45-day comment period.

- **COMMITTEE AND SUBCOMMITTEE ITEMS (in addition to voting items above)**

Essential Reliability Services Working Group (ERSWG)

The ongoing work for 2018 for the ERSWG include -

- 1) Continue the development and refinement of ERS Sufficiency Assessments.
- 2) Develop of forwarding looking (predictive) analyses of ERS
- 3) Follow up on DER recommendations.

Operating Reliability Subcommittee (ORS)

- 1) The parallel flow visualization field trial remains in progress and appears to be consistently tracking.
- 2) The new Net Actual vs Net Scheduled tool has been implemented by the Peak RC and MISO RC to improve system operations resiliency.

Resources Subcommittee (RS)

New Chair – Tom Pruitt

New Vice Chair – Sandip Sharma

- 1) The Inadvertent Working Group has conducted outreach to BA's identified with greater than absolute value 10,000 MW's of inadvertent to encourage them to draw down their balances.

Event Analysis Subcommittee (EAS)

New Chair – Rich Hydzik

New Vice Chair – Vinit Gupta

- 1) 5th Annual Monitoring and Situational Awareness Technical Conference focused on EMS quality, including modeling and real-time assessments. Presentations available at NERC website.
- 2) Webinar held for winter preparation for severe weather events.

Personnel Subcommittee (PS)

New Chair – Rocky Williamson

New Vice Chair – Leslie Sink

- 1) SOCCED was replaced with new on-line platform referred to as BrightLink.

Next Meeting

The next meeting of the Operating Committee will be on March 6-7, 2018 in Jacksonville, FL.

Meeting Minutes System Protection and Control Subcommittee

January 4, 2017 | 2:00 p.m.-3:00 p.m. Eastern

WebEx Conference Call

Membership and Position Changes

1. SPCS Vice-Chair

Jeffery Iler from American Electric Power was nominated for the currently vacant SPCS Vice-Chair position. No other nominations were put forward. Quorum was reached with the following members' approval; Mark Gutzmann, Quoc Le, Bill Crossland, Philip Winston, David Penney, Xiadong Sun, Jonathan Sykes, Bill Miller, and Michael Thompson. The nomination will now be forwarded to the Planning Committee leadership for final approval.

2. Changes in Membership

The group was informed that TRE's main member Sam Francis from Oncor Electric Delivery is planning to retire. David Penney announced that he would be looking into finding a replacement when Sam is no longer able to take part. Philip Winston also expressed that he would like to act as the SERC alternate and another representative be brought on as the main member. SERC has provided a candidate to be reviewed at a future meeting.

PRC Guidance Documents

3. PRC-023 Implementation Guidance Document

In its December meeting, the Planning Committee approved the PRC-023 Implementation Guidance document without comment.

4. PRC-024 Implementation Guidance Document

In its December meeting, the Planning Committee (PC) remanded the PRC-024 Implementation Guidance (IG) document back to the SPCS. A concern was raised that section 1.4 of the document (Background section) provided clarifying language and not providing examples which is not allowed in IG. Further comments indicated that, "If PRC-024-2 needs clarification, then a SAR should be developed and the language in the standard clarified with an opportunity for industry to comment on that language via the standards development process." With the concern raised, no PC member offered a motion to approve the IG. Rich Bauer worked with the commenter and PC Vice-Chair to offer a method to work through the challenge and according to Rich, they were in agreement. The section will be reworded, worked through

the IG team and presented to the SPCS for approval. It is likely that the section 1.4 clarifications will be directed toward examples which will then provide the clarifications. Expect more in the coming month.

5. PRC-019 Implementation Guidance Document

Volunteers were taken for the guidance document development team, with Jason Espinosa taking on the leadership role and Jack Norris acting as the NERC coordinator. Additional participants include; Aristides Martinez, Walter Campbell, Greg Kern, Hoba Abdullah, Leonardo Lima, Mark Pfeifer, David Marrero-Andino, Michael Thompson, David Penney, Steven Hataway, Talainya Loomis, and Xiaodong Sun.

6. Adjourn