



**Southwest Power Pool
REGIONAL ENTITY TRUSTEES MEETING**

July 27, 2015

Hilton KCI

Kansas City, Missouri

A G E N D A

8:00 a.m. – 3:00 p.m.

1. Call to Order/Introductions John Meyer
2. Antitrust Guidelines John Meyer
3. Approval of Meeting Minutes – June 15, 2015 John Meyer
4. Long Term Reliability AssessmentLanny Nickell
Action Requested: SPP RE Trustees accept LTRA
5. State of Reliability Report..... Mike Hughes
6. Standard Drafting Team Travel ReimbursementRon Ciesiel
7. SPP Bylaws Updates.Ron Ciesiel
8. 2Q Events Report and Facility Ratings Alert Update.....Ron Ciesiel
9. NERC CIPC Report.....Eric Ervin
10. CIP Update.....Shon Austin
11. Enforcement Report.....Joe Gertsch
12. General Manager's & Compliance ReportRon Ciesiel
13. Outreach Activity Emily Pennel
14. Financial Report/Year-to-Date Financial StatementDebbie Currie
15. Staff Goals and MetricsRon Ciesiel
16. NERC Committee Representative Written Reports - Comments or Questions
 - 16a. Planning Committee ReportNoman Williams
 - 16b. Compliance and Certification Committee Report.....Jennifer Flandermeyer
 - 16c. NERC Operating Committee Report Jim Usledinger
 - 16d. System Protection and Control Report Open



17. New Action Items Emily Pennel

18. Future Meetings John Meyer

- October 26, 2015 - Little Rock, AR
- January 25, 2016 - Oklahoma City, OK
- April 25, 2016 - Santa Fe, NM
- July 25, 2016 - Rapid City, SD
- October 24, 2016 - Little Rock, AR

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.



Southwest Power Pool
REGIONAL ENTITY TRUSTEES MEETING

June 15, 2015

Teleconference

A G E N D A

9:00 a.m. – 11:00 a.m.

Background Materials

- 1. Call to Order/Introductions ... John Meyer
2. Antitrust Guidelines ... John Meyer
3. Approval of Meeting Minutes - April 27, 2015 ... John Meyer
4. SPP RE 2016 Business Plan & Budget ... Debbie Currie

Direct expenses decreased by 8% and indirect expenses decreased by 25%. Two large expenses were removed from the budget, including \$250,000 for an Engineering Data Validation Tool that will be completed by the end of the year and hearing costs. An additional \$160,000 was removed from the SPP, Inc. overhead charge for a legacy SPP retirement plan that applies to only a few SPP RE employees.

After the June 15 approval of the budget, it will be held open until June 30 for any penalty payments received prior to July 1, although none are expected. The budget's Reliability Assessment and Performance Analysis narrative will be updated with additional information on preparation of the seasonal and long-term reliability assessments. The budget will be submitted to NERC in July 2015 and send to FERC in August.

The Trustees approved the SPP RE 2016 Business Plan & Budget, subject to adjustment for violation penalty payments received prior to July 1, 2015, plus other non-substantive changes required for filing with NERC.

- 5. Regional Delegation Agreement (RDA) Update ... Debbie Currie
NERC made some changes to the pro forma RDA, including removing the SPP Bylaws and regional standard development procedure. The revised document designates the SPP RE Trustees Chairman as an alternative to the SPP RE General Manager for authorizing funds transfer. The structure of the SPP, Inc. overhead charge was also changed.

Initially, NERC removed the pro forma RDA's automatic renewal clause for SPP RE, due to SPP RE's structure with SPP, Inc. However, SPP RE now has the same renewal clause as all other regions.



he Trustees endorsed the RDA, and the SPP RE General Manager and SPP, Inc. President will execute the RDA on June 16. The other REs will approve their RDAs within the next week and NERC will file the RDAs with FERC no later than July 1.

6. **New Action Items** John Meyer

- The SPP RE General Manager will work with other RE Regional Managers in future budget cycles to define the phrase “shared staff”. Definition is needed because some REs attach a different meaning to the term.
- The SPP RE General Manager and SPP RE staff will develop a white paper that addresses some of the known concerns with the Regional Delegation Agreement. Among other items, the white paper should address cost-savings to the Regional Entity for using SPP shared staff/facilities.
- Agenda Item for July: **SPP Bylaws (Regional Entity Trustee Nomination, Election and Compensation)**. The SPP bylaws allow SPP members to nominate and vote for Regional Entity Trustees. SPP’s bylaws also allow SPP members to approve Regional Entity Trustee compensation. This topic should be discussed because the SPP RTO footprint is becoming even more divergent from the SPP RE footprint; this might implicate “independence” issues.
- Agenda Item for July: **Expansion of Regional Entity Trustees**. SPP’s bylaws currently only allow for three persons.

7. **Other Items**John Meyer

- Trustees will send signed Standards of Conduct to Sheila Scott to file.
- John Meyer will hire an attorney to be available to the SPP RE Trustees in case a legal opinion is needed.

8. **Upcoming Meetings** John Meyer

July 27, 2015 - Kansas City
October 26, 2015 - Little Rock

John Meyer adjoined the meeting at approximately 10:00 a.m.

Respectfully,

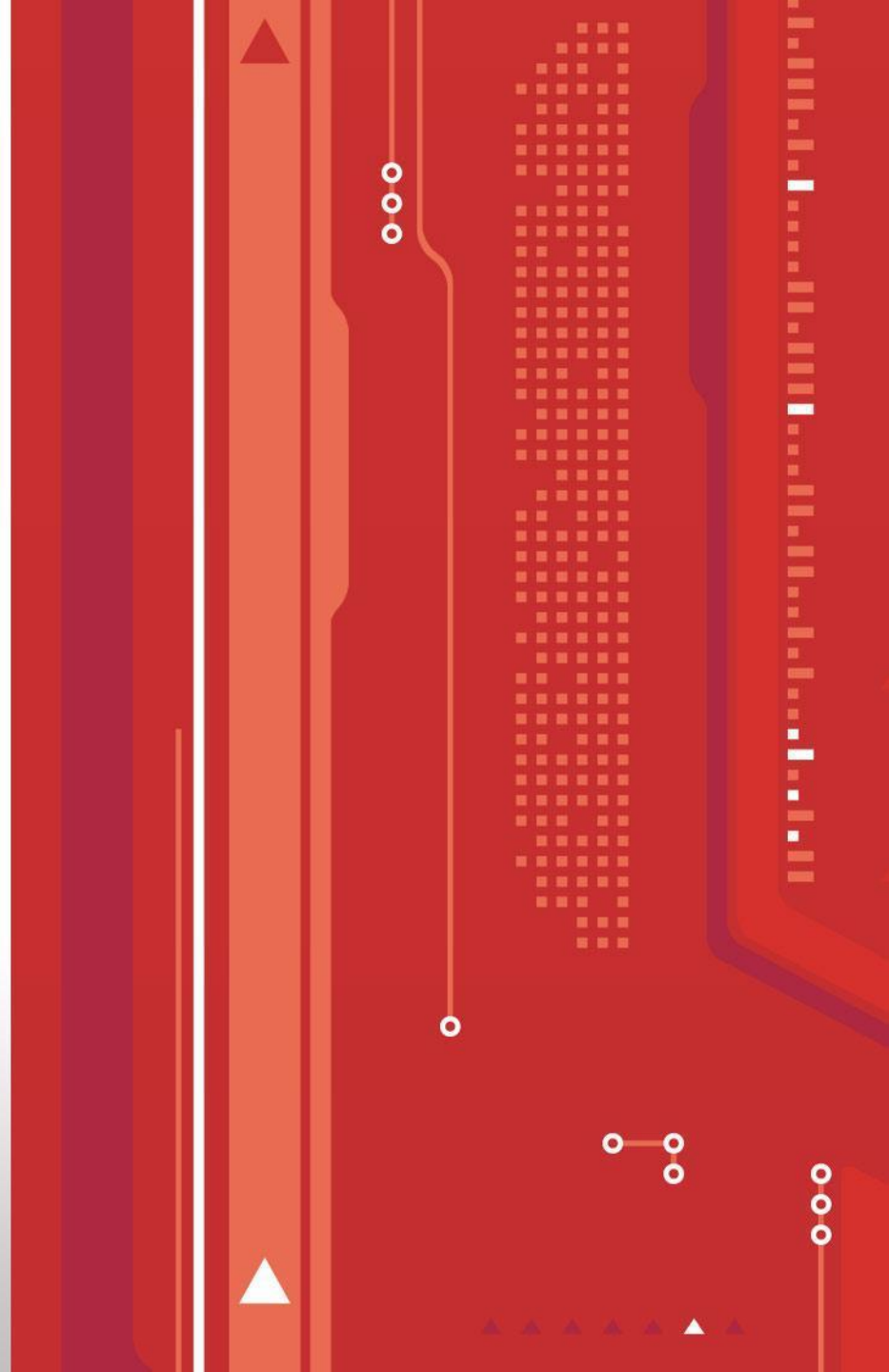
Emily Pennel
SPP RE Trustees Secretary



ATTENDEES:

Dave Christiano, SPP RE Trustee
John Meyer, SPP RE Trustee
Gerry Burrows, SPP RE Trustee
Ron Ciesiel, SPP RE General Manager
Christopher Matos, Golden Spread
Jennifer Flandermeyer, KCP&L
Debbie Currie, SPP RE
Kim Van Brimer, SPP RTO
Leesa Oakes, SPP RE
Steven Keller, SPP RE
Andrea Doucette, SPP RE

2015 Long-Term Reliability Assessment



Assessment Staff

- **Chris Haley, Engineer Associate III (RTO)**
 - chaley@spp.org
 - 501-614-3583
- **Alan Wahlstrom, Lead Engineer (SPP RE)**

Long Term Reliability Assessment

- **Widely-read continent-wide publication**
- **Projected 10-year long-term outlook (2015-2025)**
- **Primary objectives:**
 - **Qualitative outlook of region's reliability**
 - **Make recommendations for mitigations/actions as needed**

Long Term Reliability Assessment

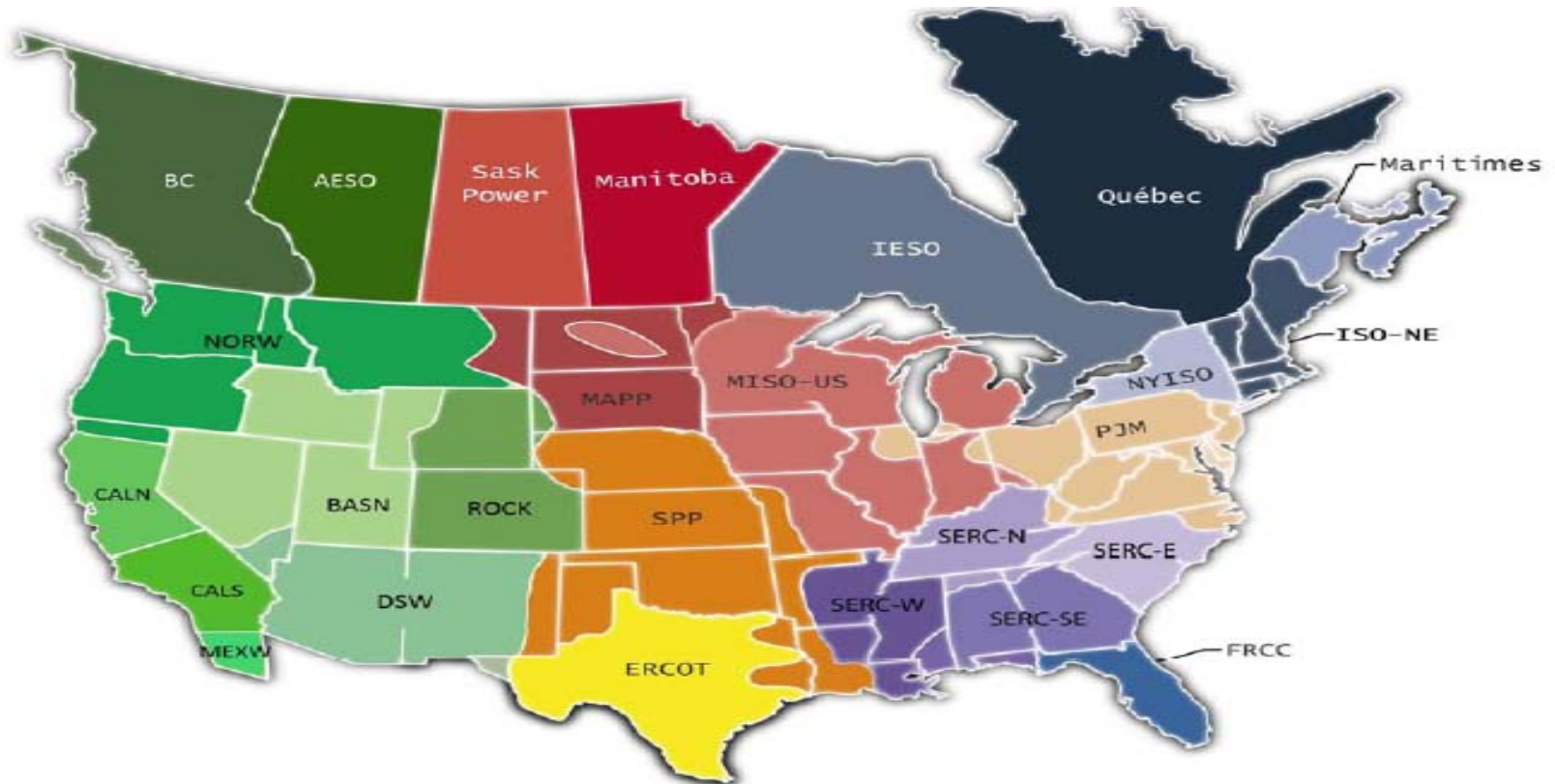
- **Provides high-level overview for SPP Planning Coordinator assessment area**
 - Demand growth
 - Capacity adequacy
 - Operational reliability

Assessment Process

- **Created with data/information submitted by SPP Reporting Entities**
- **SPP staff validates and cross-checks data to verify consistency**
- **SPP staff and stakeholders have the opportunity to provide input**
- **Assessment undergoes peer review process at NERC prior to finalization**

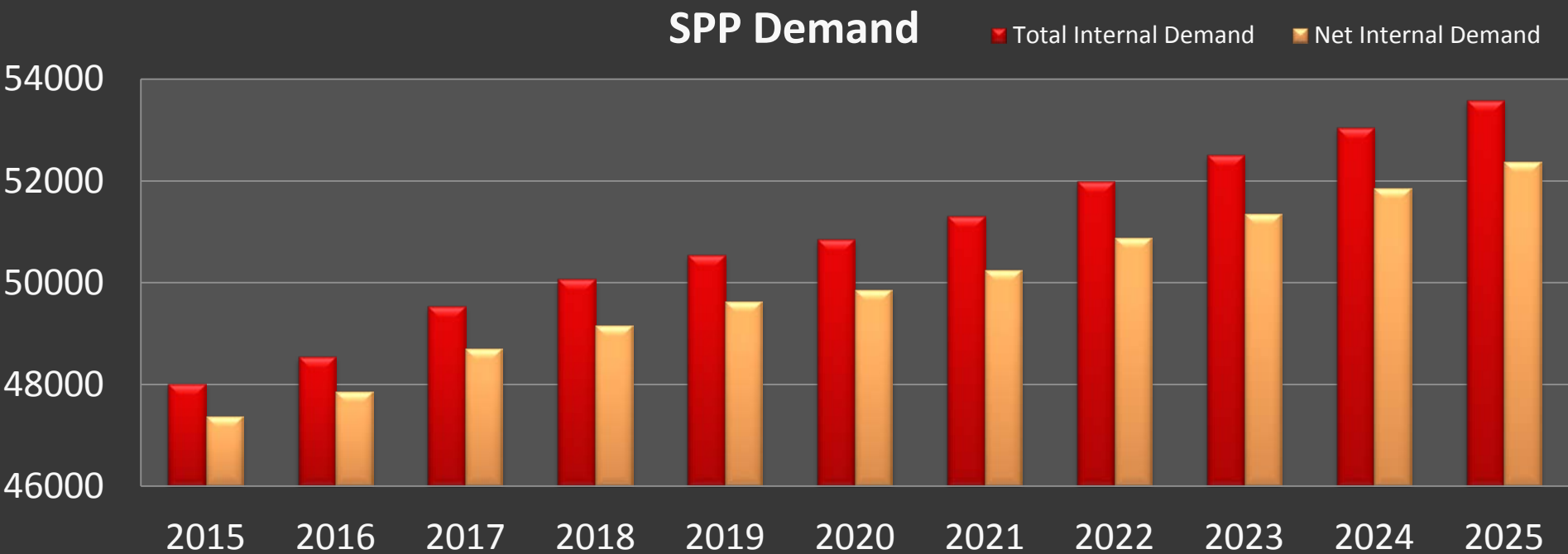
Assessment Area

The Long Term Reliability Assessment did not include the Integrated System (IS) due to the timing of integrating the Planning Coordinator (PC) functions. The IS becomes a PC member October 2015; SPP plans to include the IS in the 2015 NERC winter assessment



Non-Coincident Peak Demand

- ~48,000 MW projected 2015 Total Internal Demand
 - ~47,375 MW projected 2015 Net Internal Demand
- ~53,590 MW projected 2025 Total Internal Demand
 - ~52,380 MW projected 2025 Net Internal Demand
- Modest load growth projected over next 10 years



Demand Side Management

- **Demand Response (DR) consists of Interruptible, Critical Peak Pricing with Load Control and Direct Control Load Management**
 - ~ 640 MW in 2015
 - ~ 1,240 MW in 2025
- **Energy Efficiency**
 - ~ 333 MW in 2015
 - ~ 853 MW in 2025
- **Behind the Meter Generation**
 - ~ 182 MW in 2015
 - ~ 281 MW in 2025

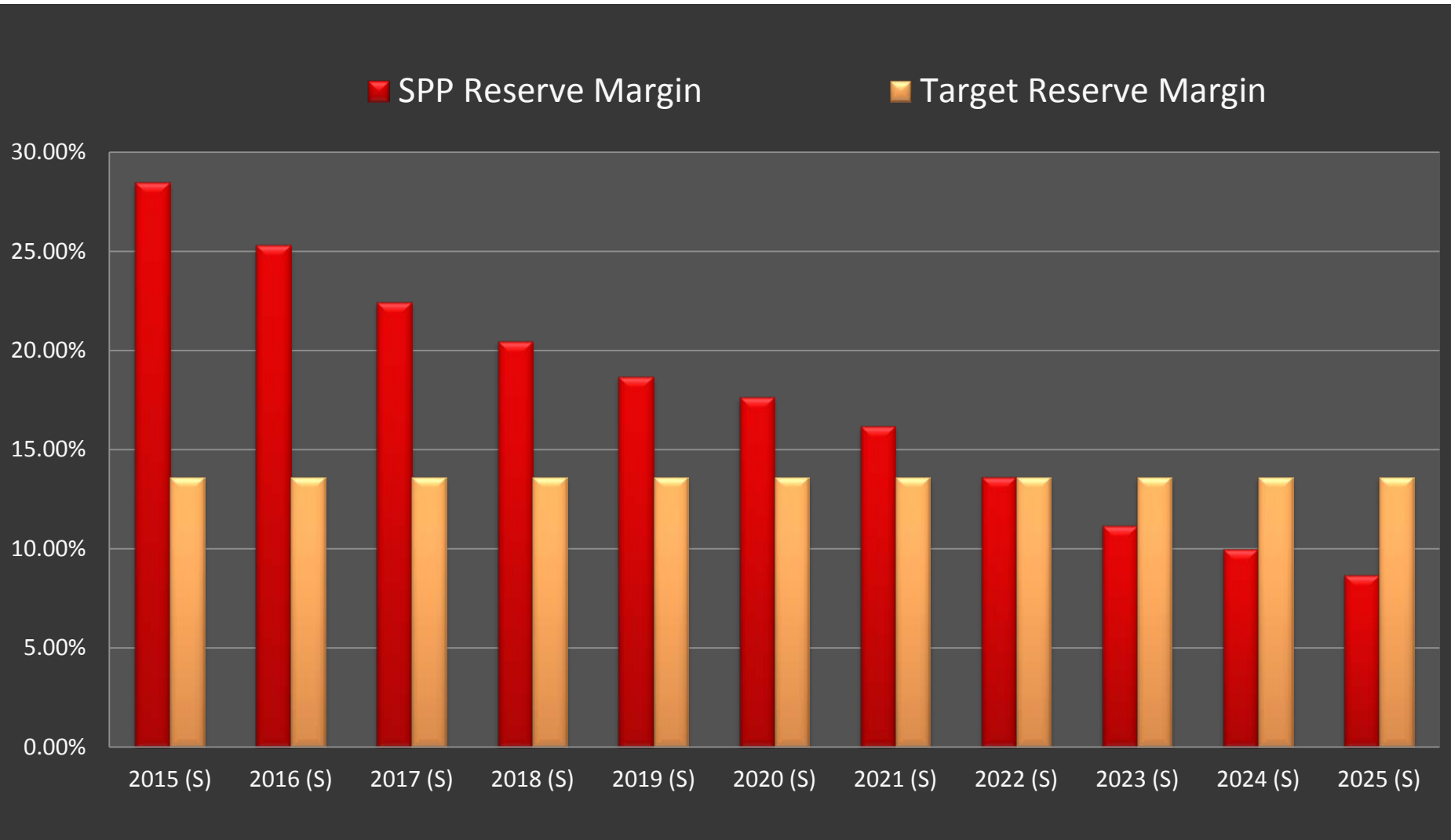
Generation

- ~ 3,000 MW confirmed nameplate generation expected to be retired 2015-2025
- ~ 1,650 MW unconfirmed nameplate generation could potentially be retired in the 2015-2025 timeframe
 - Is not included in the Available and Anticipated reserve margin calculations
- ~ 2,100 MW of new nameplate “Tier 1” generation projected coming into service 2015-2025
 - Tier 1 generation is new generation that is either under construction or has a signed generation interconnection agreement

Available Capacity

- **~60,900 MWs Existing Certain Capacity in 2015**
- **~56,900 MWs Existing Certain Capacity in 2025**
 - **Net Capability**
 - **Includes Existing Certain generation available**
 - **Reserve margin based on expected Existing Certain generation and Net Firm Transfers**
 - **Decrease in capacity due to retirements**

Available Capacity Reserve Margin



Calculated using the Net Internal Demand

Anticipated Capacity

- **~61,120 MWs Anticipated Capacity in 2015**
- **~59,020 MWs Anticipated Capacity in 2025**
 - **Includes Existing Certain and Planned “Tier 1” anticipated capacity**
 - **Reserve margin based on expected Existing Certain, Net Firm Transfers, and Planned “Tier 1” anticipated capacity**

Anticipated Capacity Reserve Margin



Calculated using the Net Internal Demand

Reserve Margins

- **Reserve margins are adequate until 2024**
 - SPP members required to maintain **12% capacity margin, which translates to a 13.6% reserve margin**
 - **Forecasted anticipated reserve margin is ~28% in 2015, decreasing to ~12.6% in 2025**
 - There are several Entities projected to fall below the approved reserve margin requirements during the 5 year near term
- **Reliability issues not expected**

Capacity Margin Task Force

- **SPP has initiated the formation of a Capacity Margin Task Force (CMTF), which is comprised of SPP Members and Staff**
- **The primary task of the CMTF is to improve the SPP Capacity Margin construct in order to meet Member's expectations while maintaining reliability**
- **The duration of the CMTF is expected through July 2016**

Transmission

- **~4,000 miles 100+ kV expected to be constructed over 10-year assessment period**
- **Particular emphasis on western part of grid due to influx of renewable generation and localized load growth**



Long-Term Reliability Issues

- **Wind will continue to cause operational challenges**
 - During off-peak periods, there may be higher wind output with not enough transmission to handle the increased output
 - 2015 ITP 10 study is assessing members' renewable portfolio standards and modeling the SPP Assessment Area to account for these mandates and goals
- **Coal delivery delays due to railroad congestion could potentially reduce fuel supplies**
- **Drought conditions have been eased due to the amount of rain the SPP region has received this past winter and spring**

Emerging Reliability Issues

- **Currently managing reliability concerns regarding exchange of energy between MISO Central/North and MISO South**
 - **In April 2015 the Operations Reliability Coordination Agreement (ORCA) was increased from 2,000 to 3,000 MW. This agreement is set to expire in April 2016**

NERC 2015 State of Reliability Report to the SPP RE Trustees

July 27, 2015

Mike Hughes
Lead Compliance Engineer
mhughes.re@spp.org
501.688.1712



State of Reliability 2015

May 2015

RELIABILITY | ACCOUNTABILITY



3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

Stated Goals

- Quantify risk and performance
- Highlight areas for improvement
- Measure success in controlling risks to reliability
- Report

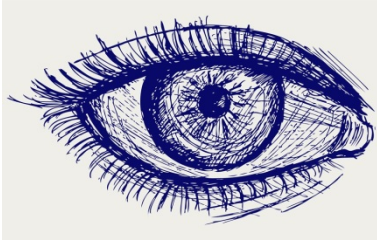


State of Reliability Report

- Provides an objective view of reliability performance
- Identifies trends and risks to reliability
- Serves as risk-informed input to:
 - Prioritize steps to manage risk
 - Standards projects



Look back



Look Forward



Bulk Power System (BPS)

Normal Conditions

N-1 Contingency

Disturbances

Outages

Adequate Level of Reliability (ALR)

- Definition by the Adequate Level of Reliability Task Force ([ALRTF](#)) in 2013 – information filing only
- Five performance and two assessment objectives
- Some key findings in the State of Reliability (SOR) Report mirror ALR objectives; others closely align
- “The analysis of SRI (severity risk index) in Chapter 3 and the metrics in Chapter 4 demonstrate that BPS reliability remained within the ALR performance objectives.”
- [ALR Definition](#)

NERC Severity Risk Index (SRI)

- Generation
- Transmission
- Load Loss
- [NERC SRI Link](#)

2014 Top Ten SRI Days

Table 3.1: 2014 Top Ten SRI days

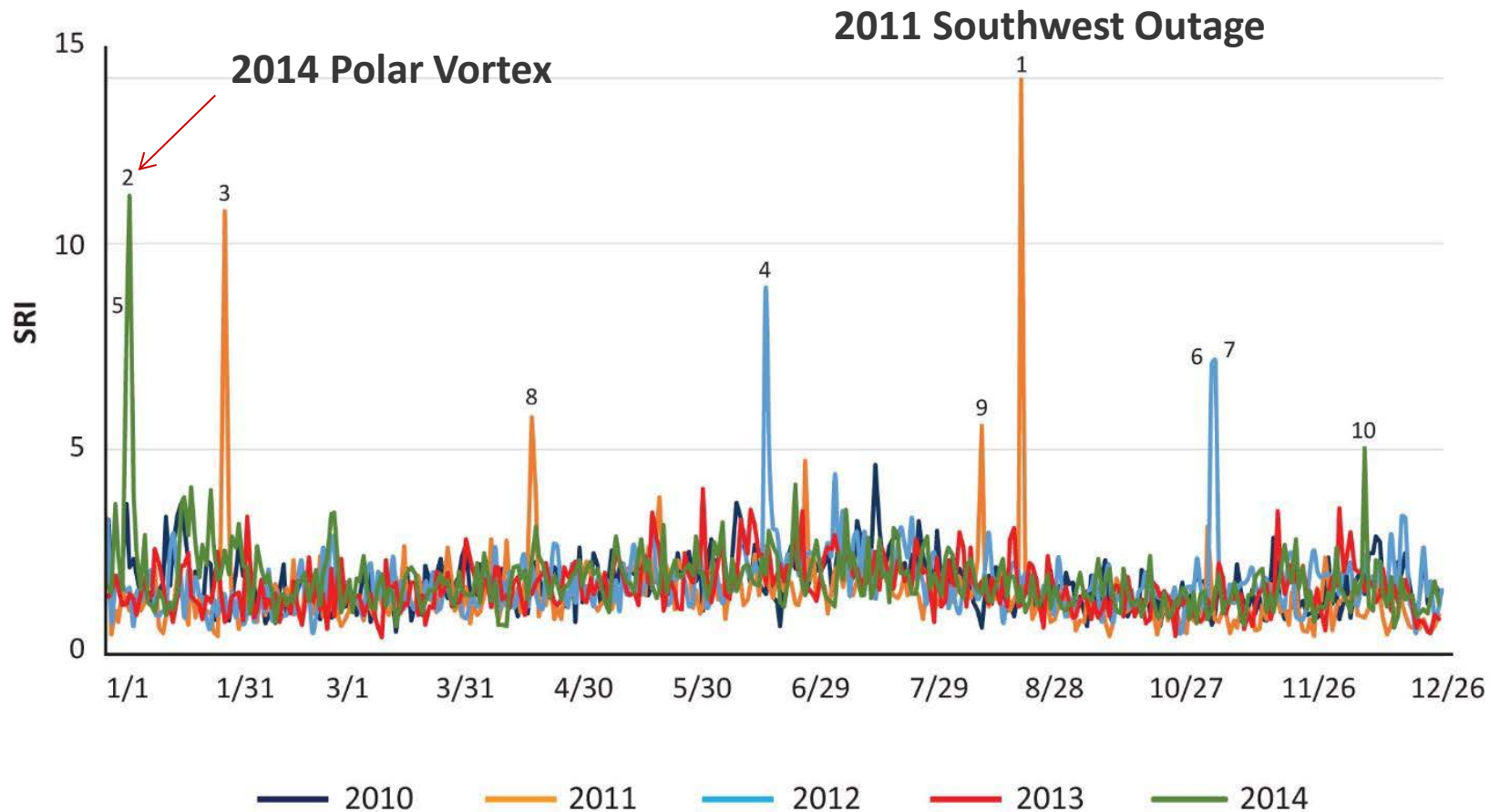
Date	NERC SRI and Weighted Components 2015				G/T/L	Weather Influenced (Verified by OE-417)?	Rank	Event Type	Regions
	SRI	Weighted Generation	Weighted Transmission	Weighted Load Loss					
1/7/2014	11.1	9.8	0.9	0.4		✓	1	Polar Vortex	RF, TRE, SERC
1/6/2014	8.0	6.7	1.2	0.2		✓	2	Polar Vortex	RF, TRE, SERC
12/11/2014	5.0	1.1	0.4	3.6		✓	3	Extreme Windstorm	WECC
7/8/2014	4.2	1.6	0.5	2.0		✓	4	Thunderstorms	RF, NPCC
1/24/2014	4.1	3.1	0.9	0.1		✓	5	Winterstorm	RF, NPCC
1/29/2014	4.0	2.9	0.9	0.2			6	Winterstorm	RF, NPCC
1/22/2014	3.9	3.4	0.4	0.0		✓	7	Winterstorm	RF, NPCC
1/8/2014	3.8	3.4	0.2	0.2		✓	8	Polar Vortex	RF, TRE, SERC
1/21/2014	3.7	3.0	0.5	0.2		✓	9	Winterstorm	RF, NPCC
1/3/2014	3.7	3.4	0.2	0.1		✓	10	Polar Vortex	RF, TRE SERC

Highest SRI Days Since 2010

Table 3.2: Top-10 SRI Days (2010–2014)

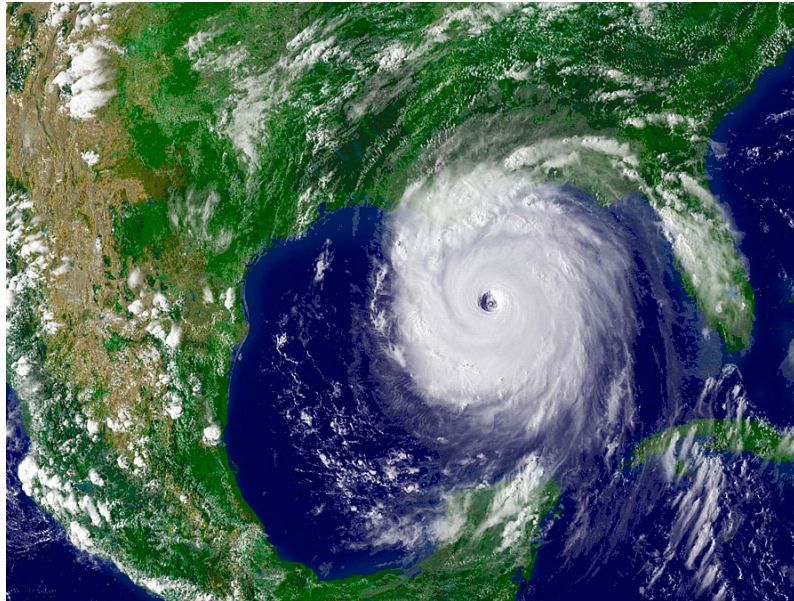
Event Rank as Indicated in chart above	Date	Event Ranking	SRI	Event Type
1	9/8/2011	1	14.0	Southwest Blackout
2	1/7/2014	2	11.1	Polar Vortex
3	2/2/2011	3	10.8	Cold Weather Event
4	6/29/2012	4	8.9	Thunderstorm Derecho
5	1/6/2014	5	8.0	Polar Vortex
6	10/30/2012	6	7.2	Hurricane Sandy
7	10/29/2012	7	7.0	Hurricane Sandy
8	4/27/2011	8	5.8	Tornadoes, Severe Storm
9	8/28/2011	9	5.6	Hurricane Irene
10	12/11/2014	10	5.0	Extreme Windstorm

Daily Severity Risk Index Graph



**[2003 Blackout 70+ SRI]
[No days above 5.0 SRI in 2013]**

Key Finding 1: Weather Continues to Stress BPS Reliability




Hurricane Katrina
August 28, 2005

Recommendation: NERC and industry should develop metrics that provide insight into weather impacts on BPS performance, especially during load-loss events

Key Finding 2: No Load Loss Due to Cyber or Physical Security Events



- No Reportable Cyber Security Incidents or physical security reportable events resulted in loss of load on the BPS in 2014
- The NERC Performance Analysis Subcommittee (PAS) collaborated with the BES Security Metrics Working Group (BESSMWG) to develop security performance metrics
- Five new metrics - Chapter 9



BES Security Metric 2: Reportable Physical Security Events

Based on data reported by registered entities as required by Reliability Standard EOP-004-2 (Event Reporting)

...to NERC's Bulk Power System Awareness group

...analyzed by NERC's Electricity Sector Information Sharing and Analysis Center (ES-ISAC).

BES Security Metric 2: Reportable Physical Security Events

Table 9.2: Reportable Physical Security Events

Metric	2014				2015				2016			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Total number of reportable events as a result of physical security threats to a Facility or BES control center	47											
Total number of reportable events that caused physical damage or destruction to a Facility	9											
Total number of reportable events as a result of physical security threats to a Facility or BES control center, or that caused physical damage or destruction to a Facility, that resulted in a loss of load	0											

**CIP-014-1 (October 2015)
Physical Security [TO]**



**CIP Version 5 (April 2016)
(Low Impact April 2017)
Cyber Security Standard**



Key Finding 3: Decline of Average Transmission Outage Severity



- **Second year of decline, but misoperations (addressed in Key Finding #6) still a key factor**
- **Failed AC substation equipment remains a contributor to outages**
- **Recommendations for evaluation of bus configuration and consistent collection of AC substation failure data**

Key Finding 4: Significant Decrease in Loss of Load From Unplanned Transmission Outages

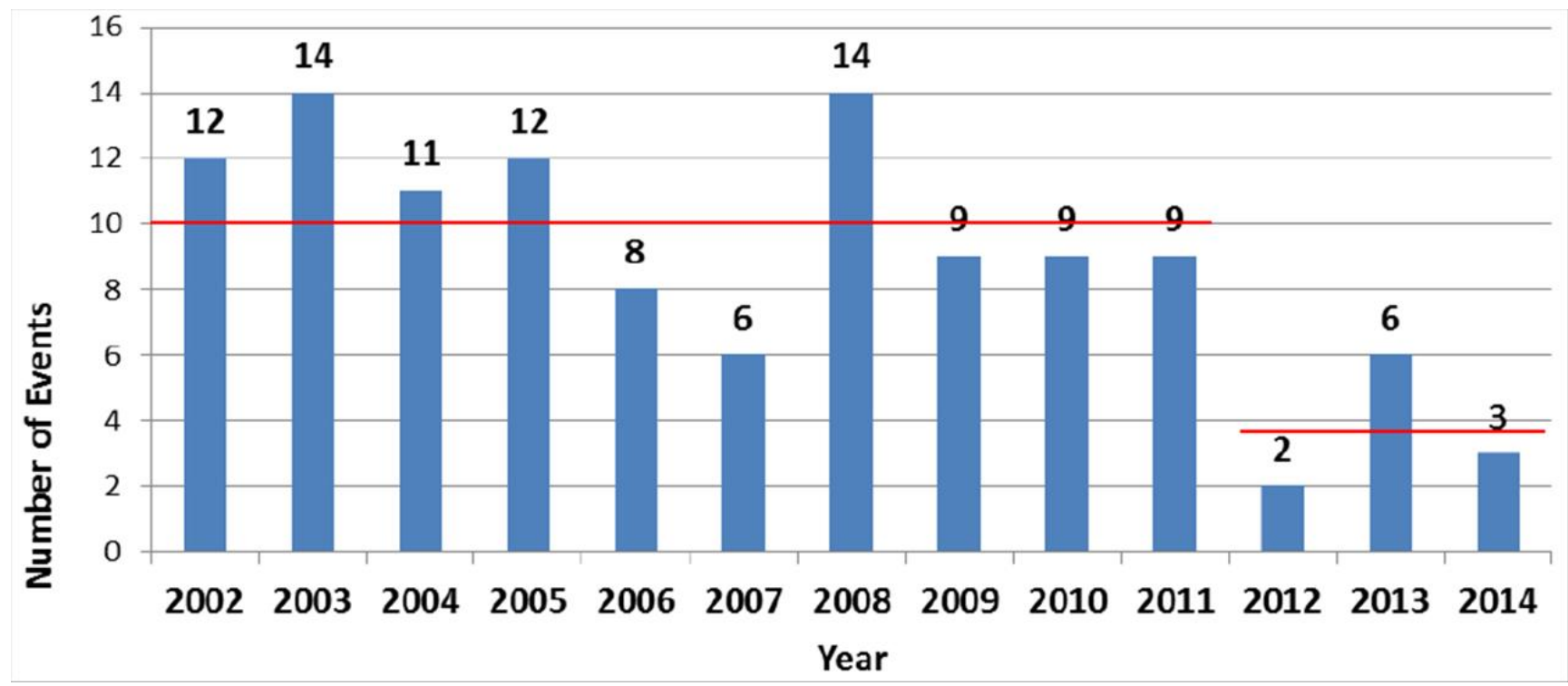


(Success Story)

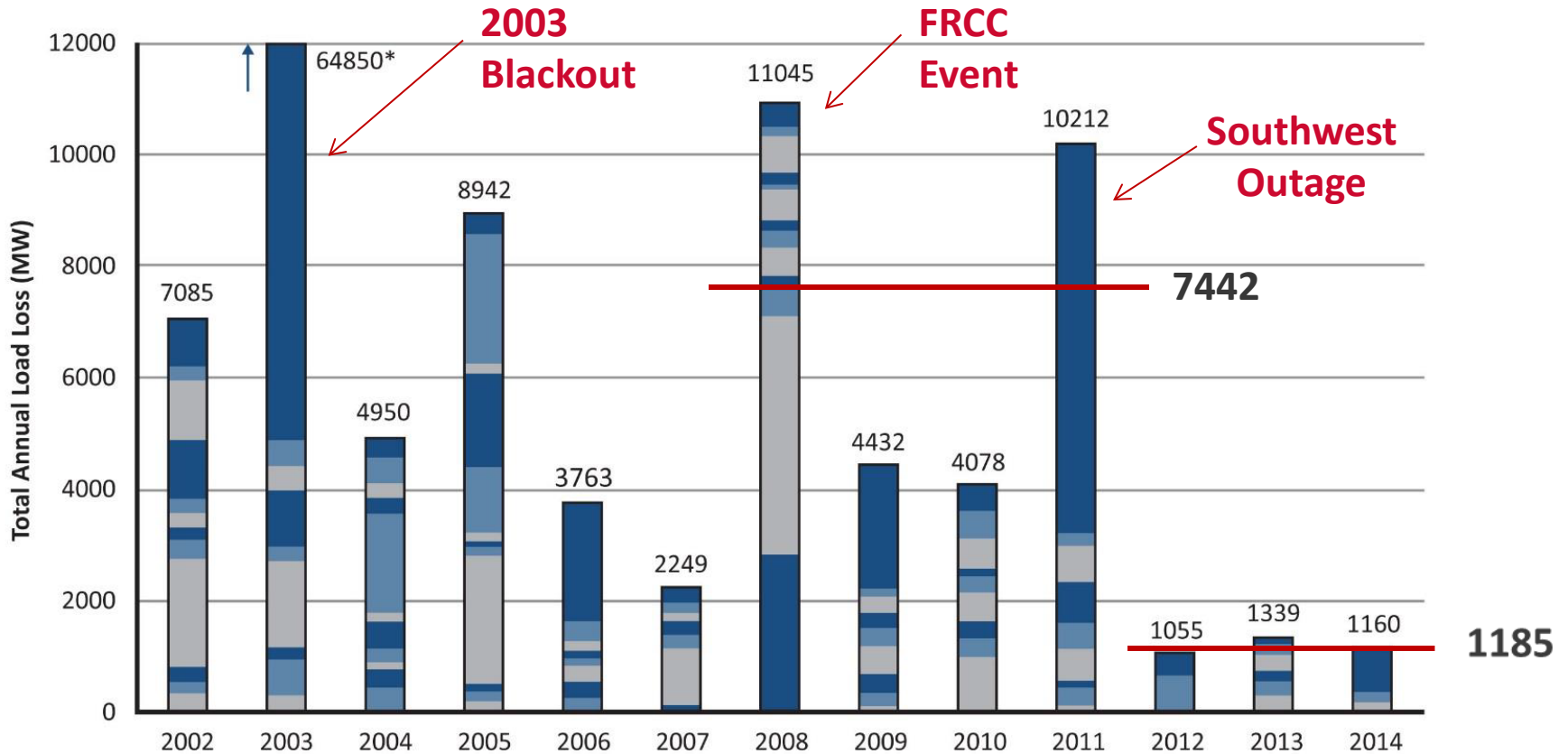
- TOP-003-1 (October 2011) – Planned Outage Coordination [GO; TO; BA; RC]
- FAC-014-2 (April 2009) – Establish and Communicate System Operating Limits [RC; PA; TP; TO]

Loss of Load Events From Unplanned Transmission Outages

Metric M-2; Chapter 4



Annual Load Loss from Disturbances (MW)



Each band of color represents a different event.

*Vertical axis scale has been reduced due to large value of 2003 NE blackout event.

Key Finding 5: Stable Frequency Response Trend



- No reportable events where frequency response cited as causal factor for initiating or sustaining an event
- NERC [Alert](#) February 5, 2015 to review generator governor dead bands and droop settings to improve frequency response
- BAL-003-1 (April 2015) – Frequency Response [BA]; Interconnection Frequency Response Obligation (IFRO)
- BAL-001-2 (July 2016) – Real Power Balancing Control Performance [BA]
- Balancing Area ACE Limit (BAAL)

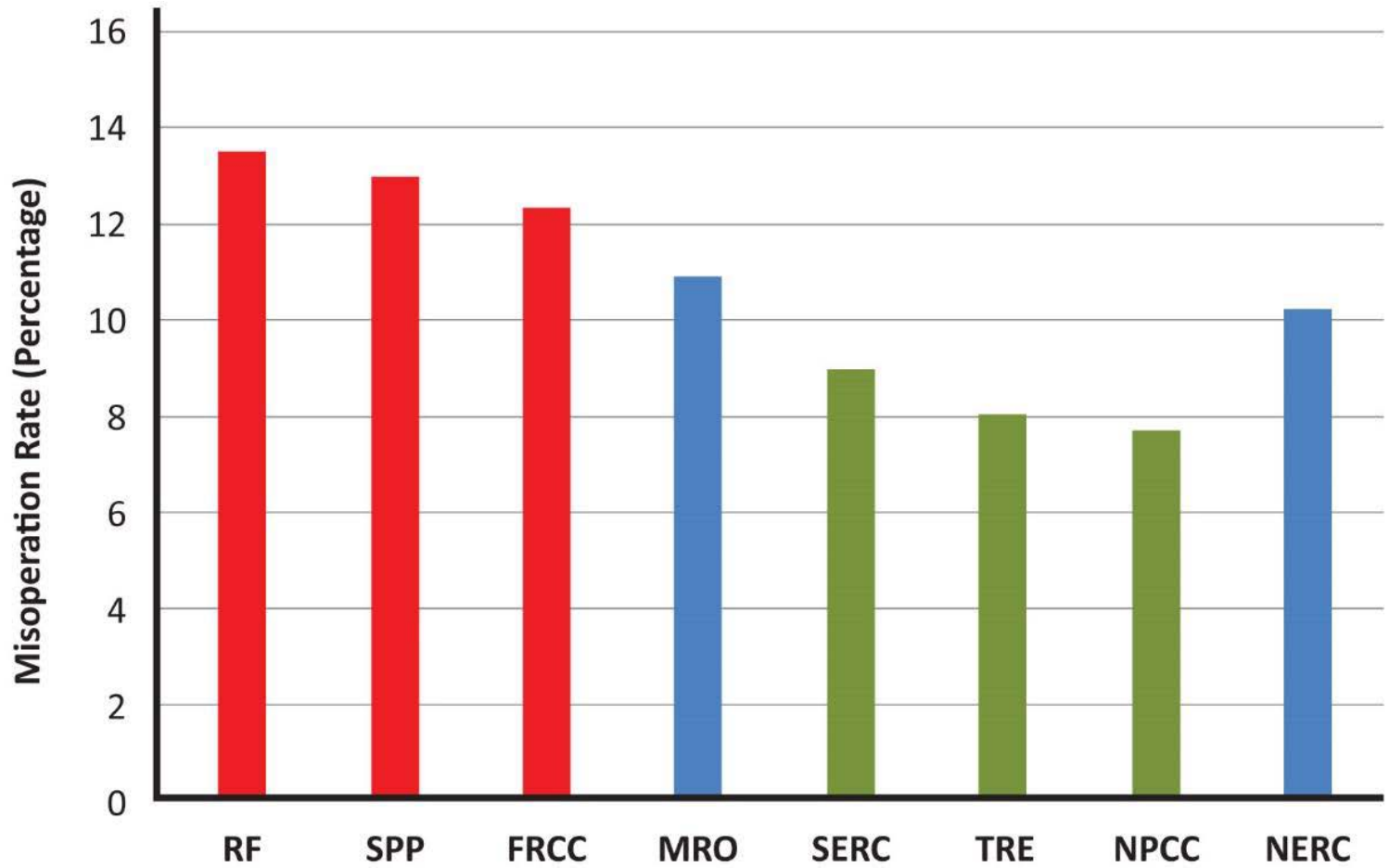
Key Finding 6: Protection System Misoperations Trending Lower



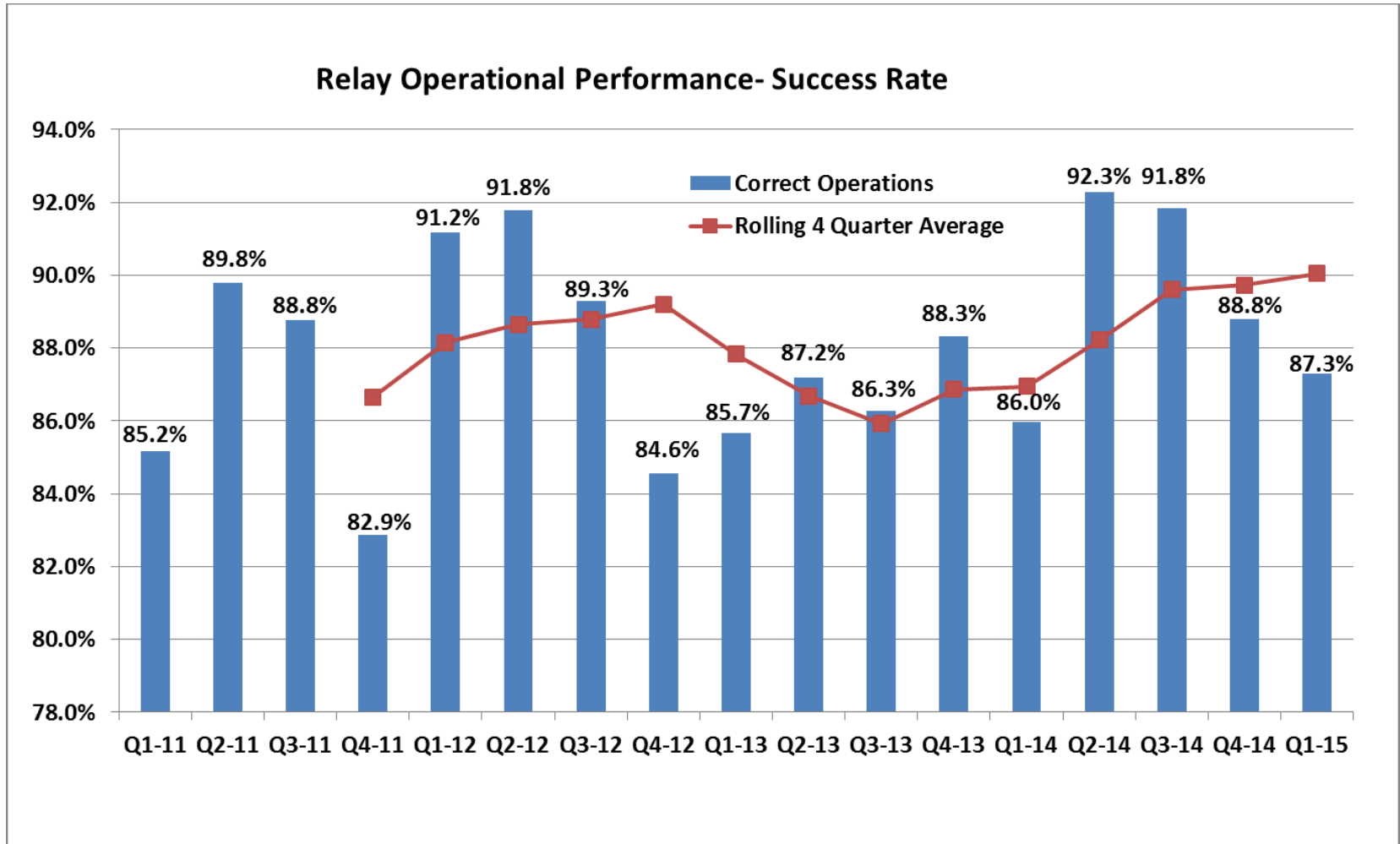
- In 68% of transmission-related events, a misoperation initiated the event or caused it to be more severe
- [SPP Systems Protection Control Working Group \(SPCWG\) Whitepaper on Relay Communications Misoperations](#)
- [NERC Protection System Misoperations Task Force \(PSMTF\)](#)
- See page 11 of SOR for list of Recommendations
- Regional misoperations data follows

Misoperation Rate by Region

Q4 2012 – Q3 2014



SPP RE Misoperation Report as of Q1-15



Key Finding 7: Use of Energy Emergency Alert Level 3 Continues to Decline



- Four Energy Emergency Alert Level 3 (EEA3) events
- Fewer than any other year
- One event resulted in load shed – polar vortex
- EOP-002-3.1 (2012) – Capacity and Energy Emergencies [BA; RC; LSE]
- Events analysis process – root cause identification and lessons learned
- [Lessons Learned](#)



Mike Hughes
Lead Compliance Engineer
501.688.1712
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9.7 Regional Entity Trustees

9.7.1 Functions and Duties of the Regional Entity Trustees

The Regional Entity Trustees shall at all times act in the best interests of SPP's role as the SPP Regional Entity in its management, control, and direction of the general business of the Regional Entity functions. In reaching any decision and in considering the recommendations of an appropriate entity, the Regional Entity Trustees shall abide by the principles in these Bylaws. Its duties shall include, but are not limited to oversight of the following:

- (a) Select, oversee and review the performance of the SPP RE General Manager in carrying out the statutory functions and duties as defined in the Delegation Agreement between ERO and SPP;
- (b) Approve the annual RE business plan and budget;
- (c) Perform function assigned by the SPP Compliance Monitoring and Enforcement Program;
- (d) Track and review Regional Standards from MOPC for submission to the ERO and FERC for approval and implementation.
- (e) Complete a self-assessment annually to determine how effectively the Regional Entity Trustees are meeting their responsibilities; and
- (f) Provide an annual report to the Board of Directors regarding the effectiveness of the Regional Entity function and processes.

9.7.2 Composition and Qualifications

9.7.2.1 Composition

The Regional Entity Trustees shall consist of up to four (4) persons, but no less than three (3) persons. The trustees shall be independent of the SPP Board of Directors, any Member, industry stakeholder, or SPP organizational group. Regional Entity Trustees do not serve as members of the SPP Board of Directors. A trustee shall not be limited in the number of terms he/she may serve.

9.7.2.2 Qualifications

Regional Entity Trustees shall have relevant senior management expertise and experience in the reliable operation of the bulk electric transmission system in North America.

9.7.2.3 Conflicts of Interest

Regional Entity Trustees shall not be a director, officer, or employee of, and shall have no direct business relationship, financial interest in, or other affiliation with, a Member, a customer of services provided by SPP, or a Registered Entity in the SPP footprint. Trustees may invest in accordance with the SPP Standards of Conduct. Participation in a pension plan of a Member, customer, or Registered Entity in the SPP footprint shall not be deemed to be a direct financial benefit if the Member's, customer's, or Registered Entity's financial performance has no material effect on such pension plan.

9.7.3 Term and Election

Regional Entity Trustees shall be elected at the meeting of Members to a three-year term commencing upon election and continuing until his/her duly elected successor takes office. The election process shall be as follows:

- (a) At least 90 calendar days prior to the meeting of Members when election of a new trustee is required, the Corporate Governance Committee shall commence the process to nominate persons for the position to be elected;
- (b) At least 45 calendar days prior to the meeting of Members, the Corporate Governance Committee shall determine the person it nominates for election as a trustee, specifying the nominee for any vacancy to be filled. The Corporate Secretary shall prepare the ballot accordingly, leaving space for additional names, and shall deliver same to Members at least 30 calendar days prior to the meeting of Members;
- (c) For purposes of electing or removing trustees only, only Members that are Registered Entities in the SPP Regional Entity footprint shall be considered a Member, and Members with Affiliate Relationships shall be considered a single Member;
- (d) Any additional nominee(s) may be added to the ballot if a petition is received by the Corporate Secretary at least 15 calendar days prior to the

meeting of Members and evidencing support of at least 20 percent of the existing Members; and

- (e) 1) If only one candidate is nominated for a seat, each Member shall be entitled to cast a vote for or against the nominee. The votes will be calculated in accordance with Section 3.9 Voting of these Bylaws, which requires a super majority. In the event a trustee position is not filled the Corporate Governance Committee will determine a new nominee for recommendation for election by the Members at a special meeting of Members to be held but no later than the next regular Board of Directors/Members Committee meeting;
- 2) If multiple candidates are nominated for a seat, each Member shall be entitled to cast a vote for only one nominee, but may vote against each candidate. The votes will be calculated in accordance with Section 3.9 Voting of these Bylaws, with the exception that a simple majority of votes cast will determine which nominee is elected. In the event a trustee position is not filled, the Corporate Governance Committee will determine a new nominee for recommendation for election by the Members at a special meeting of Members to be held no later than the next regular Board of Directors/Members Committee meeting.

9.7.4 Resignation and Removal of Regional Entity Trustees

Any Regional Entity Trustee may resign by written notice to the President noting the effective date of the resignation. The Members may remove a trustee with cause in accordance with Section 3.9 Voting of these Bylaws. Removal proceedings may only be initiated by a petition signed by not less than twenty percent of the Members. The petition shall state the specific grounds for removal and shall specify whether the removal vote is to be taken at a special meeting of Members or at the next regular meeting of Members. A trustee who is the subject of removal proceedings shall be given fifteen days to respond to the Member petition in writing to the President.

9.7.5 Vacancies

If a vacancy occurs, the Corporate Governance Committee will present a nominee to the Members for consideration and election to fill the vacancy for the unexpired term

at a special meeting of Members following 30 calendar days notice from the corporate Secretary. The election will be held in accordance with Section 9.7.3 Term and Election of these Bylaws. The replacement trustee shall take office immediately upon election.

9.7.6 Meetings and Notice of Meetings

Regular Regional Entity Trustees' meetings will be scheduled in conjunction with the regularly scheduled SPP Board of Directors meetings, provided the meeting schedule may be adjusted for good cause and with sufficient notice, and additionally upon the call of the chair or upon concurrence of at least a majority of trustees. Except as otherwise provided in these Bylaws, all meetings will be open to any interested party. At least fifteen days' written notice shall be given by the chair to each trustee, the Board of Directors, and the Members Committee of the date, time, place and purpose of a meeting, unless such notice is waived by the trustees. Telephone conference meetings may be called as appropriate by the chair with at least one-day prior notice. The chair shall grant any party's request to address the Regional Entity Trustees.

9.7.7 Chair

The Regional Entity Trustees shall elect from its membership a chair for a two-year term commencing upon election and continuing until the chair's duly elected successor takes office or until the chair's term as a trustee expires without re-election. The panel may elect to rotate the chair to the senior member of the panel when the initial, or subsequent, chair's term expires.

9.7.8 Quorum and Voting

A majority of the trustees shall constitute a quorum of the Regional Entity Trustees necessary for a binding vote. Decisions of the Regional Entity Trustees require a simple majority vote. Trustees must be present at a meeting to vote; no votes by proxy are permitted. All Regional Entity Trustee decisions regarding the Regional Entity are final except as subject to oversight by the ERO and FERC.

9.7.9 Compensation of Regional Entity Trustees

Regional Entity Trustees shall receive compensation as recommended by the Corporate Governance Committee, and approved by the Members that are Registered Entities in the SPP Regional Entity footprint, submitted for approval as part of the ERO

budget process. Trustees shall be reimbursed for actual expenses reasonably incurred or accrued in the performance of their duties.

9.7.10 Executive Session

Executive sessions (open only to Trustees and parties invited by the chair of the Regional Entity Trustees) shall be held as necessary upon agreement of the Regional Entity Trustees to safeguard confidentiality of sensitive information regarding employee, financial or legal matters, or confidential information related to compliance matters.

9.7 Regional Entity Trustees

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9.7.2.1 Composition

The Regional Entity Trustees shall consist of up to four (4) persons, but no less than three (3) persons. The trustees shall be independent of the SPP Board of Directors, any Member, industry stakeholder, or SPP organizational group. Regional Entity Trustees do not serve as members of the SPP Board of Directors. A trustee shall not be limited in the number of terms he/she may serve.

9.7.2.2 Qualifications

Regional Entity Trustees shall have relevant senior management expertise and experience in the reliable operation of the bulk electric transmission system in North America.

9.7.2.3 Conflicts of Interest

Regional Entity Trustees shall not be a director, officer, or employee of, and shall have no direct business relationship, financial interest in, or other affiliation with, a Member, a customer of services provided by SPP, or a Registered Entity in the SPP footprint. Trustees may invest in accordance with the SPP Standards of Conduct. Participation in a pension plan of a Member, customer, or Registered Entity in the SPP footprint shall not be deemed to be a direct financial benefit if the Member's, customer's, or Registered Entity's financial performance has no material effect on such pension plan.

9.7.3 Term and Election

Regional Entity Trustees shall be elected at the meeting of Members to a three-year term commencing upon election and continuing until his/her duly elected successor takes office. The election process shall be as follows:

- (a) At least 90 calendar days prior to the meeting of Members when election of a new trustee is required, the Corporate Governance Committee shall commence the process to nominate persons for the position to be elected;
- (b) At least 45 calendar days prior to the meeting of Members, the Corporate Governance Committee shall determine the person it nominates for election as a trustee, specifying the nominee for any vacancy to be filled. The Corporate Secretary shall prepare the ballot accordingly, leaving space for additional names, and shall deliver same to Members at least 30 calendar days prior to the meeting of Members;
- (c) For purposes of electing or removing trustees only, only Members that are Registered Entities in the SPP Regional Entity footprint shall be considered a Member, and Members with Affiliate Relationships shall be considered a single Member;
- (d) Any additional nominee(s) may be added to the ballot if a petition is received by the Corporate Secretary at least 15 calendar days prior to the

meeting of Members and evidencing support of at least 20 percent of the existing ~~Members~~Membership; and

- (e) 1) If only one candidate is nominated for a seat, each Member shall be entitled to cast a vote for or against the nominee. The votes will be calculated in accordance with Section 3.9 Voting of these Bylaws, which requires a super majority. In the event a trustee's position is not filled the Corporate Governance Committee will determine a new nominee for recommendation for election by the ~~Members~~Membership at a special meeting of Members to be held but no later than the next regular Board of Directors/Members Committee meeting;
- 2) If multiple candidates are nominated for a seat, each Member shall be entitled to cast a vote for only one nominee, but may vote against each candidate. The votes will be calculated in accordance with Section 3.9 Voting of these Bylaws, with the exception that a simple majority of votes cast will determine which nominee is elected. In the event a trustee position is not filled, the Corporate Governance Committee will determine a new nominee for recommendation for election by the ~~Members~~Membership at a special meeting of Members to be held no later than the next regular Board of Directors/Members Committee meeting.

9.7.4 Resignation and Removal of Regional Entity Trustees

Any Regional Entity Trustee may resign by written notice to the President noting the effective date of the resignation. The ~~Members~~Membership may remove a trustee with cause in accordance with Section 3.9 Voting of these Bylaws. Removal proceedings may only be initiated by a petition signed by not less than twenty percent of the Members. The petition shall state the specific grounds for removal and shall specify whether the removal vote is to be taken at a special meeting of Members or at the next regular meeting of Members. A trustee who is the subject of removal proceedings shall be given fifteen days to respond to the Member petition in writing to the President.

9.7.5 Vacancies

If a vacancy occurs, the Corporate Governance Committee will present a nominee to the ~~Members~~Membership for consideration and election to fill the vacancy for the

unexpired term at a special meeting of Members following 30 calendar days notice from the corporate Secretary. The election will be held in accordance with Section 9.7.3 Term and Election of these Bylaws. The replacement trustee shall take office immediately upon election.

9.7.6 Meetings and Notice of Meetings

Regular Regional Entity Trustees' meetings will be scheduled in conjunction with the regularly scheduled SPP Board of Directors meetings, provided the meeting schedule may be adjusted for good cause and with sufficient notice, and additionally upon the call of the chair or upon concurrence of at least a majority of two trustees. Except as otherwise provided in these Bylaws, all meetings will be open to any interested party. At least fifteen days' written notice shall be given by the chair to each trustee, the Board of Directors, and the Members Committee of the date, time, place and purpose of a meeting, unless such notice is waived by the trustees. Telephone conference meetings may be called as appropriate by the chair with at least one-day prior notice. The chair shall grant any party's request to address the Regional Entity Trustees.

9.7.7 Chair

The Regional Entity Trustees shall elect from its membership a chair for a two-year term commencing upon election and continuing until the chair's duly elected successor takes office or until the chair's term as a trustee expires without re-election. The panel may elect to rotate the chair to the senior member of the panel when the initial, or subsequent, chair's term expires.

9.7.8 Quorum and Voting

A majority of the two trustees shall constitute a quorum of the Regional Entity Trustees necessary for a binding vote. Decisions of the Regional Entity Trustees require a simple majority two affirmative votes. Trustees must be present at a meeting to vote; no votes by proxy are permitted. All Regional Entity Trustee decisions regarding the Regional Entity are final except as subject to oversight by the ERO and FERC.

9.7.9 Compensation of Regional Entity Trustees

Regional Entity Trustees shall receive compensation as recommended by the Corporate Governance Committee, and approved by the Members that are Registered Entities in the SPP Regional Entity footprint ~~Membership~~, submitted for approval as part

of the ERO budget process. Trustees shall be reimbursed for actual expenses reasonably incurred or accrued in the performance of their duties.

9.7.10 Executive Session

Executive sessions (open only to Trustees and parties invited by the chair of the Regional Entity Trustees) shall be held as necessary upon agreement of the Regional Entity Trustees to safeguard confidentiality of sensitive information regarding employee, financial or legal matters, or confidential information related to compliance matters.

2015 Event Report

Alan Wahlstrom
Lead Engineer

July 27, 2015



SPP RE EVENTS

Total SPP RE Events for 2015

- 6 total events
- Only 4 reached Category 1 status and were analyzed via NERC's Event Analysis process

SPP RE Regional Events (April 1 –June 31)

- One category 1h. *Partial loss of monitoring or control, at a control center for 30 min*

Loss of Monitoring

- Operator received alarm and was unable to acknowledge alarm
- Operator noticed system not updating
- IT Support notified and performed a reboot that corrected the problem
- Analysis is ongoing for the event



NERC LESSONS LEARNED

Lesson Learned 1: **Real-Time Contingency Analysis Failure due to a Modeling Error**

- **Power Flow and Contingency analysis failed for 46 minutes**
- **Operator did not recognize the failure**
- **Alarm was not in an obvious location and prominent color**
- **Topology change was made directly on the development system but not compared to original file**

Lesson Learned 1: **Real-Time Contingency Analysis Failure due to a Modeling Error, con't**

- **Lesson Learned:**
 - **For verification of changes, automated review, peer review, or both must be implemented as part of any change process**
 - **Visual tools must prominently display critical alerts to system operator**

Lesson Learned 2: **Generator Distributed Control System Impact on Automatic Voltage Regulators (AVR)**

- Reactors at a plant were switched out of service, causing reactive output to decrease as expected
- Began to increase again after a few seconds
- DCS (Distributed Control System) at the plant was set to meet a MVAR output, not KV

Lesson Learned 2: **Generator Distributed Control System Impact on Automatic Voltage Regulators, con't**

- **Lesson Learned:**

While a generator AVR may be properly set to control voltage schedule, other plant control systems may override or counteract appropriate AVR response

Lesson Learned 3: **Pre-Contingent Load Shed Event**

- **345 KV breaker was planned to be out for maintenance**
- **Contingency analysis showed there was enough generation to alleviate pre-contingent load shedding**
- **Overnight temps much lower than forecasted and wind generation became unavailable**
- **RCTA tool indentified potential overload on adjacent system**

Lesson Learned 3: **Pre-Contingent Load Shed Event, con't**

- **Lesson Learned:**

Planning for pre-contingency and post-contingency actions is essential

In the planning stage, an alternate plan should be considered in the event that assumptions made for initial plans change

Taking an outage may require a plan that includes pre-contingent load shedding, post-contingent load shedding, or both

Lesson Learned 4: **EMS Recovery Strategy**

- **An energy management system (EMS) auto-recovery process was configured such that all nodes in the EMS were prompted to reboot for a particular system condition**
- **Restart took 47 minutes to complete**
- **There was a complete loss of monitoring until each server status became fully functional**
- **System was reconfigured to reboot only the server with the problem, not all servers**

Lesson Learned 4: **EMS Recovery Strategy, con't**

- **Lesson Learned:**

Procedures should be developed and periodically reviewed to ensure minimal recovery time and to familiarize staff on recovery processes

NERC Facility Ratings Alert Status

- 6 Transmission Owners have extensions
- Work has extended into 2016 in some cases
- Final count in SPP RE:
 - 7,100 discrepancies found
 - 100% High priority lines complete as of 7/15/15
 - 72% Medium priority lines complete as of 7/15/15
 - Up from 68% on 12/31/14
 - 85% Low priority lines complete as of 7/15/15
 - Up from 67% on 12/31/14

FAC Alert Site Visits

- **NERC is making site visits to verify transmission lines reported complete are complete**
- **NERC will publish a white paper on its findings and develop a lessons learned document on correcting line discrepancies**

Links

- [SPP RE Event Analysis Webpage](#)
- [Event Analysis Process Documents](#)
- [SPP Lessons Learned](#)
- [NERC Lessons Learned](#)



JULY 27TH SPP REGIONAL ENTITY TRUSTEE MEETING

NERC CIPC Report

Eric Ervin
Director, Corporate Security
SPP CIPWG Chair
Westar Energy



NERC CIPC Report

- ***Mr. Marc Sachs, Chief Security Officer (CSO), Electricity Sector Information Sharing and Analysis Center (ES-ISAC), North American Electric Reliability Corporation (NERC)***
 - Marc introduced as the new Senior Vice President and CSO at NERC.
 - Retired US Army Officer
 - White House National Security Council
 - Department of Homeland Security - First Cyber Program Director
 - SRI International - Computer Science Lab Deputy Director
 - Verizon Communications - VP of National Security Policy
 - SANS Internet Storm Center - Director 2003 - 2010

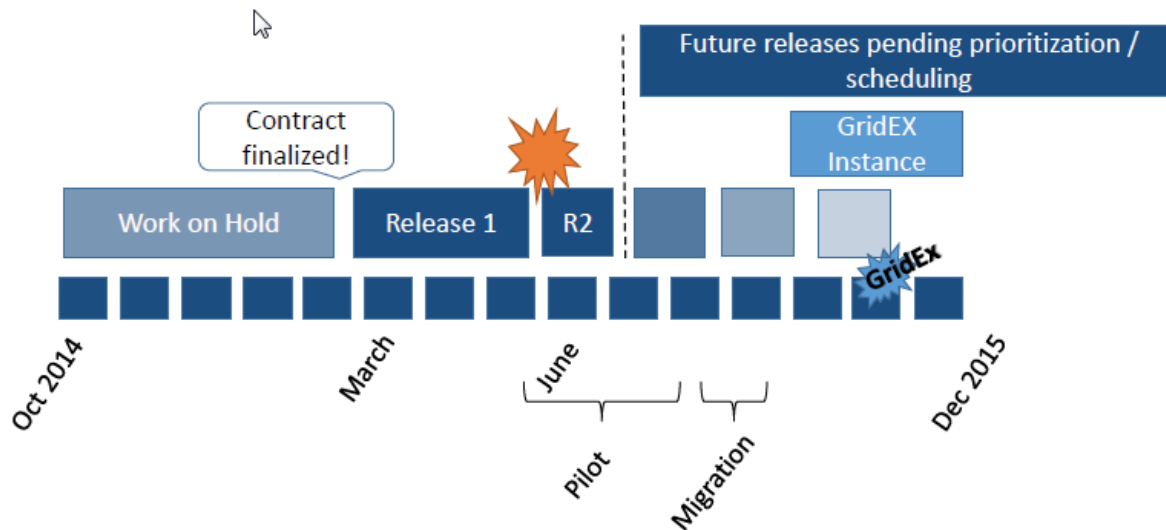
NERC CIPC Report

- ***NERC CIPC Chair Report – Mr. Chuck Abell***
 - Next CIPC Meetings:
 - Sept 15-16: J. W. Marriott – New Orleans, LA
 - Dec 15-16: Westin Buckhead – Atlanta, GA
 - Grid Security Conference Oct 13-16 – Philadelphia, PA
 - GridEx III – Nov 18-19
 - May NERC Board of Trustees Meeting
 - Adopted update CIP-014-2 Standard
 - Policy Input:
 - Future of Standards Development, Critical Infrastructure Protection (CIP) Version 5 Transition Program, Physical Security Reliability Standard Implementation Compliance Guidance, Quickly address remaining CIP technical issues, and Compliance guidance study – report back to BOT later this year
 - BES Security Metrics in 2015 State of Reliability Report

NERC CIPC Report

- **ES-ISAC – Mr. Ben Miller, NERC**

- Physical separation occurring at the NERC DC office, walling off the ES-ISAC from the rest of the NERC staff.
- ES-ISAC Portal Updates
 - GridEx II lessons-learned recommendation was to continue refinement and promotion of the ES-ISAC portal as a central coordination point and reporting tool in crisis.



NERC CIPC Report

- ***Security Reliability Program (SRP) - Mr. Scott Mix, NERC***
 - Provides a review of a registered entity's security program, including both physical security and cybersecurity (est. in 2010)
 - 14 SRP visits scheduled for 2015
 - 4 large-format workshops (region sponsored)
 - 10 single entity visits
 - 2 additional visits in January 2016 (2015 program)
 - Program content continues to be flexible and adapted to entity needs
 - Spin-off program – Small Group Advisory Session (SGAS)
 - 1-2-hour mini-SRP sit-down with ERO & individual entity
 - Typical SRP visit is 3 days – Tuesday - Thursday
 - Default agenda published in overview document
 - Entity customizations welcomed and encouraged
 - Transition to region-lead program in 2016

NERC CIPC Report

- ***Physical Security Advisory Group (PSAG) Update - Mr. Bob Canada, NERC***
 - Physical Security Sector Outreach & Training that underway at the ES-ISAC
 - Fusion Center Concept
 - Leveraging Fusion Centers for mapping and networking
 - Contact with a national SAR initiative
 - Direct Industry Outreach
 - Assist members for the true threats facing them (UAS)
 - Continue working with the CIPC Training WG for webinars
 - Suspicious Activity Reporting
 - Direct through the ES-ISAC Portal
 - Direct contact with industry, webinars and weekly reports
 - Nationwide Linkage through Nationwide SAR Initiative
 - Sponsored by DOJ and Fusion Centers

NERC CIPC Report

▪ ***CIP V5 Transition and CIP V5 Revisions - Mr. Tobias Whitney, NERC***

Topic	Lesson Learned or FAQ	Date Posted for Stakeholder Comment
Generation Segmentation	Lesson Learned	October 23, 2014
Far-End Relay	Lesson Learned	October 23, 2014
BES Impact of Transmission Scheduling Systems	FAQ	April 24, 2015
Grouping of BES Cyber Systems	Lesson Learned	March 2, 2015
Shared Equipment at a Substation	FAQ	April 1, 2015
Virtualization	Lesson Learned	TBD
Intrusion Detection Systems	FAQ	April 30, 2015
Interactive Remote Access	Lesson Learned	January 8, 2015
Mixed Trust EACMS	Lesson Learned	January 8, 2015
Multiple Physical Access Controls	FAQ	April 1, 2015
Protecting Physical Ports	FAQ	April 1, 2015
Identifying Sources of Patch Management	FAQ	April 30, 2015
Mitigating Threat of Detected Malicious Code	FAQ	November 25, 2014
Vulnerability Testing of Physical Access Controls	FAQ	April 1, 2015

At a glance:

- 23 original topics
- 50 FAQs
- 7 LLs
- 57 topics via Section 11
- 5 issues addressed by NERC

NERC CIPC Report

- ***CIP V5 Transition and CIP V5 Revisions - Mr. Tobias Whitney, NERC***
 - Small Group Advisory Sessions
 - July 8–10, 2015 Sessions at Texas RE in Austin
 - August 4–6, 2015 Sessions at NERC HQ in Atlanta
 - September 1–3, 2015 Sessions at NERC HQ in Atlanta
 - NERC is in the early stages of developing an updated Transition Guidance communication.
 - Initial focus is on TFE procedural updates
 - Evidence retention requirements for V3 after enforcement date of V5
 - Re-cap mandatory and enforceable dates

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

Submitted by Eric Ervin, Chair, SPP CIPWG
June 30, 2015

NERC CIPC Meeting

- The NERC CIPC held its quarterly meeting in Atlanta, GA June 9-10, 2015.
 - Agenda:
 - http://www.nerc.com/comm/CIPC/Agendas%20Highlights%20and%20Minutes%202013/CIPC%20Meeting%20Agenda_June%209-10%202015%20v2%201.docx
 - Presentations:
 - <http://www.nerc.com/comm/CIPC/Agendas%20Highlights%20and%20Minutes%202013/CIPC%20Presentations.pdf>
 - Draft Minutes:
 - http://www.nerc.com/comm/CIPC/Agendas%20Highlights%20and%20Minutes%202013/CIPC%20Minutes_ExA_ExB.pdf
- NERC hosted a workshop on the morning of the first day, providing an overview and training of the new ES-ISAC Portal 2.0.
- Opening Remarks were provided by Mr. Marc Sachs, Chief Security Office, ES-ISAC, NERC Staff.
- Chuck Abell, CIPC Chair, provided opening comments and an overview of the February NERC Board of Trustees Meeting.
 - NERC Events - GridSecCon Oct 13-16 – Philadelphia, PA and GridEx III – Nov 18-19.
 - May NERC Board of Trustees
 - Adopted update CIP-014-2
 - Seeking policy input on: Future of Standards Development, CIP V5 Transition Program, Physical Security Reliability Standard Implementation, and Compliance Guidelines. Gerry Cauley addressed the Board of Trustees stating that NERC and the Industry must quickly address remaining CIP technical issues.
 - NERC is conducting a compliance guidance study – report back to the BoT later this year.
- Ben Miller, NERC Staff, provided an ES-ISAC Update
 - Working on physical separation between ES-ISAC from the rest of the NERC space. End of July for the physical buildout.
 - GridEx II Lessons-Learned resulted in the ES-ISAC Portal 2.0.
- Scott Mix, NERC Staff, provided an overview of the Security Reliability Program and Directions for 2015
 - 14 SRP visits scheduled for 2015. 4 large format workshops for the regions, 10 single entity visits, 2 additional visits in January 2016.
 - Program content continues to be flexible and adapted to entity needs.
 - Spin-off program – Small Group Advisory Sessions (SGAS). 1-2 hour mini SRP sit down with ERO & individual entity.

- Transition the SRP to region-lead program in 2016.
- Mr. Bob Canada, NERC Staff, provided an update on the Physical Security Advisory Group
 - Focused on Sector outreach & training, leveraging the DOJ and State Fusion Centers for mapping, networking and contact with a national Suspicious Activity reporting initiative.
 - Suspicious Activity Reporting. Direct through the ES-ISAC Portal. Direct contact with industry, webinars and weekly reports.
 - Critical Equipment Testing and Training Initiative. ATF receptive to training of industry. Will create equipment, distance, and barrier base lines for industry.
- Nathan Mitchell, CIPC Vice Chair provided a legislative update.
 - H.R. 1560, the Protecting Cyber Networks Act (Intel)
 - H.R. 1731, the National Cybersecurity Advancement Act of 2015 (Homeland Security Committee bill).
 - S. 754, The Cybersecurity Information Sharing Act.
- Mr. Jim Rowan, North American Transmission Forum (NATF), provided an update on the Security Practices Group
 - CIP-002 V5 Practices Guide for identifying assets.
 - CIP-014 R4 and R5 Project. Development of a guide that is defensible for conducting evaluations as required in R4 and for developing and implementing a physical security plan as required in R5.
 - May 12-14 Security Practices and Compliance Workshop hosted by KCP&L. Topics areas included: risk assessments/internal controls application for security practices, synchronization for security and compliance risk.
 - 2015 Projects include: security metrics, tools and technology, protecting used ports and services.
- Tim Conway, Grid Exercise Working Group Chair, reported on GridEx III preparations for this year's exercise.
 - 74 members from Physical, Cyber, and Operations - 321 registered participants; 139 registered organizations.
 - Registration site developed and opened; player directory developed and implemented.
 - Finalizing generic inject samples to use for customization.
- Mr. Roland Miller, NextEra Energy, provided an update for the Bulk Electric System Security Metrics Working Group
 - March 2015 – drafted new chapter for 2015 NERC State of Reliability Report. Approved by the BoT of 5/14/15
 - Drafted strawman Security Metrics Development Roadmap to plan future BESSMWG activities.
 - Reportable Cybersecurity Incidents – 0
 - Reportable Physical Security Incidents resulting in load loss – 0
 - Total ISAC Bulletins sourced from the sector – 28
 - Number of Global High Severity IT Vulnerabilities – 535
 - New roadmap will be presented during the September CIPC.
- CIPC meeting dates for 2015 are as follows:
 - September 15-16, 2015 (New Orleans, LA)
 - December 15-16, 2015 (Atlanta, GA)

CIP Update

July 27, 2015

Shon Austin

Lead Compliance Specialist – CIP

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Agenda

- **Open issues**
- **CIP Version 5 Guidance**
- **Training and Outreach**

Open Issues

- [7/16/15 - FERC CIP V6 Notice Of Proposed Rulemaking \(NOPR\)](#)
- XML Listener
- Site visits/physical inspection of Low Impact BES Cyber Systems

Open Issues – FERC NOPR

- **FERC CIP V6 NOPR**
 - Generally proposes to approve the revised standards as filed
 - Proposes five concerns to be addressed that could result in:
 - Additional revisions to existing standards
 - Development of a new standard

Open Issues – FERC NOPR

1. **Reliability gap in CIP-006-6 technical controls**
 - a) **Limited protection for the nonprogrammable components of communication systems**
 - I. **Results in a gap in the security of BES communication systems**
 - b) **Gap in protection to "real-time" data transmitted outside of Control Centers**
 - c) **No protection of reliability data that traverses third-party communication infrastructure**
 - d) **Need to implement controls to protect communication links and sensitive BES data communicated between all BES Control Centers**

Open Issues – FERC NOPR

2. Gap in the protection for remote access

- **Determine the value of CIP standards requiring the following behind a Registered Entity’s intermediate system(s):**
 - **Additional network segmentation controls**
 - **Connection monitoring**
 - **Session termination controls**

Open Issues – FERC NOPR

3. Recent malware campaigns targeting supply chain vendors
 - Should CIP standards provide security controls for supply chain management for industrial control system hardware, software, and services associated with BES operations?

Open Issues – FERC NOPR

4. **Gap in the proposed definition for Low Impact External Routable Connectivity (LERC), including but not limited to the following:**
 - **“direct user-initiated interactive access” and “direct device-to-device connection” phrases**
 - **“layer 7 application layer break”**

Open Issues – FERC NOPR

5. **Gap in protection for Low Impact BES Cyber Systems**
 - **Identify security controls to address the risks posed by transient devices used at Low Impact BES Cyber Systems**

Open Issues – XML Listener

- **Means of systematically communicating operating generation dispatch instructions from BA to GOP**
 - **Revision of the SPP RE business rule for generation dispatch instructions**
 - **Primary and secondary means**
 - **Backup ICCP vs. XML as secondary means**

Open Issues – Site visits of Low Impact BES Cyber Systems

- SPP RE CIP Compliance group does not anticipate physically inspecting Low Impact BES Cyber Systems, if the Registered Entity can demonstrate compliance by other means
- Registered Entities can satisfy the requirement by providing evidence that shows compliance with the applicable requirement
 - Pictures and/or video tours of the facility physical controls
 - Firewall Access Control List of the Low Impact BES Cyber System's Electronic Security Perimeter (ESP)

CIP Version 5 Guidance

- **In follow up to the CIP Version 5 Implementation Study Final Report, NERC issued a set of memoranda on April 21, 2015:**
 1. **The meaning of the phrase “programmable electronic device” in the definition of Cyber Asset.**
 2. **The impact rating for generation interconnections Facilities under Impact Rating Criterion 2.5 of Attachment 1 to CIP-002-5.1.**
 3. **Application of Impact Rating Criteria 2.3 and 2.6 of Attachment 1 to CIP-002-5.1 with respect to third-party notifications.**
 4. **The categorization and protection of network and externally accessible devices under CIP-002-5.1 and CIP-005-5.**
 5. **Application of the definition of Control Centers based on functional obligations.**

CIP Version 5 Guidance

- **July 1 meeting**
 - On July 1, 2015, NERC hosted a small, executive-focused face-to-face meeting to discuss the issues in the CIP Version 5 Memoranda
 - Attendance
 - NERC and Regional Entity leadership and staff (including executive, technical, and compliance staff)
 - Industry representatives (including NERC standing committees)
 - CIP Version 5 standards drafting team
 - Industry policy leaders
 - FERC staff

CIP Version 5 Guidance

- **Developed Way Forward Project**
 - **Tech Conference Announcement for Control Centers and IRC 2.6**
 - **ISO-New England and NYISO coordination meeting**
 - **Identify volunteer organizations to address Network Device/Compliance “line of demarcation” guidance**
 - **Includes team members from AECC and SPP RE**
 - **Identify volunteer organizations to address NERC guidance**
 - **Identify volunteer organizations to develop Programmable Electronic Devices/BES Cyber Asset guidance**
 - **Identify volunteer to revise Generation Interconnection Facility as a FAQ**
 - **Includes team members from Westar**

CIP Version 5 Guidance



Complete by:	Actions/Deliverables/Milestones
July 17	Coordinate with NYISO and ISO New England concerning notification letters
July 17	Save the Date announcement for Technical Conferences on Aug 14th
July 24	Prep Final FAQs for Standards Committee (Original 3 and May 1 posting)
July 29 (actual)	V5TAG face-to-face in Atlanta to plan future guidance and standard development activity – finalize proposed guidance documents
July 31	Draft of guidance documents, posted for comment: <ul style="list-style-type: none"> • Generation Interconnection (FAQ) • BCA Approach • Network Devices & ERC • Vendor Mgt • Grouping of BCS
August 7	Standards Committee Coordination of timing and potential proposed changes
August 14 (planned)	Technical Conference – TO Control Centers & IROL GO/GOP Designations: Industry leaders meeting to discuss the way ahead regarding low impact TO Control Centers and GO/ GOP IROL designations. Industry will be encouraged to present their analysis or risk-basis supporting how and why the standard or future guidance can be addressed.
August 25	V5TAG face-to-face in Atlanta to plan future guidance and standard development activity – finalize proposed guidance documents
August 28	Draft of guidance documents, posted for comment: <ul style="list-style-type: none"> • Functional Obligations of Control Center • Impact Rating 2.3 and 2.6
August 31	Comment Period Closes and Post Comments: <ul style="list-style-type: none"> • Generation Interconnection (FAQ) • BCA Approach • Network Devices & ERC • Vendor Mgt • Grouping of BCS

Lessons Learned

- **Two Lessons Learned have been approved**
 - **Generation Segmentation**
 - **Far-End Relay Lesson Learned**
- **16 Lessons Learned pending approval**

Frequently Asked Questions

- **All 27 of the April 1 FAQs were approved by the NERC Standard Committee**
- **13 May FAQs pending approval by the NERC Standard Committee**

Training and Outreach

- **NERC Small Group Advisory Sessions**
 - **Three additional 3-day industry sessions scheduled:**
 - **July 8–10, 2015 Sessions at Texas RE in Austin**
 - Ten participants in total, one in the SPP RE footprint
 - **August 4–6, 2015 Sessions by teleconference**
 - Only on registration (multi-regional, including SPP RE)
 - **September 1–3, 2015 Sessions at NERC HQ in Atlanta**
 - Six participants registered to date, two in the SPP RE footprint
 - **Focused on answering Registered Entity questions in a confidential setting**

Training and Outreach

- **SPP RE Outreach**
 - **Conducted a NERC SRP (Security Reliability Program, formerly known as Sufficiency Review Program) review**
 - **Will conduct four more on-site CIP V5 outreach sessions in 2015 at:**
 - **AEP September 9-10**
 - **SWPA October 27-28**
 - **EDE November 9-10**
 - **WR December 1-3**

Training and Outreach

- **CIP V5 Outreach Sessions**
 - **Host Registered Entity has option to invite others to participate**
 - **SCADA/EMS vendor included in one session to date**
- **[CIP V5 page](#) added to SPP.org with links to training and reference information**
- **CIP-014 Webinar (joint between SPP and SPP RE staff) on July 29**
- **SPP RE Fall Compliance Workshop September 29–30 in Dallas and via webinar**

Helpful Resources

- [SPP RE CIP V5 Guidance Page](#)
 - Contains links to:
 - NERC Version 5 Transition Home Page
 - FERC CIP Version 5 Filings
 - SPP RE presentations, webinars, and videos

SPP RE CIP Team

- [Kevin Perry](#), Director of Critical Infrastructure Protection
(501) 614-3251
- [Shon Austin](#), Lead Compliance Specialist-CIP
(501) 614-3273
- [Steven Keller](#), Lead Compliance Specialist-CIP
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- [Sushil Subedi](#), Compliance Specialist II-CIP
(501) 482-2332
- [Robert Vaughn](#), Compliance Specialist II-CIP
(501) 482-2301

Enforcement Update

July 27, 2015

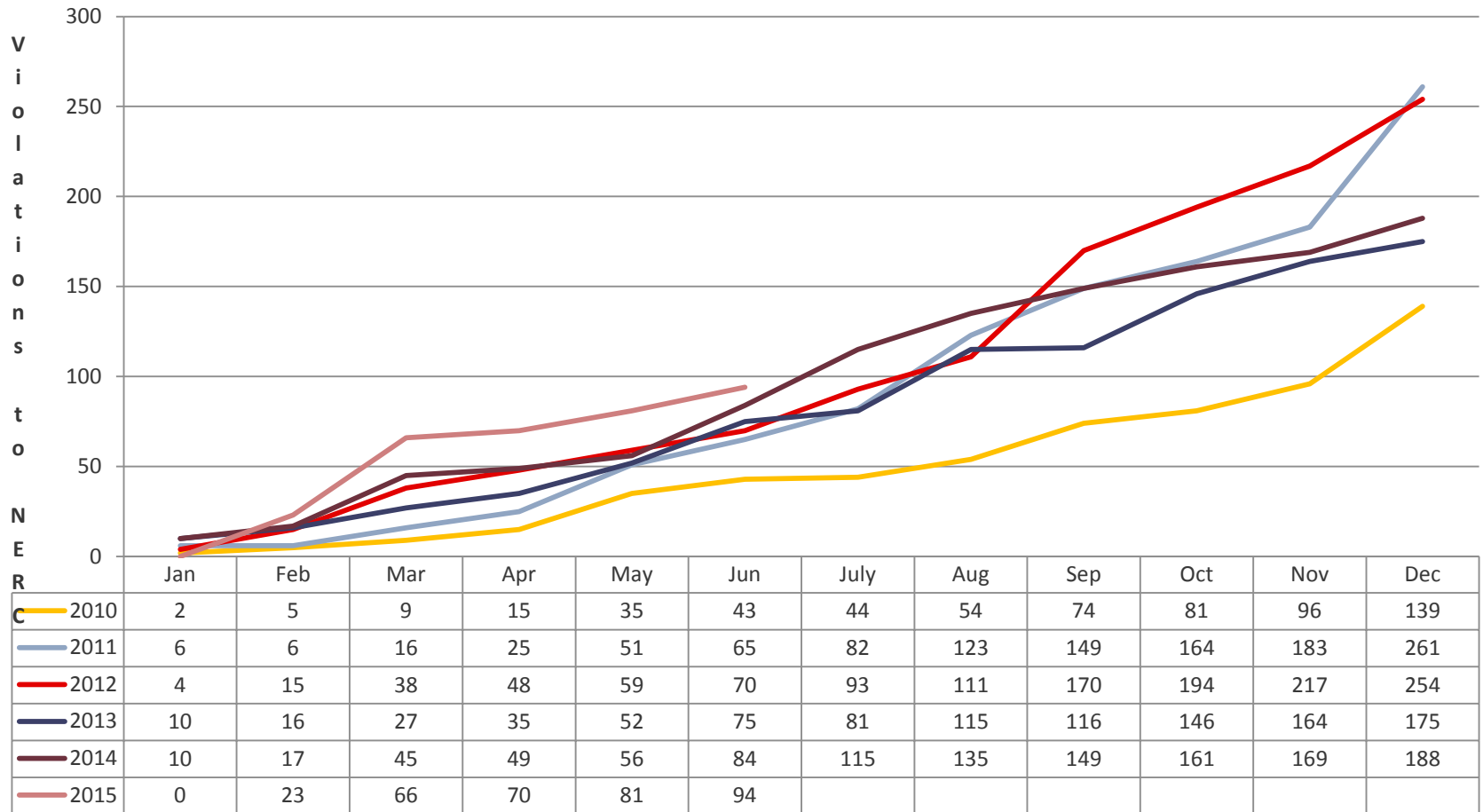
Joe Gertsch
Manager of Enforcement
jgertsch.re@spp.org
501-688-1672



SPP RE Enforcement Activities June 30, 2015	2007	2008	2009	2010	2011	2012	2013	2014	First Quarter	April	May	June	Total 2015
Notice of Preliminary Screen Issued	-	-	-	-	-	-	-	121	38	7	9	1	55
Notice of Possible Violations Issued	6	56	132	254	239	173	189	107	29	5	7	2	43
Notice of Alleged Violation (NAVAPS)													
NAVAPS Issued	6	45	10	7	0	2	1	6	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
NOCV BOTCC Approved	0	7	11	29	4	1	0	1	0	0	0	0	0
Settlements / Full Notice of Penalty													
To NERC for Approval	0	0	0	89	118	52	5	15	0	0	0	0	0
BOTCC Approved	0	0	0	50	81	103	14	30	0	0	0	0	0
Settlements / Spreadsheet NOP													
To NERC for Approval	0	0	0	16	22	49	43	59	0	0	0	0	0
BOTCC Approved	0	0	0	0	38	49	65	46	13	0	0	0	13
Find, Fix, Track													
To NERC for Approval	-	-	-	-	43	78	86	62	3	0	4	2	9
BOTCC Approval	-	-	-	-	36	74	95	61	2	2	0	2	6
Compliance Exception	-	-	-	-	-	-	-	1	31	3	7	7	48
Dismissals													
To NERC/SPP RE SRT for Approval	0	0	1	16	75	43	41	44	32	1	1	3	37
NERC/SPP RE SRT Approved		0	1	16	75	43	41	44	32	1	1	3	37
Notice of Penalty													
Approved by FERC	0	5	13	57	180	184	141	118	13	0	0	0	13
Violations Awaiting NERC Approval													15
Active Violations - Caseload													84
Caseload Index (months)*													5.6

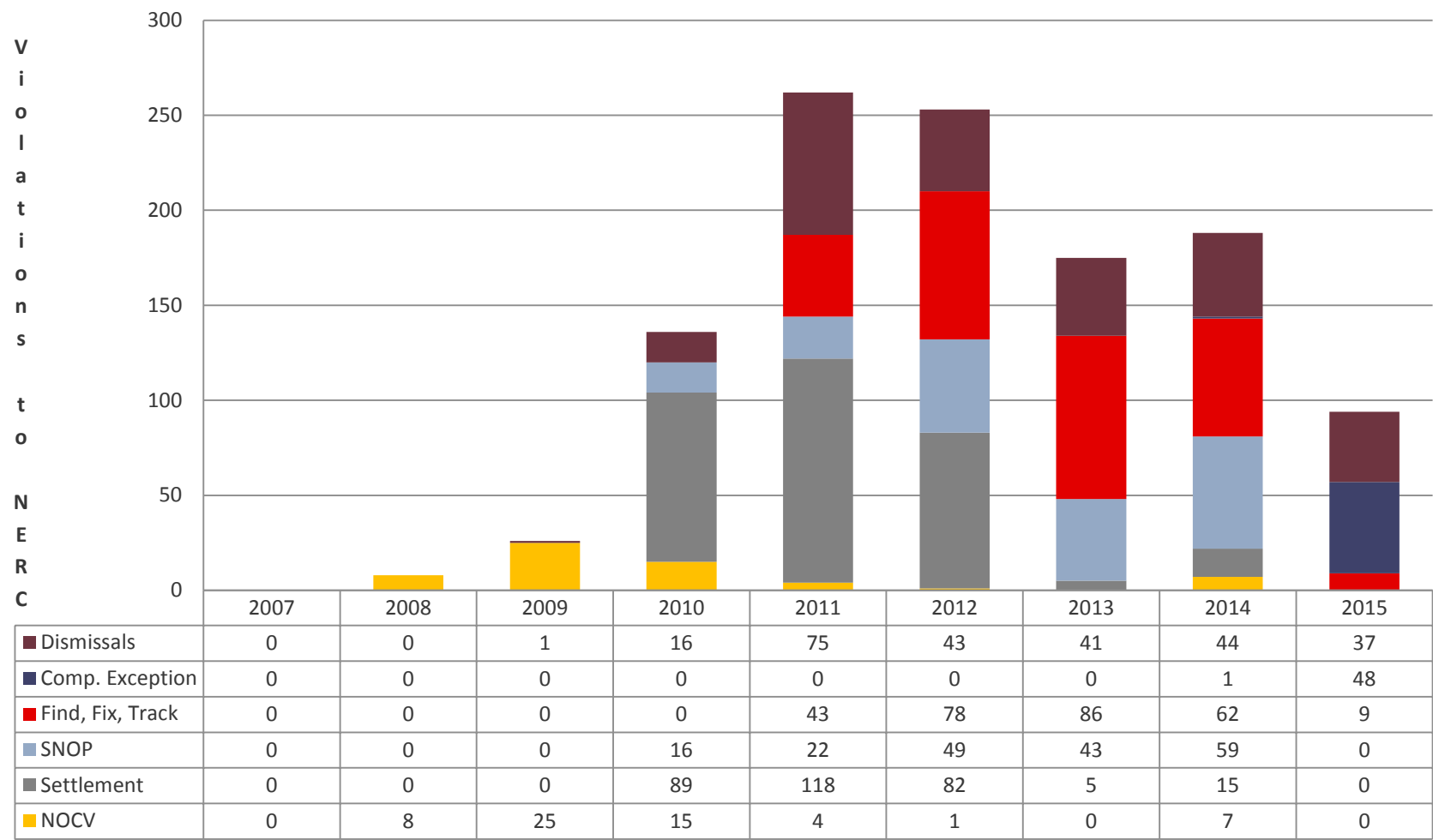
* Based on previous 12 months processing (181)

Enforcement Monthly Violation Processing



Running Total Violations

Enforcement Processing Methods



Enforcement Caseload – June 30, 2015

- **84 - Active SPP RE Violations**
 - 22 - Settlement
 - 62 - Settlement Not Requested (NAVAPS/NOCV)
- **17 – Multi-Regional Registered Entity (MRRE) Violations (31 Transferred)**
- **26 - 693 Violations**
- **58 - CIP Violations**
- **7 - High Impact Violations**
- **Discovery Method**
 - 40 - Audit
 - 33 - Self Report
 - 7 - Self Certification
 - 4 – Investigation

Caseload Aging

- **SPP RE – 84 violations, average age - 367 days**

<u>Age (days)</u>	<u>Violations</u>
> 300	39
201 – 300	24
101 – 200	4
51 – 100	10
1 - 50	7

- **Pre-2014 violations - 28**
- **MRRE – 17 violations, average age - 394 days**

High Impact Violation Summary

- **7 – Open High Impact Violations**
 - 5 - Settlement
 - 2 - Disposition Undetermined
- **Open High Impact Violations Mitigation Status**
 - 2 - Mitigation Plan Complete
 - 5 - Mitigation Plan Accepted

SPP RE 2015 Violation Dismissals

Consolidation with another violation	3
NERC V3 – V5 Guidance (approach 2)	1
Self-Report wrong standard and/or requirement.....	0
Provided exculpatory evidence	2
MRRE Transfers	31
Incorrect Interpretation of Standard	<u>0</u>
Total	37

June Mitigation Plan Summary

- Mitigation Plan Status (month/year)**

Submitted	2/50
Accepted	7/51
Certified Complete	6/44
Completion Verified	27/44
Mitigating Activity Completed	2/2

- Active Violations with no Mitigation Plans**

Initiated	47
Submitted	<u>2</u>
Total	49



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General Manager's and Compliance Report

July 27, 2015

Kansas City, MO

Ron Ciesiel

SPP RE General Manager



CIP Update

- **CIP V5 Frequently Asked Questions**
 - V5 Transition Advisory Group collaborating to finalize FAQ responses after industry comments
- **NERC Meeting July 1, 2015: CIP V5 – Way Forward**
 - Discuss concerns with the recent CIP V5 memoranda
 - Identify ways forward to support long-term solutions that may include:
 - Compliance action or guidance development
 - Standards development or interpretation processes
 - Other solutions
 - Revised postings should be out by Labor Day
 - Ron Ciesiel represented Regional Management



Vegetation Management Update

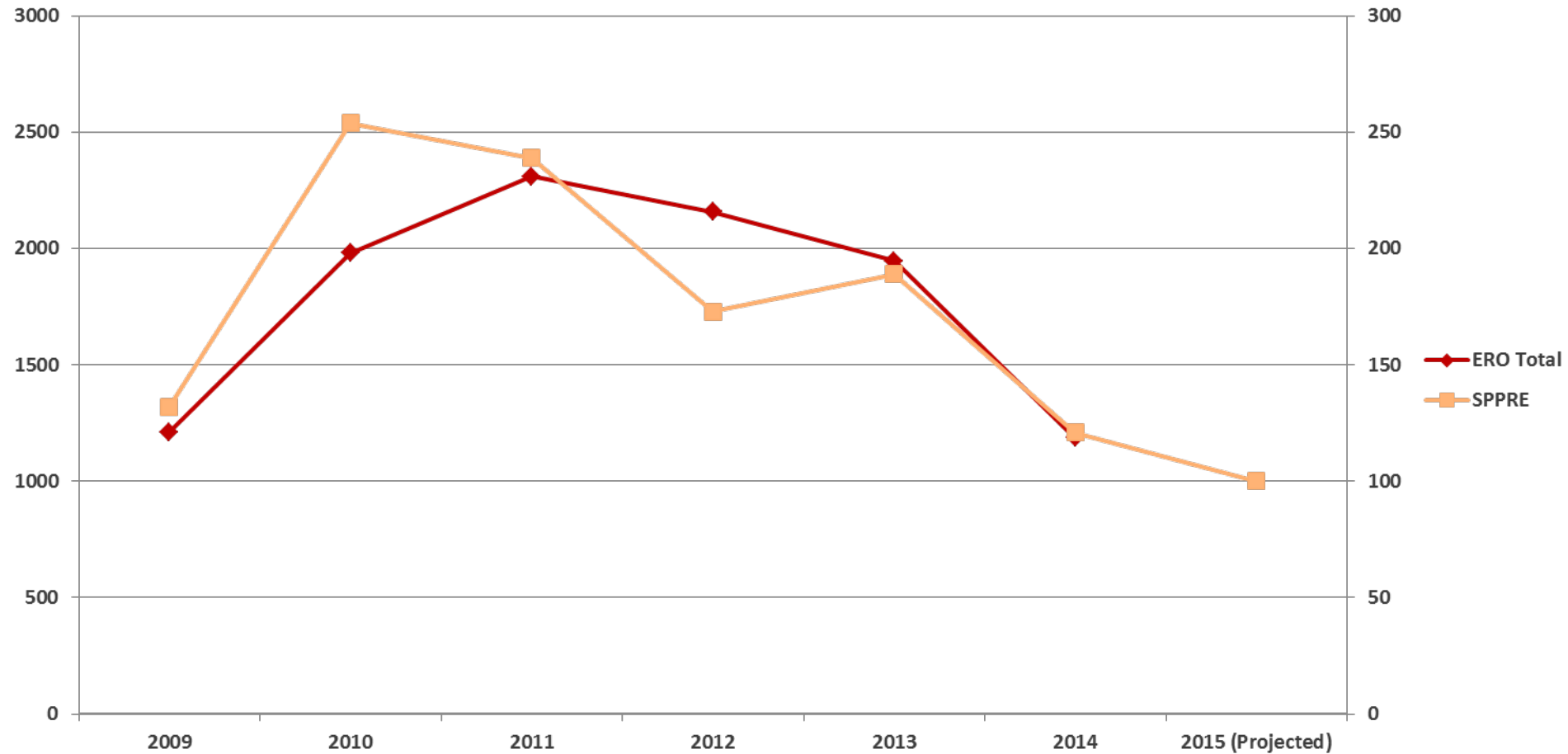
- **No reported contacts for 2Q 2015**
 - **9th consecutive quarter with no contacts**

Risk-Based Registration Initiative

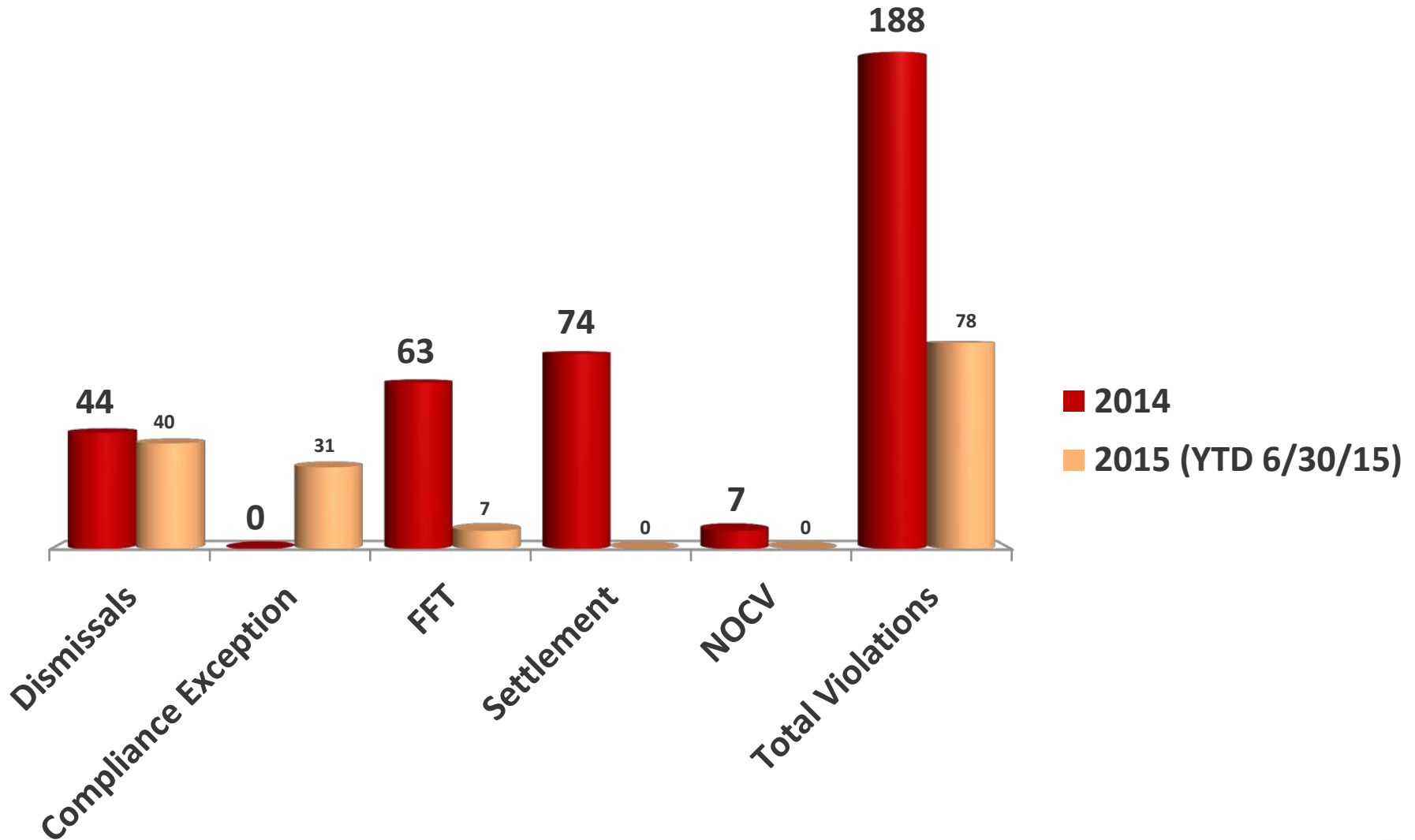
- **Purchasing-Selling Entities and Interchange Authorities no longer registered**
 - Removed 33 Registered Entities from SPP RE registry
 - Reduced registration for another 41 entities
- **Distribution Provider (DP) Threshold raised to 75 MW**
 - 2 DPs removed from the SPP RE registry
 - 2 DPs reduced to Underfrequency Load Shed-only DP

SPP RE Violations By Year

SPP RE Incoming Violations By Year



2014-2015 YTD - Violation Dispositions



Risk Based Compliance Monitoring

- Focuses oversight on higher-risk areas
 - Higher-risk Registered Entities will have larger audit scopes
- Reduces oversight on low-risk areas
- New [SPP RE webpage](#) describes Inherent Risk Assessment, Internal Control Evaluations, Self-Logging

Inherent Risk Assessments

- **SPP RE has completed 22 IRAs for Registered Entities on the 2015 audit schedule**
 - **Results of IRAs on monitoring methods**
 - **9 On-Site audits for TOP**
 - **10 Off-Site audits for non-TOP/BA/RCs**
 - **2 reduced from Off-site audits to Spot-Checks**
 - **1 reduced from Off-site audit to Self-Certification**

Internal Control Evaluation (ICE)

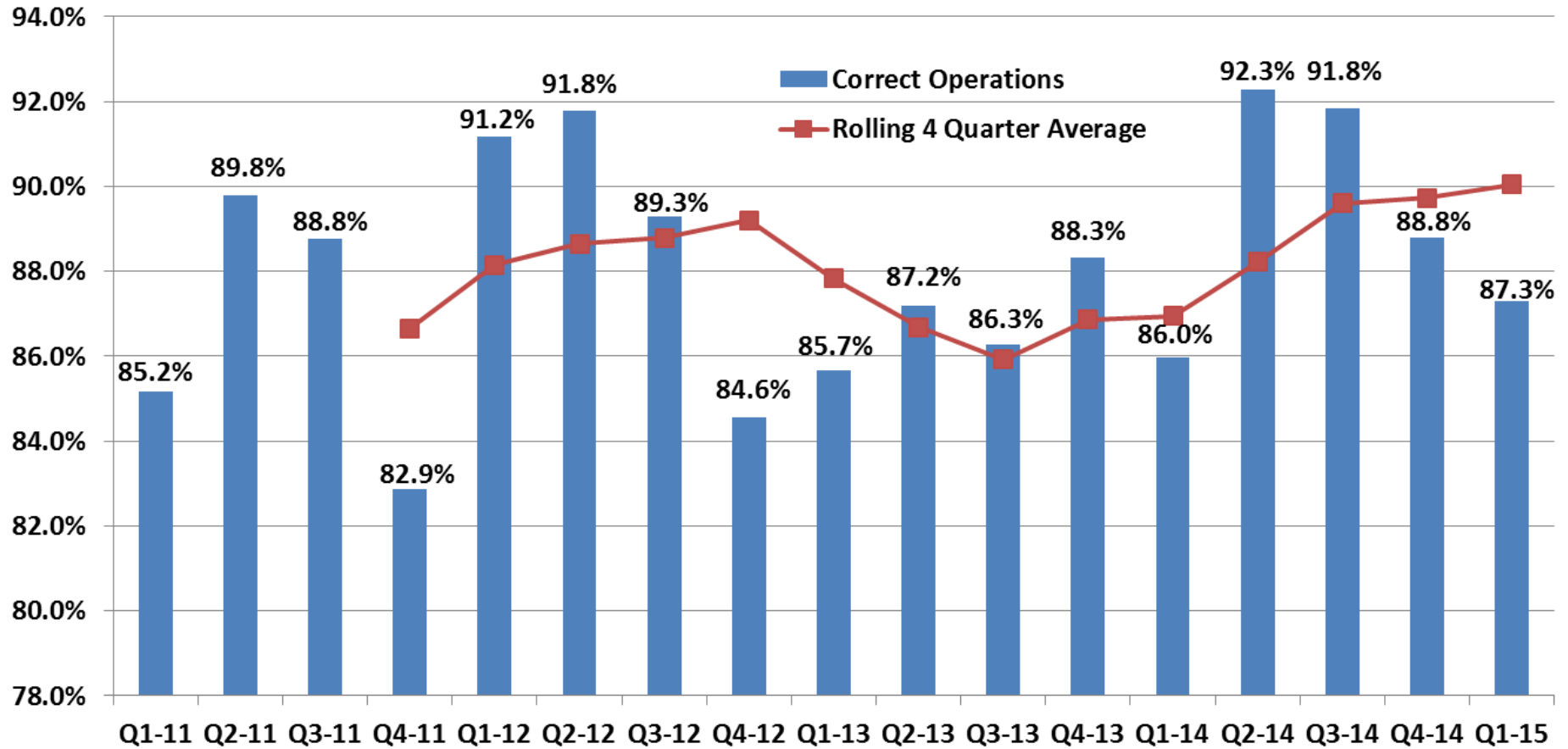
- Registered Entities will have opportunity for an ICE when they receive IRA summary letter
- At this time, two ICE requests have been made

Multiple Regional Registered Entity (MRRE)

- Registration for MRRE program ended June 30 for 2016 compliance program
- Across NERC, 14 groups of 63 Registered Entities requested inclusion in MRRE program
 - 9 of the 14 groups included SPP RE Registered Entities
 - Lead region assignments should be made by mid-August

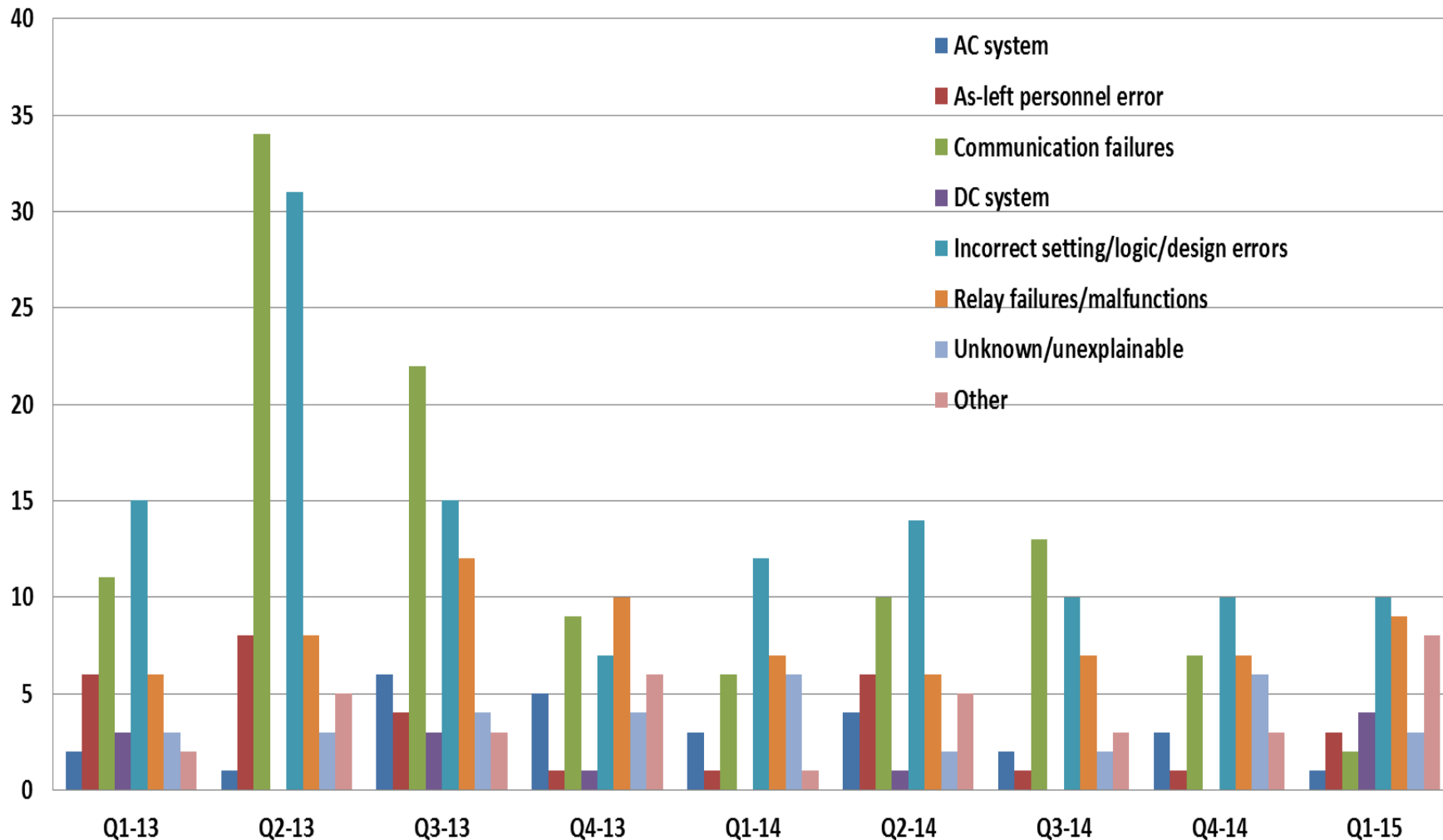
SPP RE Misoperation Report as of Q1-15

Relay Operational Performance- Success Rate



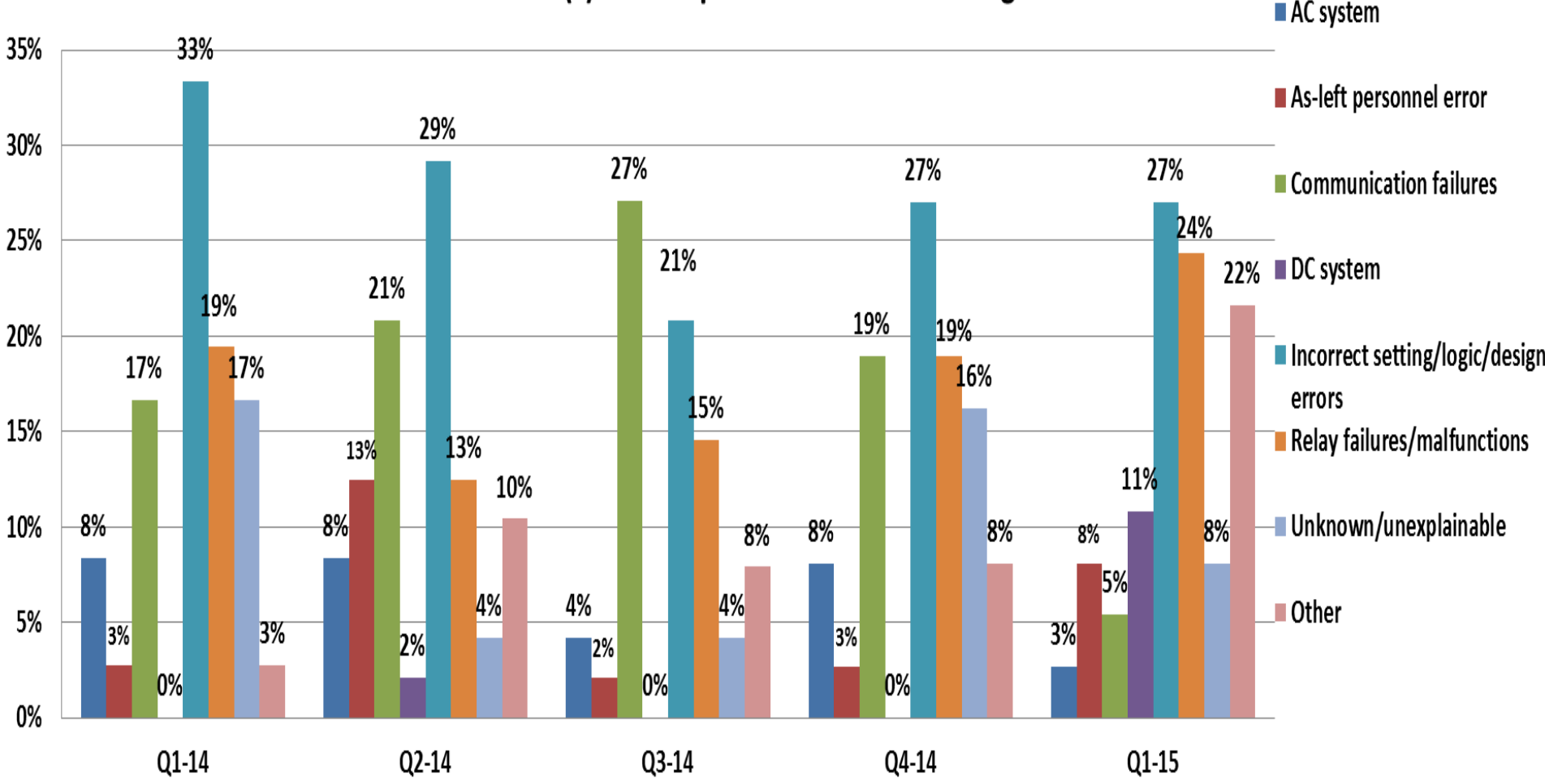
Causes of Misoperations Q1-13 to Q1-15

Cause(s) of Misoperations



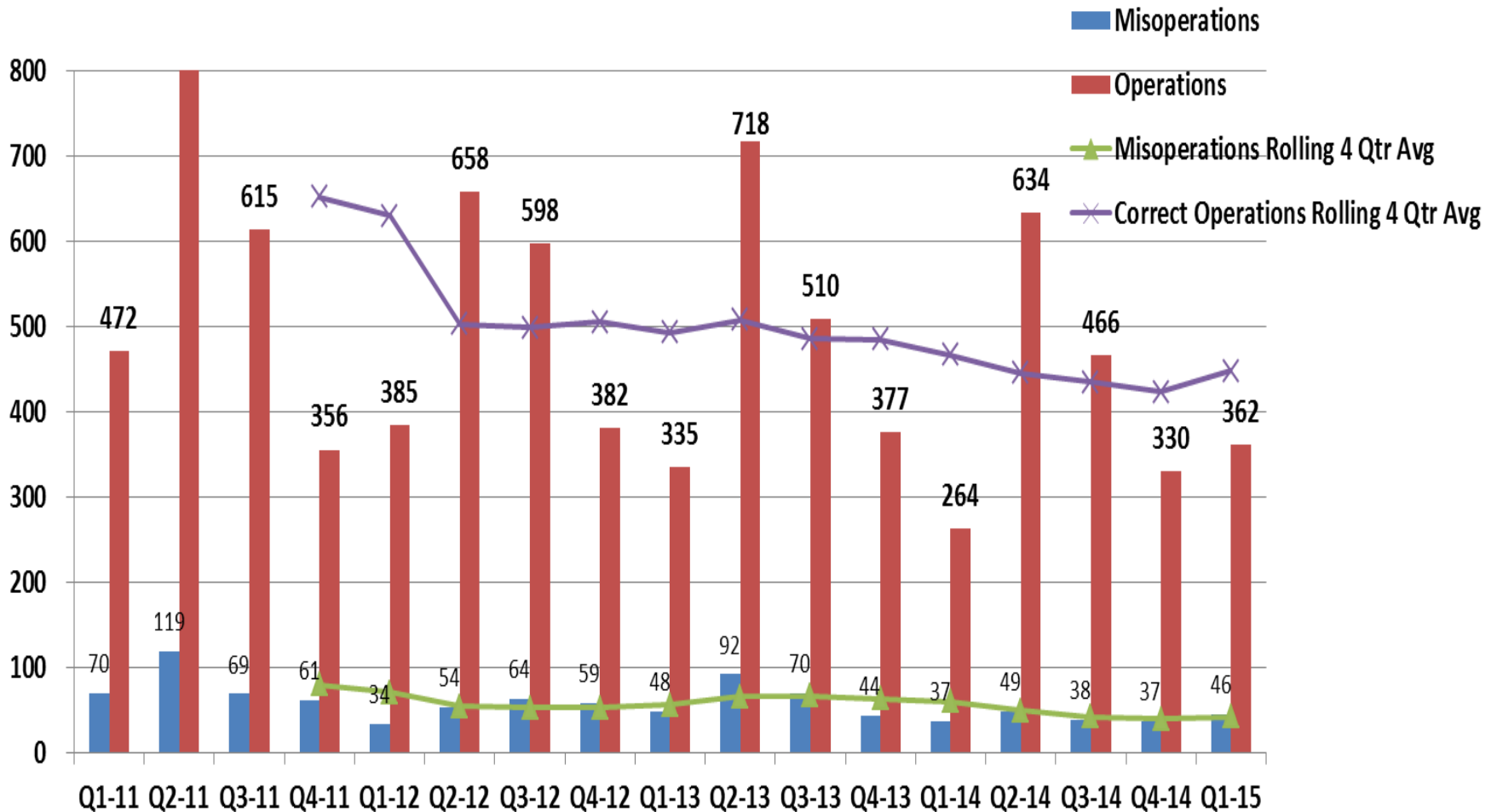
Misoperation Causes as a percentage Q1-14 to Q1-15

Cause(s) of Misoperations as a Percentage



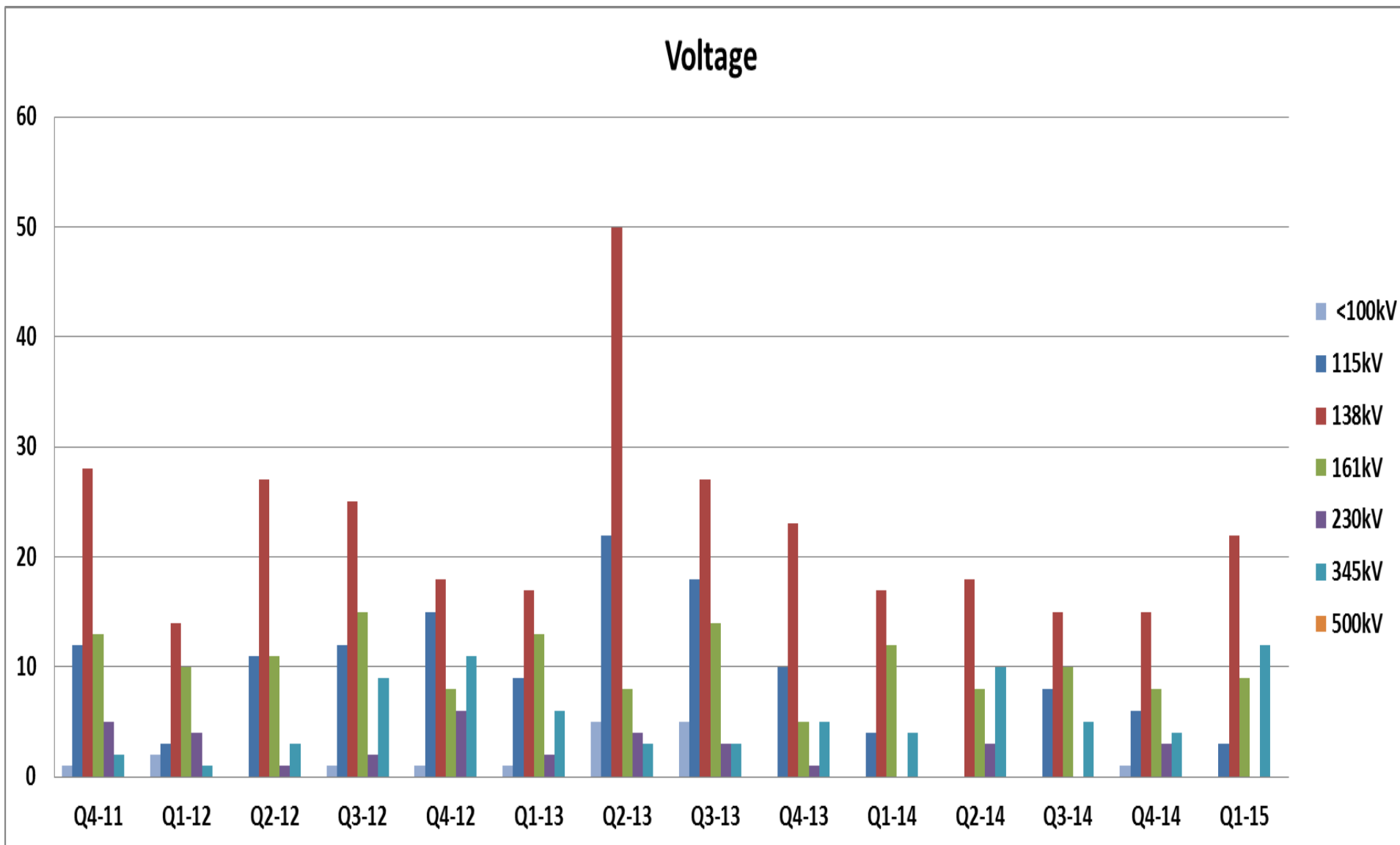
Operation/Misoperation Comparison

Operation/Misoperation



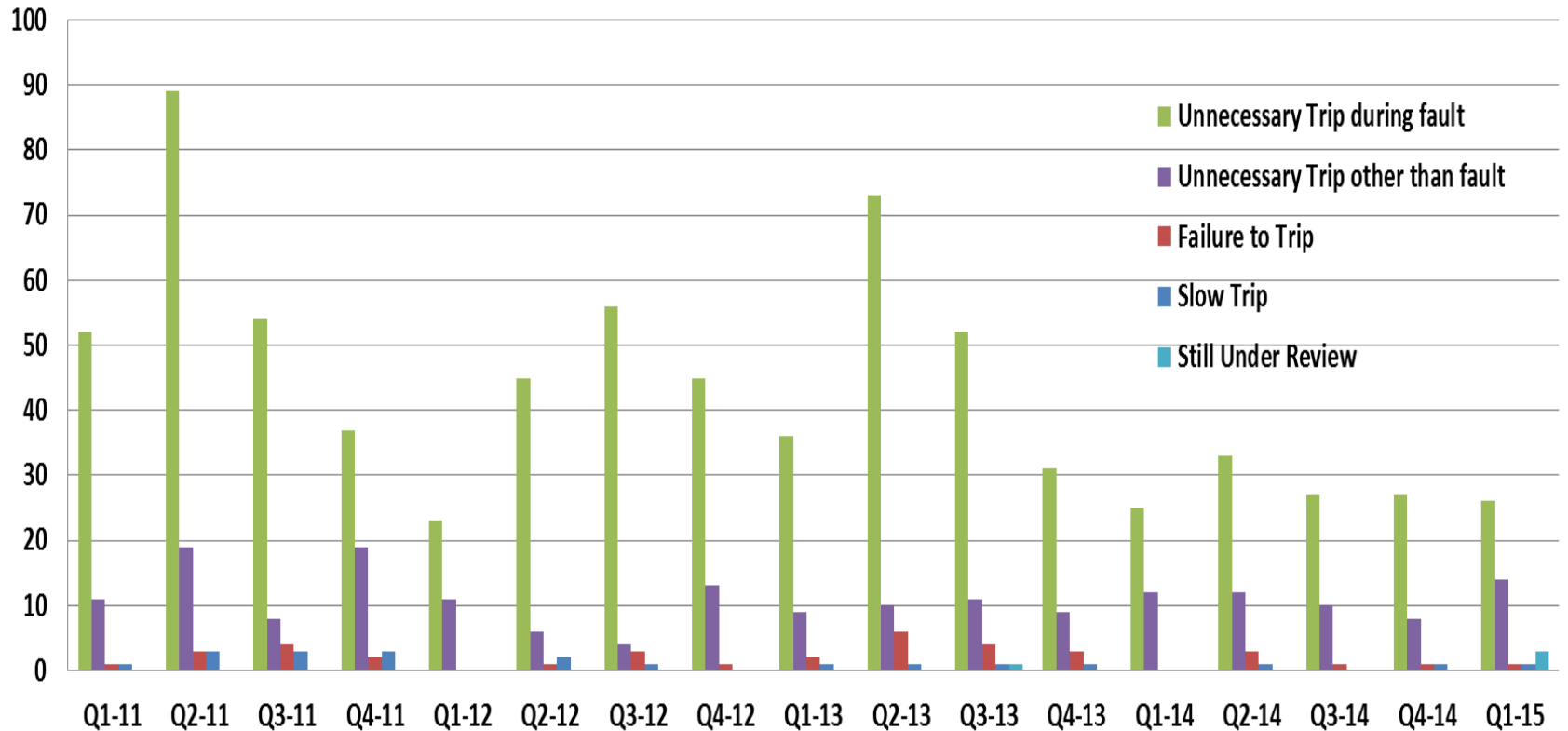
Misoperations by Voltage

Voltage



Misoperations by Type

Misoperation Category



New Standards: October 1, 2015

- [COM-001-2 Communications](#)
- [CIP-014-1 — Physical Security \(NEW\)](#)
- [PRC-006-2 -Automatic Underfrequency Load Shedding](#)

New Standards: January 1, 2016

- [FAC-001-2 — Facility Interconnection Requirements](#)
- [FAC-002-2 — Facility Interconnection Studies](#)
- [NUC-001-3 — Nuclear Plant Interface Coordination](#)

New Standards: April 1, 2016

- [CIP Version 5 Standards](#)
- [PRC-005-3 — Protection System and Automatic Reclosing Maintenance](#)

New Standards: July 1, 2016

- COM-002-4--Operating Personnel Communications Protocols
- MOD-025-2--Verification and Data Reporting of Generator Real and Reactive Power Capability and Synchronous Condenser Reactive Power Capability
- MOD-031-1—Demand and Energy Data
- PER-005-2 Operations Personnel Training
- PRC-004-4 Protection System Misoperation Identification and Correction

New Standards: July 1, 2016 (Cont.)

- [PRC-019-2 Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection](#)
- [PRC-024-2 Generator Frequency and Voltage Protective Relay Settings](#)
- [MOD-033-1 Steady-State and Dynamic System Model Validation](#)

Most Violated Standards

Based on rolling 12 months through 6/30/15 [Represents ~ 91% of total violations]

SPP RE Rank	NERC 12 Month Rank *	Standard	Description	Number of Violations	Risk Factor
1	7	CIP-002	Critical Cyber Asset Identification	23	High/Lower
2	1	CIP-007	Systems Security Management	22	Med./Lower
3	3	CIP-005	Electronic Security Perimeters	13	Med./Lower
4	2	CIP-006	Physical Security - Critical Cyber Assets	11	Med./Lower
5	4	CIP-004	Personnel & Training	6	Med./Lower
6	6	CIP-003	Security Management Controls	5	Med./Lower
7	8	VAR-002	Network Voltage Schedules	5	Med./Lower
8	10	FAC-008	Facility Ratings (includes FAC-009)	4	Med./Lower
9	5	PRC-005	Protection System Maintenance	4	High/Lower
10	9	CIP-009	Recovery Plan for Critical Cyber Assets	3	Med./Lower

* NERC as of June 30, 2014

** Not in NERC Rolling 12 month Top Ten

Renewed Delegation Agreement

- SPP RE executed the Regional Delegation Agreement (RDA) in June
- SPP RE was afforded the same renewal clause as all other regions
 - Initial 5-year term
 - Automatic renewal term of 5 years unless either party provides a one-year termination notice
- NERC filed petition with FERC on June 26 for approval of the Regional Delegation Agreements

Outreach Update

- July 29, *CIP-014 Webinar* [Register](#)
- August 6, *New Standards Webinar* [Register](#)
- Sept. 29-30, *Fall Workshop* in Dallas/webinar [Register](#)
- 235 in-person/webinar registrants for CIP 2015 workshop in Kansas City
 - 92% of attendees rated workshop in top two categories of *excellent or good*
 - [Materials posted](#) and six new videos added:
 - [Preparing for CIP V5 Audit](#)
 - [Transient Cyber Assets & Removable Media](#)
 - [External Routable Connectivity](#)
 - [Identifying BES Cyber Systems](#)
 - [V5 Transition Lessons Learned and FAQ](#)
 - [Low Impact BES Cyber Systems](#)

SPP RE June 2015 Financial Report

July 27, 2015

Debbie Currie
Manager, Regulatory Interface and
Process Improvement
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June 2015 Financial Overview

- **SPP RE began the year with four open staff positions**
 - CIP auditor position filled
 - Authorized hiring an Ops/Planning auditor
 - Two open positions eliminated in 2016 budget
- **Open positions drive a large percentage of actual to budget variance**
 - Impacts personnel expenses, travel expenses and SPP, Inc. overhead charge

June 2015 Financial Overview, cont.

- **Contractor/Consultant/Professional Service costs below budget**
 - **Audit performance improvement by Registered Entities**
 - **Reduction in violations**
 - **Increase in staff experience**
 - **Pre-audit work leading to reduced time onsite or a reduction in audit team size**
 - **No hearings**
 - **Engineering Data Validation Tool**
 - **Request for proposal (RFP) has been released and consultants expected to be selected mid-August**

June 2015 YTD Actuals vs. Budget

- **Total expenses ~\$976k under budget**
 - **Personnel expenses ~\$170k under budget**
 - **Meeting/travel expenses ~\$69k under budget**
 - **Professional services ~\$558k under budget**
 - **SPP, Inc. overhead charge ~\$178k under budget**

Year-End Projection

- **Open positions will continue to drive budget under-run**
- **At the end of the second quarter, SPP RE projects a \$1.6 million budget under-run**
 - **Personnel expenses projected to be ~\$300K under budget**
 - **Meeting/travel expenses ~\$100k under budget**
 - **Professional services ~\$800k under budget**
 - **SPP, Inc. overhead charge ~\$400k under budget**

Questions?

Debbie Currie

**Manager, Regulatory Interface and Process
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SOUTHWEST POWER POOL REGIONAL ENTITY
STATEMENT OF ACTIVITIES
2015 JUNE YTD DRAFT (UNAUDITED)

<i>(In Whole Dollars)</i>	2015 JUNE YTD ACTUAL	2015 JUNE YTD BUDGET	VARIANCE	2015 FULL YEAR PROJECTION	2015 FULL YEAR BUDGET	VARIANCE
Funding						
ERO Funding	4,840,324	4,840,324.00	-	9,680,648	9,680,648	-
Penalty Sanctions	232,250	232,250.00	-	464,500	464,500	-
Total SPP RE Funding	5,072,574	5,072,574	-	10,145,148	10,145,148	-
Testing Fees	-	-	-	-	-	-
Workshops	-	-	-	-	-	-
Interest	1,323	-	1,323	-	-	-
Miscellaneous	-	-	-	-	-	-
Total Funding (A)	5,073,897	5,072,574	1,323	10,145,148	10,145,148	-
Expenses						
Personnel Expenses						
Salaries	1,760,603	1,945,041.00	(184,438)	3,565,450	3,890,082	(324,632)
Payroll Taxes	136,335	148,795.50	(12,461)	275,659	297,591	(21,932)
Benefits	198,336	173,450.00	24,886	390,701	346,900	43,801
Retirement Costs	79,371	77,801.50	1,570	158,366	155,603	2,763
Total Personnel Expenses	2,174,644	2,345,088	(170,444)	4,390,177	4,690,177	(300,000)
Meeting Expenses						
Meetings	69,621	43,250.00	26,371	124,498	86,500	37,998
Travel	205,730	301,500	(95,770)	465,002	603,000	(137,998)
Conference Calls	-	-	-	-	-	-
Total Meeting Expenses	275,350	344,750	(69,400)	589,500	689,500	(100,000)
Operating Expenses						
Contracts & Consultants	270,300	685,300.00	(415,000)	775,806	1,370,600	(594,794)
Office Rent	-	-	-	-	-	-
Office Costs	7,474	4,000.00	3,474	12,979	8,000	4,979
Administrative Costs	-	-	-	-	-	-
Professional Services	92,172	238,822.50	(146,650)	267,460	477,645	(210,185)
Computer Purchase & Maint.	-	-	-	-	-	-
Depreciation	-	-	-	-	-	-
Miscellaneous/ Contingency	-	-	-	-	-	-
Total Operating Expenses	369,946	928,123	(558,177)	1,056,245	1,856,245	(800,000)
Total Direct Expenses	2,819,941	3,617,961	(798,020)	6,035,922	7,235,922	(1,200,000)
SPP Inc. Indirect Expenses	2,108,014	2,286,094.00	(178,080)	4,172,188	4,572,188	(400,000)
SPP RE Indirect Expenses	-	-	-	-	-	-
Total Indirect Costs	2,108,014	2,286,094	(178,080)	4,172,188	4,572,188	(400,000)
Total Expenses (B)	4,927,954	5,904,055	(976,100)	10,208,110	11,808,110	(1,600,000)
Net Change in Assets (A-B)	145,942	(831,481)	977,423	(62,962)	(1,662,962)	1,600,000
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))	4,927,954	5,904,055	(976,100)	10,208,110	11,808,110	(1,600,000)
Change in Working Capital (Total Funding less Total Budget) (A-B-C)	145,942	(831,481)	977,423	(62,962)	(1,662,962)	1,600,000
FTEs*	29.9	32.8	(3)	32.8	32.8	-
Beginning WC - 01/01/2015	3,571,778	1,662,962	1,908,816	3,571,778	1,662,962	1,908,816
Change to WC - 2015 YTD	145,942	(831,481)	977,423	(62,962)	(1,662,962)	1,600,000
Working Capital as of 6/30/15	3,717,720	831,482	2,886,239	3,508,816	-	3,508,816

*Headcount (RE direct staff count as of 6/30/2015 and shared staff YTD billed hours/1880).

SPP RE Metrics Reporting as of June 30, 2015

w/in Target Outside Target but w/in Allotted Range Outside Allotted Range

1. High Impact	2. Maintain Caseload		3. Mit. Accept/Reject		4. Mit. Plan Completion	5. Process Pre-2014 Violations
Accept MP or issue NAVAPS at avg. of <= 100 days	Maintain a one year caseload		Accept/Reject Mit Plans w/in 30 days	Accept/Reject Resubmitted Mit Plans w/in 10 days	Complete Mitigation reviews <= 20 days	Process 100% of Pre-2014 Caseload
Current Avg. Days : 0.00	FFT Settle Dismiss NOCV Comp. Ex Total:	Yr. Passed 50%	Current Avg. Days : 9.38	Current Avg. Days : 4.20	Current Avg. Days : 16.49	% Processed: 38.78%
0.00	9 0 39 0 31 79	Caseload Complete 66.39%	Metric Eligibility : 100.00%	Metric Eligibility : 100.00%		% Metric Period Passed: 50.00%
6. 60 Day Triage	7. Records Close Out	8. Publish Off-Site Audit	9. Publish On-Site Audit	10. BES Request Review	11. Publish: Excep., PDS, Self-cert	12. Incoming Processing
Complete Incoming Compliance Issue Triage in <= 60 days	Average Days to Close Out Violation Record	Publish Off-site w/in 45 days	Publish On-site w/in 65 days	Review requests w/in 10 days	Publish reports w/in allotted timeframe 100% of time or greater	Notify NERC of new violations w/in 5 business days
Current Triage Avg. : 30.87	# of Violations closed out 86	# Published YTD: 4	# Published YTD: 1	Current Avg. Days: 1.00		Current Average Days : 1.87
		# of Reports Published in more than 45 Days: 0	# of Reports Published in more than 65 Days: 0			
		Average Publishing Time <=45 Days	Average Publishing Time <=65 Days			
		Average Publishing Time 45-50 Days	Average Publishing Time 65-75 Days			
		Average Publishing Time >=50 Days	Average Publishing Time >=75 Days			
		Actual Average Days to Publish Off-Site Reports	Actual Average Days to Publish On-Site Reports			
		100%	100%			
13. Cost Control	14. Maintain/Increase Misop Success	15. Cause Code Success Rate	16. Outreach	17. Continuous Improvement Project Goals		
Maintain Costs at or below 2014 projections	90 % success rate or greater over rolling 4 quarter avg.	Achieve 100% success rate in Cause Coding Events	Conduct 3 Workshops, 6 webinars, and 12 newsletter in '15	Milestone Completion to Date		
Current Success Rate: 90.00%	Current Success Rate: 75.00%	Current Success Rate: 75.00%				
CIP O&P			Worksho... Webinars Newslett...	RAI Imp. Comp. Workbook Enforcement Wbk Budget Wkb MRRE Process CMEP Controls		
Remaining Budget Costs to date			Goal Completed	Outstanding Tasks Completed Tasks		

Integration of Variable Generation Task Force (IVGTF)

- The IVGTF presented their final report, “Reliability Considerations for BA Communications with Increased Variable Generation,” which focuses on the importance of forecasting variable generation resources in all operating timeframes. A similar effort is being conducted by a task force developing the IEEE 1547 Standard on distributed energy resources.
- The PC disbanded the task force, in light of the publication of this report, as this was the task force’s last assignment.

NERC Probabilistic Assessments

- NERC Staff provided an update on its ongoing Probabilistic Assessments and its selection of scenarios, done in the context of resource adequacy, identifying a significant impact on Loss of Load Hours and Expected Unserved Energy probabilistic metrics.
- The Probabilistic Assessment Implementation Group plans to apply more rigorous treatment of uncertainties and determine potential impacts to resource adequacy.
- The PC provided recommendations on improvements to the initial results of the assessments, including:
 - Reassessing the Probabilistic Assessment Study Effort using RTO/ISO input,
 - Reviving the Generation and Transmission Reliability Plan Models Task Force (GTRPMTF),
 - Increasing the value of transmission parameters, and
 - Incorporating high-risk weather-related scenarios.
- The PC also questioned who is taking the lead in providing and developing these metrics, and if a more industry-based solution should be explored before any proposed regional-based solution.

Reliability Assessment Subcommittee (RAS)

- The RAS provided an update on its 2015 Summer Reliability Assessment (SRA). The assessment identified that most areas have adequate resources available to cover their projected severe demand cases. A similar seasonal assessment for winter is scheduled to be released in November.
- The RAS also provided an update on the Long Term Reliability Assessment (LTRA), which is scheduled to be released December 1st. Each Regional Entity will provide an overview of their assessment methodology, including their performance evaluations on parameter completeness, timeliness, accuracy, and responsiveness. The PC can submit assessment survey comments to the RAS by July 10th.
- The RAS has moved to a question format for the survey, asking questions pertaining to entity reliability implications, long-term emerging concerns, emerging short-term issues in planning and operations, and mitigating strategies.

- The RAS also proposed that the Short Term Reliability Assessment should be expanded from a summer/winter seasonal outlook to an annual or 18-month outlook.
- The RAS also proposed shifting the responsibility of this assessment to the NERC Operating Reliability Subcommittee, which reports to the NERC OC.

System Operating Limit Standards Periodic Review Team

- The System Operating Limit Standards Periodic Review Team identified that it is addressing issues for several FAC standards. One issue identified is that reliability standards FAC-011-3 and FAC-014-2 do not fit the current operational paradigm. The team is also aligning various requirements with proposed IRO and TOP standards. Inconsistencies with the definition of System Operating Limits (SOLs) will also be addressed through a white paper.

System Analysis and Modeling Subcommittee (SAMS)

- The SAMS is coordinating with DOE to host a workshop on Fault-Induced Delayed Voltage Recovery (FIDVR) and Composite load modeling later this fall.
- The subcommittee is also assisting NERC in compiling a subsynchronous resonance and control interaction reference library.
- SAMS is evaluating future efforts to address developing solar and wind penetration, modeling of a three-phase system for developing detailed generator interaction guidelines, enhancing dynamic load modeling to conduct FIDVR analyses, developing harmonic and flicker analysis guidelines, evaluating Essential Reliability Services Task Force (ERSTF) and IVGTF recommendations, constructing ferroresonance analysis guidelines, coordinating with the North American Synchrophasor Initiative (NASPI) on validating generators using Phasor Measurement Units (PMU) data, and assessing governor modeling, governor data, and real-time performance data.
- In conjunction with the System Protection and Control Subcommittee (SPCS), SAMS continues to prepare its findings and conclusions based on the data collection mandated in FERC Order 754. The report will be reviewed at the next PC meeting for approval.

Modeling Working Group (MWG)

- The MWG identified their future projects, including the establishment of uniform topological element structures and the parameters for exchanging node-breaker models in bus-branch representations.
- The group is creating three models based on a winter peak load, a summer peak load, and a spring/fall low load case.
- NERC reminded the PC that the data collection, requirements, and reporting procedure, as outlined in MOD-032-1 R1 is due July 1, 2015. The remaining requirements of the

SPP Regional Trustee Meeting
July, 27 2015
June 2015 NERC Planning Committee Update

standard becomes effective July 1, 2016. The validation of system models, as outlined in MOD-033-1, goes into effect July 1, 2017.

NERC Compliance and Certification Committee Meeting Notes
June 10 – 11, 2015
Submitted by Jennifer Flandermeyer, SPP RRO Representative
Senior Manager, Reliability Strategy, Kansas City Power & Light

The North American Electric Reliability Corporation (NERC) Compliance and Certification Committee (CCC) convened their quarterly meetings on June 10 and 11, 2015. The following are the most significant highlights from those meetings. Minutes and background materials are posted as follows:
http://www.nerc.com/comm/CCC/Agenda%20Highlights%20and%20Minutes%202013/DRAFT_CCC_Minutes_June%202015%20Meeting.pdf.

CCC Procedural Changes

There was discussion about movement of the procedural documents to Enterprise Wide Risk Committee (EWRC) purview with some version of transparency there. NERC site has a EWRC section now with agenda postings and any materials that are public. Hearing procedures will be going through a revision process at the request of a NERC Trustee. This effort will be ongoing in the near future.

Standard Development Process and Appeals Process

An appeal under Section 8 of the Standard Process Manual on TPL-007 (Geomagnetic Disturbance Events) has been filed with the NERC Board of Trustees (BOT). The Level 1 appeal to the NERC Director of Standards and was dismissed as the issue was found not to demonstrate adverse impact from procedural action or inaction. The Level 2 appeal has been issued to a NERC BOT hearing panel. Going forward, the CCC requested and NERC will provide notice when issues such as this are raised for CCC awareness.

NERC CMEP and ORCP Audit Update

NERC CCC serves as observers and a steering committee for development of criteria to be audited for the two areas of monitoring – Compliance Monitoring and Enforcement Program (CMEP) and Organization Registration and Certification Program (ORCP). The Director of Internal Audit's role is to guide the audit plan, conduct the audits and accomplish the assurance and oversight for the NERC organization. For the past audits, all action items and performance improvements observations have been closed. NERC's internal audit team validated that all of those items were mitigated and / or completed. NERC is ready to start planning for the 2016 audit – commitments are in Q4 2015 planning and execution of the audit in April 2016.

NERC SPM and SAN Audit

NERC CCC serves as observers on the audits of NERC and as a steering committee for development of criteria to be audited for the areas of monitoring – Standards Process Manual (SPM) and Standards Applicable to NERC (SAN). NERC's internal audit team validated that all of those items considered findings in the audits were mitigated and

completed. NERC Standards reported that there was one area of non-compliance and ten process improvement opportunities. All items except two are completely remedied. Background materials were included on this item.

RISC Metrics Report

Background materials were included on this item to discuss Reliability Issues Steering Committee (RISC) metrics. Terry Bilke, past CCC Chair, talked about CCC representation on the RISC. RISC is conducting a Reliability Leadership Summit in DC on August (25th) and is an open meeting. A short follow up on this item will be considered on the September agenda.

Rules of Procedure (RoP) Changes for Risk Based Registration

RoP changes have been proposed and will go to the NERC BOT for approval. The ORCS is recommending approval to the changes and asking for the CCC to approve in accordance with the CCC responsibilities. The CCC approved the proposed changes for the filing RM15-4-000.

Regional Consistency Tool Update

Carter Edge provided an update to the CCC on the Regional Entity Regional Consistency Tool (RCT). The RCT is hosted by EthicsPoint and provides the reports to the registered users from each of the regional entities. Sixteen cases have come through the tool – with seven test cases from an MRRE and nine others submitted by registered entities. They are in various stages of completion but some have been posted as complete. There was an inconsistency identified and it was mostly administrative so corrective action occurred. The cases include items related to compliance audits, self certification, Organization Registration and Certification and then one each in various other areas such as mitigation validation. The Regional Entity Management Group (REMG), Carter Edge, will report to the CCC twice per year – again in September given there are many items that are in process and will determine next report at that time but likely March 2016.

Subcommittee Updates

Nominating Subcommittee: No openings currently.

EROMS: The CCC Stakeholder survey was combined with the ERO Effectiveness Survey. EROMS worked through the Survey results yesterday. The committee is trying to figure out how to work through the data quickly and NERC is already using the data in presentations. The survey was very long and took a long time to complete. EROMS is working on this with NERC to identify ways to shorten the survey. The response rates dropped but believe due to length and concurrent with annual self certification. Biggest improvement in enforcement actions and area of struggle continues to be in organization registration and certification, thus the team will look at this and try to address with statistical analysis.

CPPS: Risk elements webinars have received generally positive feedback and CPPS will provide comments for consideration to NERC. If CCC members have feedback, please submit. RSAWS for review and coordination – there have been 4 or 5 RSAWs submitted

to the team and they have been working with NERC on responses. Some comments may have been inconsequential but will assist with understanding going forward to avoid confusion. Definition around how to submit evidence of compliance is sometimes challenging and so the collaboration with CPPS and NERC is helpful.

ORCS: NERC Staff provided an update on Risk Based Registration Phase 1, Phase 2 and Organization Registration and Certification. There was robust discussion about the removal of the LSE from the registry criteria and functional model with regard to impact to funding for the NERC budget. The CCC asked NERC to go back and review impacts for additional discussion in September's meeting.

NERC Staff Updates

Risk Based Compliance Monitoring and Enforcement Program update was provided with background materials included in the agenda package. There was a request for input regarding longer term effectiveness measures.

NERC will host a fall industry event the week of October 19th on the West Coast combined with the Standards and Compliance Workshop. The Small Entity Internal Controls Evaluation Exercise will also be completed in November. NERC is also performing a two way dialogue opportunity with registered entities one on one for discussions about v5 with NERC and Regional staff. They have been very successful and over eighty entities have taken the opportunity. The next sessions of those are on the calendar and available for registration.

There are several meetings scheduled for select groups partnered with NERC leadership and staff on how NERC will provide guidance to industry on clarification of standards. The meetings will focus on both levels – procedural level of guidance development and provision as well as the guidance currently issued on version 5. The discussion will include how they will be applied and consistent application. CCC members will be participating.

NERC submitted a compliance filing on May 20th to FERC in order to offer an additional methodology to review eligibility for self-logging. The approach is outlined as an attachment in the filing and an overview of the alternative methodology. There were no comments made to the filing. The program document is also posted to the RAI page on the NERC website. NERC assesses the programs and reports at the BOT quarterly. The update will be a report on the diversity of entities participating in the self-logging programs.

NERC provided an update on the revisions to the Rules of Procedure to incorporate risk-based compliance monitoring and enforcement. She noted those revisions are posted on NERC's website.

Registration Impacts from FERC Order 1000

CCC member, Mr. Michael Deloach (AEP) addressed the issue of merchant transmission registration options. He presented several scenarios to detail the implications of the

registration options. He proposed further socialization on this issue to determine if additional steps need to be taken. CCC members discussed an instance where Texas Reliability Entity tracked these types of entities as part of the registration process. CCC members requested this approach be reviewed with Texas Reliability Entity and the ORC team through Terry Brinker and Scott Quenneville should socialize this process with the other regions if it addresses issues relating to merchant transmission registration. This discussion will be taken as a NERC action item to determine how the issue will be handled and what will be next if anything.

Future Meetings

- September 16-17, 2015: New Orleans, LA
- December 2-3, 2015: Atlanta, GA (NERC)
- March 1-2, 2016: Atlanta, GA (NERC)
- June 15-16, 2016: Folsom, CA (CAISO)
- September 13-14, 2016: TBD – located with other standing committees
- December 2016: Arlington, VA (NRECA)

NERC Operating Committee

Report to the SPP Regional Entity Trustee

July 27, 2015

Jim Useldinger, Kansas City Power & Light

Activity Update

A regular meeting of the NERC Operating Committee (OC) was held on June 9-10, 2015 in Atlanta, GA.

OC meeting highlights:

- **Essential Reliability Services Task Force (ERSTF)**

The ERSTF developed an approach and framework for the long-term assessment of essential reliability services to supplement existing resource adequacy assessments. The ERSTF approach is to then develop a series of metrics that can be continually measured for further evaluation.

A draft of **ERSTF Measure Framework Report Version 2**, dated June 2015 was reviewed. This report tracks and provides the necessary level of technical detail guidance for each of the measures being evaluated. It is intended to be a “living” document and won’t be finalized until late 2015.

Measures Finalized in Framework Report 2

- Measure 1- Synchronous Inertial trend (Interconnection)
- Measure 2 – Initial Frequency Deviation following largest contingency
- Measure 3 - Synchronous Inertial trend (Balancing Area)
- Measure 4 – Frequency Response
- Measure 6 – Net Load Ramping Variability
- Measure 7 – System Reactive Capability
- Under development
- Measure 10 – Voltage: Short Circuit System Strength (in place of Measure 8 which was eliminated after review and analysis)
- Industry best practice recommendation
- Measure 5 – Real time inertial model
- Measure 9 – Voltage-System Performance

This report and all ERSTF activity can be found at:

[http://www.nerc.com/comm/Other/Pages/Essential-Reliability-Services-Task-Force-\(ERSTF\).aspx](http://www.nerc.com/comm/Other/Pages/Essential-Reliability-Services-Task-Force-(ERSTF).aspx)

Some of the next steps for the ERSTF include: 1) continue developing the Framework Measures Report Version 2, 2) coordination with NERC External Affairs on developing a simplified document, 3) present preliminary findings and a draft report for comment at the September 2015 OC and PC meetings and 4) issue the final report by December 31, 2015.

- **2015/2016 Winter Operations Panel Discussion**

Three panelists reviewed statistics, discussed observations and lessons learned from the winter of 2014/2015. The panelists summarized the learnings from the 2013/2014 polar vortex winter as applied to the winter of 2014/2015 and discussed changes to winter operational planning going forward. Panelists were:

Tom Hanzlik, Manager System Control – South Carolina Electric and Gas

Sammy Roberts, Manager Power System Operations – Duke Energy

- **System Operator Cognitive Overload**

Dr. Peter Hancock, University of Central Florida was invited to brief the OC on **Problems of Cognitive Workload**. Talking points included that a typical response to cognitive overload is to automate, this leading to possible, if not probable, conclusion that, if you build systems where operators are rarely required to respond, they will rarely respond when required. The load of mental work can be measured using four basic methodologies: 1) primary task performance, 2) subjective report, 3) physiological assessment and 4) secondary task techniques. Dr. Hancock characterized mental workload as “the portion of the operator’s mental capacities actually required to perform a particular task.” Mental effort is “the voluntary matching of mental capacities with that needed to task success.” And, an increase in mental workload often precedes performance failure. The transition from physical to mental work requires the measurement of workload. He also reviewed several tools for assessing operator workload as outlined in the U. S. Air Force’s Subjective Workload Assessment Technique.

- **Eastern Interconnection Data Sharing Network (EIDSN)**

The Operating Reliability Subcommittee through the Data Exchange WG is working closely with NERC staff and the EIDSN to ensure a smooth and reliable transition from NERCnet to new Elnet. The EIDSN was formed by Eastern Interconnection RC’s in January 2014 as a non-profit company that serves 21 entities, including ERCOT and NERC. All companies are connected to Elnet and implementation has been extended to September 2015. The actual transition from NERCnet to Elnet is each node owner’s responsibility.

- **Approving a Field Test Associated with a Reliability Standard**

The leadership of the NERC Technical Committees in concert with the NERC staff and the Standards Committee drafted a revision to the Standard Process Manual to better identify the role of the Technical Committees in reviewing, approving and stopping field tests. The OC approve a motion to endorse the proposed revisions to the Manual.

- The **Reliability Guideline: Generating Unit Operations during Complete Loss of Communications**

A revised guideline was posted in April and no additional comments were received. The OC voted to approve this revised guideline.

- **Committee and Subcommittee Items**

- OC elected Jim Case, Entergy, as its new chair and Lloyd Linke, WAPA, as its new vice-chair, both effective at the conclusion of the June 2015 meeting
- OC Work Plan reviewed, prioritization of work assignments
- Operating Reliability Subcommittee (ORS)
 - GMD Event Reporting – ORS continues to work with NOAA’s Space Weather Prediction Center to improve the dissemination of GMD watches and warnings through the SWPC’s use of the NERC Hotline and the RCIS.
- Resources Subcommittee (RS)
 - Eastern Interconnection Frequency Response Initiative – developing a reliability guideline to provide generator operators guidance on equipment settings that support frequency response (i.e., deadbands, droop, outer loop control, etc.). The guideline would include recommendations for governor testing.
- Event Analysis Subcommittee (EAS)
 - ERO Event Analysis Process Version 3 comments being reviewed, revised report at September meeting.
 - 3rd annual Monitoring and Situational Awareness Conf to be held September 2015.
 - Chair Sam Holeman stepping down, Hassan Hamdar approved as new EAS Chair
- Personnel Subcommittee (PS)
 - An updated Continuing Education Program Administrative Manual V4.3 was approved by OC.

Next Meeting

The next meeting of the Operating Committee will be on September 15-16, 2015 in New Orleans, LA.