

## Agenda

### Board of Trustees

February 8, 2018 | 8:30 a.m.–12:00 p.m. Eastern

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

Hilton Fort Lauderdale Marina  
1881 SE 17<sup>th</sup> Street  
Fort Lauderdale, FL 33316

Conference Room: Grand Ballroom (1<sup>st</sup> Floor)

#### Call to Order

#### NERC Antitrust Compliance Guidelines

#### Introductions and Chair's Remarks

#### Consent Agenda – Approve

##### 1. Minutes\*

- a. December 4, 2017 Conference Call
- b. November 9, 2017 Meeting

##### 2. Committee Membership and Charter Amendments\*

- a. Election and Appointment of NERC Officers
- b. Critical Infrastructure Protection Committee Charter Amendments
- c. Compliance and Certification Committee Charter Amendments
- d. Reliability Issues Steering Committee Membership
- e. Personnel Certification Governance Committee Membership
- f. Operating Committee Membership

#### Regular Agenda

##### 3. Remarks and Reports

- a. Welcome Remarks Speaker Eric Silagy, President and CEO, Florida Power & Light
- b. Remarks by Kevin McIntyre, Chair, FERC
- c. Remarks by Bruce Walker, Assistant Secretary, DOE
- d. Remarks by Murray Doehler, Past Chair, CAMPUT
- e. Interim President's Report
- f. Report on Board of Trustees January 24 and February 6, 2018 Closed Sessions

- g. Board of Trustees Self-Assessment Results

#### 4. Board Committee Reports

- a. Corporate Governance and Human Resources
  - i. 2017 Contribution to Savings and Investment Plan – **Approve**
  - ii. Board of Trustees Vice Chair Compensation – **Approve**
  - iii. [NERC Bylaws Amendments](#) – **Approve and Recommend to Member Representatives Committee for Approval**
  - iv. Proposed 2018 ERO Enterprise Metrics Revisions\* – **Approve**
- b. Compliance
- c. Finance and Audit
  - i. 2017 Year-End Unaudited Statement of Activities – **Accept**
  - ii. Investment Policy Revisions – **Approve**
- d. Enterprise-wide Risk
- e. Technology and Security
- f. Nominating

#### 5. Other Matters and Reports\*

- a. Memorandum of Understanding between British Columbia Utilities Commission, NERC, and WECC – **Approve**
- b. Approvals in Connection with the Termination of the Regional Delegation Agreement with SPP, Inc.
  - i. Termination Agreement for the Regional Delegation Agreement with SPP and NERC – **Approve**
  - ii. Revised Regional Delegation Agreement between NERC and MRO – **Approve**
  - iii. Revised Regional Delegation Agreement between NERC and SERC – **Approve**
- c. Rules of Procedure Amendments - Consolidated Hearing Process – **Approve**
- d. RISC’s ERO Reliability Risk Priorities Report – **Accept**

#### 6. Standards Quarterly Report and Actions\*

- a. PRC-025-2 – Generator Relay Loadability – **Approve**
- b. FAC-501-WECC-2 – Transmission Maintenance – **Approve**
- c. BAL-004-WECC-3 – Automatic Time Error Correction – **Approve**
- d. PRC-004-WECC-2 – Protection System and Remedial Action Scheme Misoperation – **Retire**
- e. VAR-002-WECC-2 – Automatic Voltage Regulators – **Retire**
- f. SERC Regional Reliability Standards Development Procedure – **Approve**

#### 7. Committee Reports\*

- a. Operating Committee

- b. Planning Committee
  - c. Critical Infrastructure Protection Committee
    - i. CIPC 2018 Work Plan – **Approve**
  - d. Member Representatives Committee
  - e. Personnel Certification Governance Committee
  - f. Standards Committee
  - g. Reliability Issues Steering Committee
  - h. Compliance and Certification Committee
    - i. CCC 2018 Work Plan – **Approve**
    - ii. CCC Monitoring Program – CCCPP-012 – **Approve**
  - i. Electricity Subsector Coordinating Council
- 8. Forum and Group Reports\***
- a. North American Energy Standards Board
  - b. North American Transmission Forum
  - c. North American Generator Forum

**9. Adjournment**

\*Background materials included.

# Antitrust Compliance Guidelines

## I. General

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

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

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

## II. Prohibited Activities

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

- Discussions involving pricing information, especially margin (profit) and internal cost information and participants' expectations as to their future prices or internal costs.
- Discussions of a participant's marketing strategies.
- Discussions regarding how customers and geographical areas are to be divided among competitors.
- Discussions concerning the exclusion of competitors from markets.
- Discussions concerning boycotting or group refusals to deal with competitors, vendors or suppliers.

- Any other matters that do not clearly fall within these guidelines should be reviewed with NERC's General Counsel before being discussed.

### **III. Activities That Are Permitted**

From time to time decisions or actions of NERC (including those of its committees and subgroups) may have a negative impact on particular entities and thus in that sense adversely impact competition. Decisions and actions by NERC (including its committees and subgroups) should only be undertaken for the purpose of promoting and maintaining the reliability and adequacy of the bulk power system. If you do not have a legitimate purpose consistent with this objective for discussing a matter, please refrain from discussing the matter during NERC meetings and in other NERC-related communications.

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

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

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

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

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

# DRAFT Meeting Minutes

## Board of Trustees

December 4, 2017 | 11:00 a.m. – 12:00 p.m. Eastern

### Conference Call

Roy Thilly, Chair, called to order the duly noticed open meeting of the Board of Trustees (Board) of the North American Electric Reliability Corporation (NERC) on December 4, 2017, at 11:00 a.m. Eastern Time, and a quorum was declared present. The agenda is attached as Exhibit A.

Present at the meeting were:

### Board of Trustees Members

Roy Thilly, Chair  
Kenneth DeFontes, Vice Chair  
Charles A. Berardesco, Interim President and Chief Executive Officer  
Robert G. Clarke  
Frederick W. Gorbet  
David Goulding  
George S. Hawkins

### Board of Trustees Members Not Present

Janice B. Case  
Jan Schori

### NERC Staff

Tina Buzzard, Associate Director to the Office of the President and CEO  
Thomas Coleman, Director of Reliability Assessment  
Mark Lauby, Senior Vice President and Chief Reliability Officer  
Sonia C. Mendonça, Vice President, Acting General Counsel and Corporate Secretary, and Director of Enforcement  
John Moura, Director of Reliability Assessment and System Analysis  
Elliott Nethercutt, Senior Technical Advisor

### NERC Antitrust Guidelines

Mr. Thilly directed the participants' attention to the NERC Antitrust Compliance Guidelines included with the advance meeting materials, and directed that any questions regarding antitrust compliance or other related matters be directed to Ms. Mendonça.

### 2017 Long-Term Reliability Assessment

Mr. Thilly thanked the Trustees who had provided comments on the draft 2017 Long-Term Reliability Assessment report (LTRA) that had been included in the advance meeting materials. He also thanked ERO

Enterprise staff and industry reviewers for all of their efforts. Mr. Moura introduced the LTRA and provided an overview of the report and key issues. Mr. Coleman reviewed the requirement for the LTRA in the NERC Rules of Procedure and the approach taken in developing the report.

Mr. Coleman also outlined the key findings and reviewed the LTRA recommendations. The Board discussed the LTRA, including the executive summary, recommendations, and overall body of the report.

After discussion, and upon motion duly made and seconded, the Board accepted the LTRA, endorsed the recommendations contained therein, and authorized its publication.

### **Adjournment**

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

Submitted by,



Sonia C. Mendonça  
Acting Corporate Secretary

# DRAFT Minutes

## Board of Trustees

November 9, 2017 | 8:30 a.m.–12:00 p.m. Central

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

### Call to Order

Mr. Roy Thilly, Chair, called to order the duly noticed open meeting of the Board of Trustees (the “Board”) of the North American Electric Reliability Corporation (“NERC” or the “Corporation”) in New Orleans, Louisiana, on November 9, 2017, at 8:30 a.m. Central, and a quorum was declared present. The agenda is attached as **Exhibit A**.

Present at the meeting were:

### Board Members

Roy Thilly, Chair  
Janice B. Case  
Gerald W. Cauley, President and Chief Executive Officer  
Robert G. Clarke  
Kenneth W. DeFontes, Jr.  
Frederick W. Gorbet  
David Goulding  
George S. Hawkins  
Jan Schori

### NERC Staff

Charles A. Berardesco, Senior Vice President, General Counsel, and Corporate Secretary  
Tina Buzzard, Associate Director  
Tom Coleman, Director of Reliability Assessment  
Howard Gugel, Senior Director of Standards  
Stan Hoptroff, Vice President, Chief Technology Officer, and Director of Information Technology  
Scott Jones, Vice President, Chief Financial and Administrative Officer, and Corporate Treasurer  
Mark G. Lauby, Senior Vice President and Chief Reliability Officer  
Bill Lawrence, Senior Director of E-ISAC  
Ken McIntyre, Vice President and Director of Standards and Compliance  
Sonia Mendonça, Vice President, Deputy General Counsel and Director of Enforcement  
James Merlo, Vice President and Director of Reliability Risk Management  
Timothy E. Roxey, Vice President and Chief E-ISAC Operations Officer  
Marcus H. Sachs, Senior Vice President and Chief Security Officer  
Janet Sena, Senior Vice President and Director of Policy and External Affairs  
Michael Walker, Senior Vice President and Chief Enterprise Risk and Strategic Development Officer

### **NERC Antitrust Compliance Guidelines**

Mr. Thilly noted the public nature of the meeting and directed the participants' attention to the NERC Antitrust Compliance Guidelines included with the advance meeting materials, and stated that any additional questions regarding these guidelines should be directed to Mr. Berardesco.

### **Welcoming Remarks**

Mr. Thilly welcomed all of the attendees, including Leo Denault of Entergy Corporation, Travis Fisher of the Department of Energy ("DOE"), Commissioner Cheryl LaFleur and David Ortiz of the Federal Energy Regulatory Commission ("FERC"), Murray Doehler of CAMPUT, and Asim Haque, Chair of the Ohio Public Utilities Commission ("Ohio PUC"). Mr. Thilly reported that before the open meeting, as is its custom, the Board met in closed session with NERC management, and subsequently in executive session without NERC management, to review NERC management activities.

### **Consent Agenda**

Upon motion duly made and seconded, the Board approved the consent agenda as follows:

### ***Minutes***

The draft minutes for the August 10, 2017 meeting were approved as presented to the Board at this meeting.

### **Committee Membership Appointments and Charter Revisions**

#### ***Operating Committee***

**RESOLVED**, that the Board hereby approves the amended Operating Committee ("OC") charter, substantially in the form presented to the Board at this meeting, to replace the OC charter approved by the Board on February 9, 2017.

**FURTHER RESOLVED**, that the Board hereby appoints the following individual to the OC, for a term of two years:

- Greg Darnell of Southern Company, representing Electricity Marketer

#### ***Standards Committee***

**RESOLVED**, that the Board hereby approves the appointments of the following individuals to the Standards Committee, each for a term of two years:

- Andrew Gallo of City of Austin dba Austin Energy to serve as Chair
- Amy Casuscelli of Xcel Energy to serve as Vice Chair

#### ***Compliance and Certification Committee***

**RESOLVED**, that the Board hereby approves the appointments of the following individuals to serve as Compliance and Certification Committee ("CCC") representatives, each for a term of three years:

- Steve McElhaney of Cooperative Energy, representing Regional Entity

- Jodirah Green of ACES Power, representing Electricity Marketer

**FURTHER RESOLVED**, that the Board hereby approves the re-appointment of the following individual to serve as CCC representative, for a term of three years:

- Lisa Milanes of California Independent System Operator, representing Regional Entity

#### ***Critical Infrastructure Protection Committee***

**RESOLVED**, that the Board hereby approves the appointments of the following individuals to the Critical Infrastructure Protection Committee, for a term of two years:

- Marc Child to serve as Chair, representing Great River Energy
- David Revill to serve as Vice Chair, representing Georgia Systems Operations Corporations,
- David Grubbs to serve as Vice Chair, representing the City of Garland/Garland Power and Light, replacing Nathan Mitchell

#### ***Reliability Issues Steering Committee***

**RESOLVED**, that the Board hereby approves the appointment of Andrew Gallo to serve as the Standards Committee representative to the Reliability Issues Steering Committee, replacing Brian Murphy for the remainder of Mr. Murphy's term ending on January 31, 2018.

#### **Regular Agenda**

##### ***Remarks by Leo P. Denault, CEO, Entergy Corporation***

Mr. Cauley introduced Mr. Denault, who thanked attendees and welcomed them to New Orleans. Mr. Denault recommended the city's World War II museum, acknowledging the many veterans at Entergy. He commented on Entergy's work at the confluence of reliability and security, noting that approximately forty percent of Entergy's customers are industrial. Mr. Denault stated that changing technologies are impacting reliability issues, and the increasing amount of customer data has implications concerning data security. He commended NERC for its continued work in a rapidly changing environment.

##### ***Remarks by Travis Fisher, Senior Advisor, DOE***

Mr. Cauley introduced Mr. Fisher, attending for Bruce Walker and Patricia Hoffman of the DOE. Mr. Fisher commented on the DOE's continuing focus on resilience and the DOE's engagement in GridEx. He noted the DOE's restoration work in Puerto Rico, as well as the DOE's interest in longer-term, more reliable solutions for the island.

##### ***Remarks by Cheryl LaFleur, Commissioner, FERC***

Ms. LaFleur noted her attendance to the Board meeting in New Orleans five years prior, and commented that much had changed since then. She expressed her appreciation for attending with David Ortiz, Matthew Vlissides, Cristie DeVoss, and Roger Morie of FERC. Ms. LaFleur expressed further appreciation to all of the 1,300 FERC employees who continued to work diligently despite the FERC's lack of a quorum. She provided comments around resilience, noting a common sense understanding of what the term means. Ms. LaFleur noted that resilience is linked to NERC's mission to avoid cascading outages, and stated that the ERO Enterprise is the only continent-wide entity with the engineering expertise to handle

the task. She noted that the ERO Enterprise should be careful to not include political considerations in its assessment activities.

***Remarks by Asim Haque, Chair, Ohio PUC***

Mr. Thilly introduced Mr. Haque, asking him to speak about his role from a state perspective. Mr. Haque expressed thanks to NERC, in particular to Mr. Cauley and Ms. Sena, for their welcoming and open approach. He stated that the state commissions are closest to actual customers, and thus are very concerned about costs. Mr. Haque noted the commissions look to NERC for technical expertise, but cautioned about including any political considerations in its work.

***Remarks by Murray Doehler, CAMPUT***

Mr. Doehler expressed his appreciation in attending, and referenced the upcoming Veteran's Day. He commented that CAMPUT has formed a NERC committee, and provided his support for the comments made by Ms. LaFleur and Mr. Haque.

***President's Report***

Mr. Cauley acknowledged the 52<sup>nd</sup> anniversary of the 1965 blackout which set the stage for NERC. He noted the upcoming fourth GridEx exercise that will include Canadian and Mexican authorities and members of the Electricity Subsector Coordinating Council. Mr. Cauley noted comments on NERC's role, and stated that NERC's data and analysis were appropriately considered in recent policy maker activity. He stated that NERC is careful not to inappropriately cross over into policy issues, but that NERC has an obligation to look more deeply into essential reliability services. As an example, Mr. Cauley noted that the upcoming gas report will identify emerging risks, but will not dictate policy outcomes. He further noted that the ERO Enterprise has matured its approach to coordinated long-term strategy planning, including budgets, cooperation with the Regional Entities, and excellence in Standards and Compliance. Mr. Cauley commented that NERC's focus areas include excellence in its regulatory role, and continuing to identify existing and emerging risks with particular attention to rapid changes in the grid, security, and resilience.

**Report on Semiannual Meeting of NERC Trustees and Regional Entity Boards**

Mr. Thilly reported on the semiannual meeting with ERO Enterprise board leadership, noting the meeting is an important part of the mission to be a single ERO Enterprise. He stated the meeting included a discussion of program alignment, strategic planning and coordination of budget processes between NERC and the Regional Entities, and governance and oversight of the Compliance Monitoring and Enforcement Program (CMEP) for purposes of ERO Enterprise credibility.

**Report on Board of Trustees November 7, 2017 Closed Session**

Mr. Thilly reported on the closed session with management on compliance, personnel, and contract matters. He noted the resilience discussion at the Member Representatives Committee ("MRC") and policy comments, and the requested work by the Reliability Issues Steering Committee ("RISC") in defining resilience. Mr. Thilly commented that resilience is already built into what NERC does, and NERC is not looking to expand scope but rather to examine resilience more closely. The Board requested that the RISC report back with a framework on how to think about resiliency in the context of reliability.

**Board Committee Reports**

### ***Corporate Governance and Human Resources Committee***

Mr. Clarke, Committee Chair, summarized the November 2, 2017 meeting, and noted that the 2017 Board and MRC effectiveness surveys are due December 15, 2017. He commented that the Corporate Governance and Human Resources Committee (the “CGHRC”) recommended the corporate metrics for approval, and hired an executive compensation consultant.

### ***Compliance Committee***

Ms. Case, Committee Chair, provided an update on implementation of risk-based CMEP, emphasizing the Committee’s focus on the most serious risks and violations and streamlining processing of minor risk violations. She noted the high rate of self-reporting and enhanced timely mitigation. Ms. Case also noted increased scrutiny of major violators, including meeting with registered entities’ leadership, and described plans for continued reporting to stakeholders on program alignment

### ***Finance and Audit Committee***

Ms. Schori, Committee Chair, reported the Committee met with Grant Thornton and approved fee agreements. She noted the Committee approved principles for oversight of financial internal control audits. Upon motion duly made and seconded, the following resolution was approved:

**RESOLVED**, that the Board, upon recommendation of the Finance and Audit Committee, hereby accepts the NERC Third Quarter 2017 Unaudited Statements of Activities, as presented to the Board at this meeting.

### ***Enterprise-wide Risk Committee***

Mr. Goulding, Committee Chair, summarized the recent meeting of the Committee, including a review of the 2018 audit plan and three-year plan, along with a CCC update.

### ***Standards Oversight and Technology Committee***

Mr. DeFontes, Committee Chair, reported the Compliance Monitoring and Enforcement Program (“CMEP”) Technology Project update, including the status of bids and Board approval. He expressed the Committee’s support for the 2018-2020 Reliability Standards Development Plan. In the previous day’s meeting, Mr. Hoptruff provided an update on other IT projects for 2017 and 2018 and the technology review policy that will be used to evaluate projects. Mr. Gugel reviewed the Standards Efficiency Review project, noting a goal of a twenty-percent reduction in requirements.

### ***Nominating Committee***

Mr. Gorbet, Committee Chair, summarized the Committee’s report at the MRC. He discussed the Committee’s composition and noted two existing trustees will be re-nominated. Mr. Gorbet reported that the Committee interviewed eight individuals for two open spots, and the Committee will finalize nominations in December.

### **Standards**

Mr. Gugel presented on the following Reliability Standards-related projects. After discussion, and upon motions duly made and seconded, the Board approved the following resolutions:

### ***2018-2020 Reliability Standards Development Plan***

**RESOLVED**, that the Board hereby approves the proposed 2018-2020 Reliability Standards Development Plan, as presented to the Board at this meeting.

**FURTHER RESOLVED**, that NERC management is hereby authorized to make the appropriate filings with applicable regulatory authorities, and take such further actions and make such further filings as are necessary and appropriate to effectuate the intent of the foregoing resolutions.

***TPL-007-2 – Geomagnetic Disturbance Mitigation***

**RESOLVED**, that the Board hereby adopts proposed Reliability Standard TPL-007-2, substantially in the form presented to the Board at this meeting.

**FURTHER RESOLVED**, that the Board hereby approves the associated implementation plan, substantially in the form presented to the Board at this meeting.

**FURTHER RESOLVED**, that the Board hereby approves the Violation Risk Factors and Violation Severity Levels for the proposed Reliability Standard, substantially in the form presented to the Board at this meeting.

**FURTHER RESOLVED**, that the Board hereby approves the proposed retirement of Reliability Standard TPL-007-1, as presented to the Board at this meeting.

**FURTHER RESOLVED**, that NERC management is hereby authorized to make the appropriate filings with ERO governmental authorities and take such further actions and make such further filings as are necessary and appropriate to effectuate the intent of the foregoing resolutions.

**Other Matters and Reports**

***ERO Enterprise Long-Term Strategy, Operating Plan, and 2018 Metrics***

Mr. Thilly noted a full report was done at the MRC, and thanked staff across the ERO Enterprise for their work. Upon motion duly made and seconded, the Board approved the following resolutions:

**RESOLVED**, that the Board hereby approves the proposed ERO Enterprise Long-Term Strategy, Operating Plan, and 2018 Metrics, in substantially the form as presented to the Board at this meeting, together with such changes as are approved by the Chief Executive Officer and reported to the Board.

***Compliance Monitoring and Enforcement Program Technology Project***

Mr. DeFontes reported that Mr. Hoptruff had presented the CMEP Technology Project to the SOTC, which had recommended approval. Upon motion duly made and seconded, the Board approved the following resolutions:

**WHEREAS**, the CMEP Technology Project (the “Project”) is a strategic initiative designed to support the ERO Enterprise as it continues to evolve as a risk-informed regulator; and

**WHEREAS**, the Project is designed to further the ERO Enterprise goals of implementing a risk-informed CMEP, reducing known risks to reliability, and improving the efficiency and enforcement of the ERO; and

**WHEREAS**, NERC management has summarized for the Board's Standards Oversight and Technology, Finance and Audit, and Compliance Committees the expected capital investment and other significant terms and conditions for the Project; and

**WHEREAS**, the Board has determined to approve the Project and to authorize NERC management to enter into appropriate agreements to implement the Project; and

**NOW, THEREFORE, BE IT RESOLVED**, that the Board of Trustees, upon recommendation of the Standards Oversight and Technology Committee, hereby approves the Project, consistent with the foregoing and the information provided to the Board and the above-referenced Committees;

**FURTHER RESOLVED**, that each of the Chief Executive Officer, General Counsel, and Chief Financial Officer, are hereby authorized to execute and deliver, on behalf of NERC, agreements relevant to the Project in a form substantially consistent with the foregoing and the information provided to the Board and its Committees.

#### ***Special Assessment: Bulk Power System Impacts Due to Severe Disruptions on the Natural Gas System***

Tom Coleman presented the report, and thanked the Board for its review and for comments from the MRC, Planning Committee, and Operating Committee. The report stemmed from the Aliso Canyon storage facility outage, underscoring the risk to generation. Mr. Coleman outlined the process for developing the report. Mr. Cauley noted that the report does not endorse specific market solutions. He also requested for NERC Legal to review the report for CEII prior to release. Upon motion duly made and seconded, the Board approved the following resolution:

**RESOLVED**, that the Board, hereby accepts the NERC Special Assessment "Bulk Power System Impacts due to Severe Disruptions on the Natural Gas System," substantially in the form presented to the Board at this meeting.

#### ***Rules of Procedure Amendment – Registered Ballot Body Criteria***

Mr. Gugel presented the amendment, discussing comments by stakeholders. Upon motion duly made and seconded, the Board approved the following resolutions:

**RESOLVED**, that the Board hereby approves the proposed amendments to Appendix 3D to the NERC Rules of Procedure, as presented to the Board at this meeting.

**FURTHER RESOLVED**, that NERC management is hereby authorized to make the appropriate filings with ERO governmental authorities and take such further actions and make such further filings as are necessary and appropriate to effectuate the intent of the foregoing resolution.

#### ***NERC Membership Roster***

Mr. Berardesco summarized the proposed upcoming membership renewal process, required by the NERC Bylaws, referencing the materials included in the advance agenda package. Upon motion duly made and seconded, the Board approved the following resolution:

**RESOLVED**, that the Board, pursuant to Article II, Section 2 of the NERC Bylaws, hereby establishes March 3, 2018, as the date by which all NERC members must submit their registration renewals, and otherwise authorizes the plan submitted by NERC management for the renewal of NERC membership by all NERC members.

#### ***Southwest Power Pool Regional Entity (“SPP RE”) Transition Update***

Mr. McIntyre reported updates have been presented through industry webinars, a presentation at the SPP RE workshop, and correspondence with registered entities through FAQs on a weekly basis. He noted all registered entities have provided their response regarding transitioning, and NERC is working on analysis. Mr. McIntyre discussed the ongoing plans, including public posting, and presenting a recommendation to the Board in February.

#### ***Geomagnetic Disturbance Research Plan Update***

Mr. Moura provided an update on the research plan, including an agreement between NERC and Electric Power Research Institute, the general plan moving forward, and a ROP Section 1600 data request to be presented to the Board for approval in 2018.

#### ***Update to Inverter Resource Performance Task Force and Level 2 Industry Recommendation***

Mr. Merlo reviewed the results of the Level 2 alert, noting key findings and vendors’ recommendations of remediation based on lessons learned from previous inverter trips.

#### ***Supply Chain Standards Implementation Update***

Mr. McIntyre provided an update on activities since August, and reviewed actions based on the Board’s resolutions related to the supply chain Reliability Standards. He highlighted work with stakeholders, associations, and forums to highlight supply chain risks. He outlined next steps and future follow-up with the Board.

#### ***E-ISAC Quarterly Update***

Mr. Sachs presented the quarterly E-ISAC update, referencing the materials included in the advance agenda package, including an update on member engagement and CRISP engagement. He provided an update on CRISP agreements with the Regional Entities, and on the Kaspersky issue and related NERC alert. Mr. Sachs thanks Mr. Hoptroff for his team’s support of the E-ISAC. Mr. Lawrence provided an update on the portal, CHIRP initiative, GridSecCon, and GridEx.

#### **Committee Reports**

Representatives of the Standing Committees provided reports to the Board highlighting items from their written reports, which had been included with the advance meeting materials.

### ***Operating Committee***

Lloyd Linke, Committee Chair, referenced the written report. He expressed his appreciation for the Board approval of the new Committee charter, and highlighted the Committee's work on the ERO Enterprise strategic plan.

### ***Planning Committee***

Brian Evans-Mongeon, Committee Chair, referenced the written report, and complimented the work of staff and committees on the Long-Term Reliability Assessment. He noted the Committee is completing work on the scope of Essential Reliability Services, and working on a presentation with Regional Entities on Distributed Energy Resources and Under Frequency Load Shedding.

### ***Critical Infrastructure Protection Committee***

Marc Child, Committee Chair, summarized the Committee's work on guidelines, and the formation of a working group to address supply chain and remote access issues.

### ***Member Representatives Committee***

John Twitty, MRC Chair, summarized the issues that had been discussed at the MRC meeting on the previous day, and noted the election of Jason Marshall and Gregory Ford as the new MRC leadership.

### ***Personnel Certification Governance Committee***

Mike Anderson, Committee Vice Chair, referenced the written report, providing an update on recent activities. He noted the personnel certification program has a long history, and the Committee is focused on further strengthening the program.

### ***Standards Committee***

Brian Murphy, Committee Chair, noted that the written report had been reviewed the prior day. He thanked the Board and NERC staff for their support, and expressed his confidence in the future Committee leadership. Mr. Thilly thanked Mr. Murphy for his service and leadership, and his key role in strengthening the standards process.

### ***Reliability Issues Steering Committee***

Lloyd Linke, RISC member, stated the Committee received feedback on the RISC report, and that the comment period is still open. He noted the upcoming solicitation of nominations for the Committee. Mr. Thilly noted the excellent work of the RISC informed NERC planning processes.

### ***Compliance and Certification Committee***

Patti Metro, Committee Chair, noted the Committee will transmit required NERC self-certifications to the Board and independent auditors. She noted that items for approval will be submitted to the Board for the February meeting.

### ***Electricity Subsector Coordinating Council***

Scott Aaronson, ESCC Secretary, referenced the written report, highlighting ESCC's focus on Puerto Rico restoration efforts. He noted significant progress on E-ISAC development, commending staff leadership

and the Board's support through resources. Mr. Aaronson emphasized the importance of resilience as part of reliability, and of learning from real-life experiences for future work.

### **Forum and Group Reports**

#### ***North American Energy Standards Board ("NAESB")***

Michael Desselle, NAESB Chair, referenced the written report, and noted continued coordination with NERC staff.

#### ***North American Transmission Forum***

Tom Galloway, Forum CEO, summarized the Forum's work on industry resiliency, cybersecurity, and enhancing transparency on certain work as appropriate.

#### ***North American Generator Forum***

Allen Shriver, Forum COO, reported the Forum's work with equipment vendors on modifications to inverters.

### **Adjournment**

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

Submitted by,



Charles A. Berardesco  
Corporate Secretary

## **Critical Infrastructure Protection Committee Charter Changes**

### **Action**

Approve

### **Summary**

The CIPC revised its charter to acknowledge that the CIPC will produce Implementation Guidance and security guidelines as key deliverables. In addition, the CIPC added the Institute of Electrical and Electronics Engineers to the list of collaborative organizations, while creating a new non-voting member class referred to as Partner Members, which may include the following organizations:

- Federal Energy Regulatory Commission
- US Department of Homeland Security
- US Department of Energy
- US Department of Energy Laboratories
- Public Safety Canada
- Natural Resources Canada
- Oil & Natural Gas subsector
- Telecomm sector
- Financial Services sector
- Critical manufacturing sector
- Water sector

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# Critical Infrastructure Protection Committee Charter

January 2018

**RELIABILITY | ACCOUNTABILITY**



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# Chapter 1: General Functions of the CIPC

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## Advisory Panel to the NERC Board

The Critical Infrastructure Protection Committee (CIPC) will support the objectives of the North American Electric Reliability Corporation (NERC) Board of Trustees (Board) and standing committees by serving as an expert advisory panel on physical and cyber security, focusing on operations, compliance, and policy matters. The CIPC will advance the reliability of the critical bulk electricity infrastructure of North America by addressing the technical and organizational dimensions of security through collaboration and sharing of best practices and by identifying and quantifying emerging risks.

## Coordination and Communications

1. Coordinate and communicate with those organizations responsible for both physical and cyber security in all electric industry segments, including, but not limited to, the Electricity Information Sharing and Analysis Center (E-ISAC), American Public Power Association (APPA), Canadian Electricity Association (CEA), Edison Electric Institute (EEI), Electric Power Research Institute (EPRI), Electric Power Supply Association (EPSA), ISO/RTO Council (IRC), National Rural Electric Cooperative Association (NRECA), North American Energy Standards Board (NAESB), the Nuclear Energy Institute (NEI), the Institute of Electrical and Electronic Engineers (IEEE), and the NERC Regional Entities (REs).
2. Coordinate and communicate with the other critical infrastructure sectors as appropriate.
3. Liaise with government agencies on critical infrastructure protection matters.
4. Coordinate with the other NERC committees and working groups to assure the highest degree of collaboration possible.

## Information Sharing

Facilitate and advocate information sharing for critical infrastructure protection among industry segments and with governments.

CIPC actions, documents, and recommendations will be distributed to the NERC committees and working groups and posted for industry comments (assuming sensitivity permits), at the discretion of the CIPC. NERC committees, working groups, and industry comments will be considered by the CIPC prior to forwarding actions or documents to the NERC Board for approval, if required.

## Security Guidelines

Develop, periodically review, and revise security guidelines and implementation guidance. CIPC shall issue documents in accordance with the process described in Appendix 1.

## NERC Reliability Standards

Assist in the development and implementation of NERC Reliability Standards by:

1. Assisting the standards process by providing expert resources in support of the development of NERC Reliability Standard Authorization Requests and Reliability Standards;
2. Providing a forum for education, sharing of views, and informed debate of NERC Reliability Standards; and
3. Facilitating the implementation of NERC Reliability Standards by developing guidance documents, hosting workshops, and performing other activities.

## Chapter 2: Membership

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### Owners and Operators

The majority of the members of CIPC will be representatives of the registered entities that own and/or operate the Bulk Electric System (BES) infrastructure of North America.

### Expectations and Requirements

Voting members of the CIPC are expected to:

1. Bring subject matter expertise to the CIPC;
2. Be knowledgeable about physical and cyber security practices and challenges in the electricity sector;
3. Attend and participate in all CIPC meetings;
4. Express their own opinions at committee meetings, but also represent the interests of their Regions;
5. Discuss and debate interests rather than positions;
6. Voting members must chair or co-chair a CIPC Work Group or Task Force at least once within a two-year term;
7. Complete assigned Committee, Task Force, and Working Group assignments; and
8. Maintain, at a minimum, a Secret Clearance, or to the extent not already obtained, apply for a Secret Clearance.

### Terms

Terms are expected to be a minimum of two years.

### Selection

1. There will be a minimum total of thirty voting members. The maximum will be thirty-two, as described below.
2. A minimum of twenty-four voting members shall be representatives from NERC registered entities. There shall be at least three such members from each of the eight NERC REs selected by the registered entities from that NERC RE. The three members from each NERC RE must collectively have expertise in three technical areas – physical security, cyber security, and operations, as defined below:
  - a. Physical Security – Members are primarily focused on the physical protection of electricity sector facilities. Members should have a background in corporate or physical security at an asset owner utility, ISO or RTO.
  - b. Cyber Security – Members are technical experts in one or more areas of control systems security, enterprise information security, or systems architecture and design that affect the reliable operation of the BES.
  - c. Operations – Members are primarily focused on system operations. Members should have a background in supervisory control and data acquisition (SCADA), Energy Management System (EMS), substation or generating plant control equipment operation and administration.
3. A minimum of two voting members (more if required as stated later in this paragraph) selected by CEA. The CIPC shall contain the number of Canadian voting representatives equal to the percentage of the Net Energy for Load (NEL) of Canada to the total NEL of the United States and Canada, times the total number of voting members on the CIPC, rounded up to the next whole number. The representatives from paragraph two, above, can fulfill this requirement. If the Canadian representatives from paragraph two are not in sufficient numbers, then NERC will ask the CEA to select sufficient Canadian representatives to meet the requirement.

4. A minimum of four voting members that are policy experts. A policy expert is defined as having had regulatory review responsibility, strategic planning or legislative development, review or advocacy experience positions in a NERC registered entity, or an industry trade association.
  - a. Two selected by APPA.
  - b. Two selected by NRECA.

## Alternates

Appointing organizations may appoint non-voting alternates who will have a voice at meetings and can be named as proxies.

## Partner Members

The committee values collaboration with cross-sector organizations who can contribute to the stated purpose of the CIPC. The following organizations are invited to participate in face-to-face meetings and join workgroups and task forces, subject to the Expectations and Requirements stated above. The following seats are considered non-voting:

1. Federal Energy Regulatory Commission
2. US Department of Homeland Security
3. US Department of Energy
4. US Department of Energy Laboratories
5. Public Safety Canada
6. Natural Resources Canada
7. Oil & Natural Gas subsector
8. Telecomm sector
9. Financial Services sector
10. Critical Manufacturing sector
11. Water sector

## Executive Committee Review

The Executive Committee (EC) will annually review the membership to ensure sufficient expertise is represented on the CIPC and that the members are meeting the expectations and requirements listed above. The chair will contact any member who has missed two consecutive meetings (even if the member has sent a proxy) to seek a commitment to actively participate, or ask the member to resign from the committee. The chair may remove any member who has missed two consecutive meetings (even with a proxy).

## Chapter 3: Officers

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### Officer Positions

The Committee shall have a chair and two vice-chairs as selected from the voting membership.

### Terms

The terms of all officer positions are for two years and shall begin on January 1 following their election and continue through December 31 of the second year following.

### Timing of Elections

Elections for the chair and vice-chairs shall take place at the September meeting in odd-numbered years.

### Selection Process

The Committee selects officers using the following process:

1. The nominating subcommittee will present its recommended candidate (or candidates if filling the vice chair positions).
2. The secretary will open the floor for nominations.
3. After hearing no further nominations, or upon approval of a motion to close nominations, the secretary will close the nominating process.
4. The committee will then vote on the slate of candidates recommended by the nominating subcommittee. If the slate is approved by a two-thirds majority, the slate shall be deemed elected and the election shall close.
5. If the slate fails, the secretary will distribute paper ballots containing the names of all of the candidates, listed in the order in which they were nominated, on which the committee members shall mark their preference(s).
6. The secretary shall collect and tabulate the ballots. Any ballot containing more votes than the number of open positions shall be deemed invalid. Any candidate(s) to garner a two-thirds majority of the Committee's votes will be deemed elected.
7. If open positions remain at the conclusion of the balloting process, the chair may, at his/her discretion, open the floor for additional nominations. The secretary shall prepare new ballots listing the names of the remaining and any newly nominated candidates in the order the nominations were made, and the balloting process shall be repeated until all positions have been filled.
8. The elected leadership will be submitted to the NERC Board for approval.

### Vacancies

If an officer is unable to complete their term, that person's replacement will be selected by the EC to serve the remainder of that term.

## Chapter 4: Executive Committee

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### Members

1. The CIPC shall have an EC with the following membership:
  - a. Chair
  - b. Two vice-chairs
  - c. Secretary (non-voting, NERC staff member)
  - d. Four additional members elected by the CIPC, who are subject matter experts (SMEs) in one of the following areas: Physical Security, Cyber Security, Operations, and Policy.
    - i. The SME members are selected at the December meeting in odd-numbered years, using the selection process defined in the Officers section above.
    - ii. The terms of the SME member positions are for two years and shall begin on January 1 following their election and continue through December 31 of the second year following.
    - iii. If an SME member is unable to complete their term, a replacement will be selected by the EC to serve the remainder of that term.

### Non-Voting Executive Committee Members

In addition, the EC includes, as non-voting participants, the immediate past CIPC Chair who may serve one year, and named representatives from APPA, CEA, EEI, EPSA, IRC and NRECA. Other recognized and well-established trade associations from the electricity sector that are involved in critical infrastructure protection issues will be considered for non-voting membership if they are not already represented. Representatives from NERC are encouraged to participate in and contribute to EC activities.

Additional non-voting members must be approved by the voting members of the EC.

### Terms

Terms shall be for two years commencing on January 1 of the year following appointment.

### Duties

1. Provide policy direction for the operation of the CIPC and manage task force and working group workload.
2. Review CIPC member candidates for expertise qualifications.
3. Respond to urgent matters by calling conference calls or special meetings.
4. Prepare meeting agendas.
5. Coordinate CIPC activities with other NERC standing committees and other entities.
6. Report to the NERC Board.

### Open Meetings

EC meetings are open to CIPC members, alternates, proxies, and invited guests except as noted below under Chapter 5 - Confidential Sessions. Although meetings are open, only voting members may offer and act on motions.

## Chapter 5: Meetings

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### Quorum

A CIPC quorum requires two-thirds of the Committee voting members.

### Voting

Voting may take place during regularly scheduled in-person meetings, web meetings, or may take place via email or conference call. All actions by the committee shall be approved upon receipt of the affirmative vote of two-thirds of the members present and voting at a meeting at which quorum is present.

### Proxies

A member of the committee is authorized to designate a proxy. Proxy representatives may attend and vote at committee meetings provided the absent committee member notifies in writing (letter or email) the committee chair, vice chair or secretary along with the reason(s) for the proxy. The member shall name the proxy representative and their affiliation in the correspondence. No member of the committee can serve as a proxy for another member of the committee. It is expected that the proxy will adhere to the Voting Members' Expectations and Requirements as described in Section 3 of this document.

### Agenda

1. Agendas with materials to be voted on will be posted two weeks prior to the meeting.
2. Only a voting member can put forth a motion.

### Action without a Meeting

The Committee may act by mail or email ballot without a regularly scheduled meeting. Two-thirds of the members present and voting is required to approve any action. A quorum for actions without a meeting is two-thirds of the Committee members. The committee chair or a majority of the EC may initiate the request for such action without a meeting. The secretary shall post a notice on the NERC website and shall provide committee members with a written notice (letter or email) of the subject matter for action not less than three business days prior to the date on which the action is to be voted. The secretary shall distribute a written notice to the Committee (letter or email) of the results of such action within five business days following the vote and also post the notice on the NERC website. The secretary shall keep a record of all responses from the committee members with the committee minutes.

### Regular Meetings

CIPC meetings will be conducted at the discretion of the chair, generally once every three months.

### Open Meetings

NERC committee meetings are open to the public, except as noted below under Confidential Sessions. Although meetings are open, only voting members may offer and act on motions.

### Antitrust Guidelines

All persons attending or otherwise participating in the committee meeting shall act in accordance with NERC's Antitrust Compliance Guidelines at all times during the meeting. A copy of the NERC antitrust statement shall be included with each meeting agenda.

## **Confidential Sessions**

The chair of a committee may limit attendance at a meeting or portion of a meeting, based on confidentiality of the information to be disclosed at the meeting. Such limitations should be applied sparingly and on a non-discriminatory basis as needed to protect information that is sensitive to one or more parties. A preference, where possible, is to avoid the disclosure of sensitive or confidential information so that meetings may remain open at all times. Confidentiality agreements may also be applied as necessary to protect sensitive information. (See also the following paragraph on Confidential Matters.)

## **Confidential Matters**

On occasion, the CIPC may be called upon to provide information or support in relation to a matter that requires confidentiality. Upon such an occasion and with the approval of the NERC President/CEO, the chair of the CIPC may convene a working group to provide such information or support without notice or approval of any other member or group. The existence of such a working group, its mission and results, will be shared with the members only to the degree and at the time deemed appropriate by the NERC President/CEO. Information labeled under Traffic Light Protocol (TLP) shall be handled according to published conventions of that protocol.

## **Parliamentary Procedures**

In the absence of specific provisions in this scope document, the Committee shall conduct its meetings guided by the most recent edition of Robert's Rules of Order, Newly Revised.

## **Non-Voting Members.**

Non-voting members will have a voice at all open meetings

## Chapter 6: Subgroups

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### Appointing Subgroups

The EC may appoint technical subgroups to address security-related issues as it deems fit or may assign such issues to its subcommittees, working groups and task forces. Working groups and task forces will take assignments from the EC and all work products will be presented to the CIPC for any further action. Subgroups will be reviewed annually by the EC to ensure that work plans are being accomplished, workload is equitably distributed, and the subgroup is still adding value to the Committee function.

### Nominating Subcommittee

1. At the last regular meeting (normally the June meeting) before the selection of a new committee chair (normally the September meeting), the incumbent chair will nominate, for the committee's approval, a chair of the nominating subcommittee. The subcommittee will recommend candidates for the committee's chair, two vice-chairs, and four SME EC members. The nominating subcommittee may be formed upon the vacancies.
2. The subcommittee chair will then assemble five committee members which shall include the subcommittee chair and four additional members drawn from the larger committee.
3. The subcommittee will solicit nominations for the Officer and SME EC positions from the voting members of the committee.
4. The subcommittee will review the nominations received and develop a slate of seven candidates: one for the committee chair, two for the committee vice-chairs, and four SME members of the EC.
5. The subcommittee will present its slate of officers at the committee's September meeting and SME EC members at the committee's December meeting.

# Appendix A: Security Guidelines Approval Process

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## Guidelines

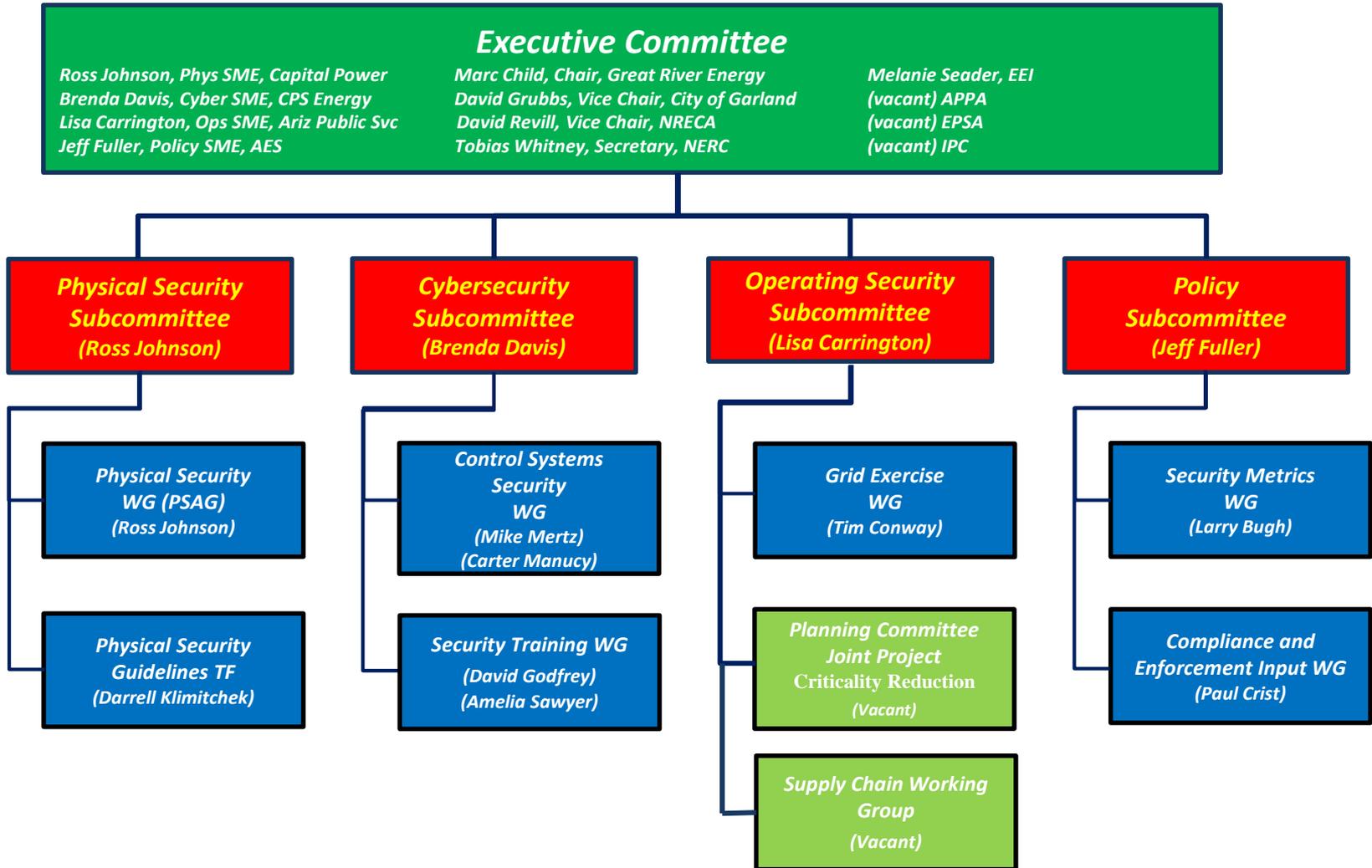
Guidelines are documents that suggest approaches or behavior in a given technical area for the purpose of improving security and reliability. Security guidelines are not binding norms or mandatory requirements. Security guidelines may be adopted by a responsible entity in accordance with its own facts and circumstances.

## Approval of Guidelines

Because guidelines contain suggestions that may result in actions by responsible entities, those suggestions must be thoroughly vetted before a new or updated guideline receives approval by a technical committee.

The process described below will be followed by the CIPC:

1. New/updated draft guideline approved for comment by the committee. The workgroup Chair approves for comment request the release of a new or updated draft guideline developed by its groups. Alternately, the EC reserves the right to waive such posting.
2. Post draft guideline for comment if required. The draft guideline is posted for comment for forty-five (45) days (or a period specified by the EC). If the draft guideline is an update, a redline version against the previous version must also be posted.
3. Post comments and responses. After the comment period, the CIPC will post the comments received as well as its responses to the comments. The committee may delegate the preparation of responses to a committee subgroup.
4. New/updated guideline approval and posting. A new or updated guideline, which considers the comments, received, is approved by the CIPC and posted as "Approved" on the NERC website. Updates must include a revision history and a redline version against the previous version.
5. Guideline updates. After posting a new or updated guideline, the CIPC will periodically assign a workgroup task to review the library of guidelines.
6. Standards Committee authorization is required for a security guideline to become a supporting document that is posted with or referenced from a NERC Reliability Standard. See Appendix 3A in the NERC's Rules of Procedure under "Supporting Document."
7. In order to receive ERO endorsement, the CIPC must follow the NERC approved process for development and publication of implementation guidance for documents that support a NERC Reliability Standard.



## **Compliance and Certification Committee Charter Changes**

### **Action**

Approve

### **Summary**

The CCC revised its charter to reflect the participation of CCC observers in NERC audits of the Regional Entities in accordance with Appendix 4A of the NERC Rules of Procedure.

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# Compliance and Certification Committee Charter

February XX, 2018

**RELIABILITY | ACCOUNTABILITY**



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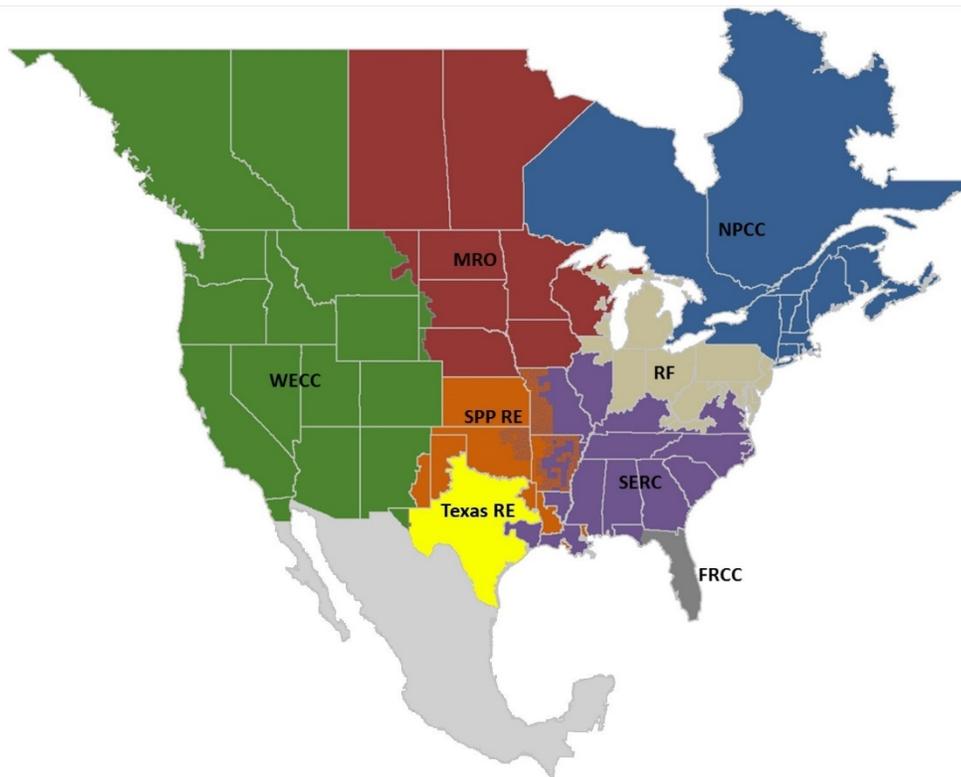
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## Preface

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The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to assure the reliability and security of the bulk power system (BPS) in North America. NERC develops and enforces Reliability Standards; annually assesses seasonal and long-term reliability; monitors the BPS through system awareness; and educates, trains, and certifies industry personnel. NERC’s area of responsibility spans the continental United States, Canada, and the northern portion of Baja California, Mexico. NERC is the Electric Reliability Organization (ERO) for North America, subject to oversight by the Federal Energy Regulatory Commission (FERC) and governmental authorities in Canada. NERC’s jurisdiction includes users, owners, and operators of the BPS, which serves more than 334 million people.

The North American BPS is divided into eight Regional Entity (RE) boundaries as shown in the map and corresponding table below.



*The North American BPS is divided into eight RE boundaries. The highlighted areas denote overlap as some load-serving entities participate in one Region while associated transmission owners/operators participate in another.*

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

## Mission

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In the capacity of a North American Electric Reliability Corporation (NERC) Board of Trustees (Board)-appointed stakeholder committee serving and reporting directly to the NERC Board, the Compliance and Certification Committee (CCC) will engage with, support, and advise the NERC Board and NERC regarding all facets of the NERC Compliance Monitoring and Enforcement Program (Compliance and Enforcement program), Organization Registration program (Registration program), and Organization Certification program (Certification program). As a committee providing support and advice but otherwise independent of the execution of these programs, the CCC will monitor NERC's adherence to the Rules of Procedure (ROP) for these programs. Also and in a similar manner, as a committee independent of the Reliability Standards development process, the CCC will be the body responsible for monitoring NERC's adherence to the (ROP) regarding the Reliability Standards development process with the exception of appeals of substantive or procedural action or inaction associated with a Reliability Standard or the Standards process as defined in the appeals section of the Standard Processes Manual. The CCC is also responsible for establishing and implementing a program to monitor NERC's compliance with the Reliability Standards that apply to NERC.

# Compliance and Certification Committee Functions

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To fulfill its mission, the CCC performs the following functions:

1. Organizes and conducts committee meetings directly with NERC staff regarding all facets of the Compliance and Enforcement, Registration, and Certification programs;<sup>1</sup>
2. Provides comments and recommendations to the NERC Board and NERC staff;
3. Provides comments to NERC with respect to stakeholders' perception of the policies, practices, and effectiveness of the Compliance and Enforcement program, Registration program, and Certification program;
4. Recommends revisions of the electric reliability organization (ERO) ROP related to the Compliance and Enforcement program, Registration program, and Certification program to the NERC Board;
5. Establishes and implements programs to monitor:<sup>2</sup>
  - a. NERC's adherence to Section 405 for Compliance Monitoring and Enforcement, including but not limited to the uniform CMEP (Appendix 4C) and the Sanction Guidelines (Appendix 4B).
  - b. NERC's adherence to Section 506 for Organization Registration and Certification, including but not limited to the Organization Registration and Certification Manual (Appendix 5A).
  - c. NERC's adherence to Section 300 of the ROP regarding the Reliability Standards development process with the exception of appeals of substantive or procedural action or inaction associated with a Reliability Standard or the Reliability Standards process as defined in the appeals section of the Reliability Standards Development Procedure. Committee members who have participated in the development process for a particular Reliability Standard shall not participate in the committee's monitoring of that process.
  - d. NERC's compliance with the Reliability Standards that apply to NERC.
6. Serves as the hearing body for any contest regarding findings of or penalties or sanctions for violation(s) of Reliability Standard(s) where NERC is directly monitoring the entity for compliance with those standards (registered entity by agreement with a Regional Entity or absent a delegation agreement; the Region itself where approved standards are applicable to the Region) as described in Section 408 of the NERC ROP;
7. As directed by the NERC Board, serves as the mediator for any disagreements between NERC and the Regional Entities concerning NERC performance audits of Regional Entities' compliance programs. When directed by the Board to serve as mediator, the committee chair will appoint three disinterested members of the committee to meet with representatives of NERC and the Regional Entity to attempt to resolve the matter.
8. At the discretion of the CCC, participates as an observer in Regional Entity Compliance Program audits executed by NERC's Internal Audit and Corporate Risk Management function, consistent with Appendix 4A of the ROP.
9. Actively supports the Standards Committee in the development of new and revised standards by providing a pool of qualified compliance oriented personnel for participation in the compliance administration element phase of the standards development process;
10. Provides assistance to NERC and the Regional Entities to implement the Compliance and Enforcement, Registration, and Certification programs; and

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<sup>1</sup> Meetings are conducted under Section 4 of this Charter.

<sup>2</sup> Monitoring by the CCC is ongoing and does not preclude, interfere with or replace, in whole or in part, the NERC Board's responsibility to conduct and provide such reviews of these programs as required by Federal Energy Regulatory Commission (the Commission) regulations, 18 C.F.R. § 39.3.c: "The Electric Reliability Organization shall submit an assessment of its performance three years from the date of certification by the Commission, and every five years thereafter."

11. Undertakes assignments from the Board or the Board's Compliance Committee related to compliance and enforcement, organization registration, organization certification, and standards development.

# Chapter 1: Membership

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## Goals

The CCC provides for balanced discussion, commentary, and recommendations on compliance issues by bringing together a wide diversity of opinions and perspectives from NERC member sector experts who have particular familiarity, knowledge, and experience in the area of compliance and NERC Standards and Regional Standards.

## Appointment and Terms of Service

Members are appointed to the committee by the NERC Board and serve on the committee at the pleasure of the Board. Member terms are the lesser of three years from appointment or interim approval (Section 5.b), replacement, or removal by the Board. Members may be reappointed at the conclusion of a term. There is no limitation on the number of times a member may be reappointed. A member may be recommended to the Board for reappointment by the Nominating Subcommittee by self-nomination. To the extent practicable, member terms will be staggered such that approximately one-third of the committee is subject to reappointment or replacement each year.

## Qualifications

Individuals deemed qualified to serve on the committee will generally include senior-level industry experts who have particular familiarity, knowledge, and experience in the area of compliance, compliance enforcement, compliance administration and management, organization responsibilities and registration, organization certification, and NERC Standards and Regional Standards. These individuals should be involved with internal compliance programs within their respective organizations.

## Expectations

Committee members are expected to represent the interests of the sector they represent to the best of their ability and judgment. In addition to the duties, rights, and privileges described elsewhere in this charter, committee members will:

1. Act consistently during meetings with the procedures in this manual and Robert's Rules of Order;
2. Demonstrate and provide knowledge and expertise in support of committee activities;
3. Adjudicate in a fair and unbiased manner that meets applicable legal and due process requirements when participating in hearing procedures conducted under the NERC ROP Section 408;
4. Solicit comments and opinions from constituents and groups of constituents or trade organizations represented by the member and convey them to the committee;
5. Respond promptly to all committee requests, including requests for reviews, comments, and votes on issues before the committee;
6. Arrange for a proxy to attend and vote at committee meetings in the member's absence; and
7. Respond promptly to all requests to register for committee meetings.

## Representation

The membership structure of the CCC will be modeled upon the membership structure of the NERC Member Representatives Committee (MRC) as described in NERC's Bylaws (the Bylaws) Article VIII Section 2 [see Attachment A]. This should produce a committee that has an appropriate balance of entities subject to compliance with the NERC Reliability Standards and NERC's Compliance and Enforcement program, and others affected by the Standards and the Compliance and Enforcement program.

## **Regional Entities**

Each Regional Entity, or the applicable regional organization if no Regional Entity exists for the geographic area, may nominate one member to the committee. In aggregate, the sector will have voting strength equivalent to two members. The voting weight of each Regional member's vote will be set such that the sum of the weight of all available Regional members' votes is two votes.

## **Canadian Representation**

The committee structure will include representation by Canadians as laid out in Article VIII Section 4 of the Bylaws.

## **NERC Membership**

Users, owners, and operators of the bulk power system are subject to the Compliance, Registration, and Certification programs regardless of whether they are NERC members. It is expected that committee members will generally be from organizations who are NERC members; however, committee members may be non-members of NERC who are subject to the qualifications identified herein and meeting requirements laid out in the Bylaws for non-NERC-member participation in the MRC.

## **Selection**

The CCC will conduct open nominations processes to receive nominations to fill any membership vacancies. Prospective members of the committee may be identified to the CCC via any means the committee finds acceptable, including solicited or unsolicited nomination by a recognized industry group or association, general open solicitation by the committee for nomination(s), individuals' self-nomination, directed solicitation by the committee to an individual or individuals, or referral by the Board or other NERC body or committee.

## **Nominating Subcommittee**

The CCC will annually appoint a Nominating Subcommittee to identify, qualify, and recommend individuals to fill sector representative vacancies on the committee or, when required, to serve as the chair or vice chair of the committee. The subcommittee will identify the individuals they are recommending to the full CCC for review. Individuals recommended by the subcommittee for appointment to the committee must be approved by the Board.

## **Interim Approval**

Upon approval of the committee, individuals identified and selected by the Nominating Subcommittee for membership on the committee may serve as members on an interim basis pending their appointment by the Board.

## **Expertise**

When selecting individuals to recommend for committee membership, the Nominating Subcommittee will seek to engage individuals who, in aggregate, provide the committee with a level and breadth of expertise sufficient to achieve its goals and fulfill its scope and responsibilities while respecting other important factors such as industry sector, Region, interconnection, and country.

## **Regional Entity Members**

Each Regional Entity, or the applicable regional organization if no Regional Entity exists for the geographic area, may nominate an individual to serve as a member representing their organization. The Nominating Subcommittee will defer to these nominations. The nomination is non-binding upon the Board. Vacancies on the committee will exist where the Regional Reliability Organization or Regional Entity has not provided a nomination.

## **Canadian Members**

The Nominating Subcommittee will endeavor to attract and engage Canadians with suitable qualifications and expertise in adequate numbers to satisfy Article VIII Section 4 of the Bylaws. Recognized Canadian organizations such as the Canadian Electricity Association and Canada's Energy and Utility Regulators will be consulted and solicited for

assistance in recruiting Canadians to serve on the committee. All members considered to be serving as Canadians on the committee will be expected to have an endorsement, as appropriate, of such an organization. Canadian representatives should be capable of representing Canadian viewpoints in committee activities, in addition to the sector that they otherwise represent. Consistent with practice regarding the MRC, the Board may appoint additional Canadian individuals to the committee towards satisfying Article VIII Section 4 of the Bylaws.

## **Industry Sector Members**

The Nominating Subcommittee will assess the qualifications of nominees and select individuals to recommend to the NERC Board for appointment to the committee. The subcommittee may give preference to candidates nominated by organizations generally considered by the industry as representative of a broad cross-section of the industry sector in question, such as an industry trade association. A NERC Member sector may elect to identify sector representatives for nomination to the Nominating Subcommittee through a process approved by the NERC Board.

## **General Nominations and Appointment Process**

The committee's secretary administers the general nominations process.

### **Requesting Nominations**

The NERC staff will request nominations and will forward all nominations received to the Nominating Subcommittee. The Nominating Subcommittee will then prepare its recommended slate of members. The recommended slate will be reviewed by the whole committee for information purposes before it is submitted to the Board. The committee may approve the slate to serve as members on an interim basis, pending appointment by the Board at the Board's earliest convenience, but will not otherwise act on the slate.

### **Board Approval**

The Nominating Subcommittee will present the recommended committee membership slate to the Board for approval. If the Board approves the recommended committee slate, each member on the slate is appointed. The Board may also appoint members individually as needed to meet membership balance and fill vacancies.

### **Vacancies and Non-participation**

The committee's secretary will administer the nominations process for vacancies on the committee.

### **Addressed on an Ongoing Basis**

Vacancies on the committee can be addressed on an ongoing basis through receipt and consideration of both solicited and unsolicited nominations for the vacant positions.

### **Role of the Nominating Subcommittee**

Nominations received for vacancies will be vetted by the Nominating Subcommittee in the same manner as general nominations. The subcommittee may subsequently and individually recommend nominees they deem qualified to the NERC Board for consideration for appointment to the committee. Existing committee members may also approve such individuals to serve as members on an interim basis pending full appointment by the Board.

## Resignations

### By the Member

In the event a member can no longer serve on the committee, that member will submit a written resignation to the committee chair or the secretary.

### Requested by the Chair

The chair may request any committee member who ceases to participate in the committee, as indicated by not attending or sending a proxy for two consecutive meetings, to submit a resignation or to request continuation of membership with an explanation of extenuating circumstances. If a written response is not received within 30 days of the chair's request, the lack of response will be considered a resignation.

### Referral to the Nominating Subcommittee

The committee chair will refer the vacancy resulting from a resignation to the Nominating Subcommittee of the committee. If a recent list of nominations is available to the Nominating Subcommittee that it deems to be valid, the subcommittee will recommend a replacement nominee; otherwise, the subcommittee will request NERC staff prepare a new solicitation for nominations to fill that position. The Nominating Subcommittee will follow the previously stated criteria in recommending a replacement.

### By the Board

Committee members serve at the pleasure of the Board who may request resignation from, remove, or replace a member from the committee, as the Board deems appropriate.

### Interim Approval

The committee chair may seek a vote of the committee to allow the proposed replacement member to be seated, pending appointment of the replacement at the Board's next scheduled meeting.

### Proxies

A substitute representative, or proxy, may attend and vote during all or a portion of a committee meeting in lieu of a voting member provided the absent member notifies the committee chair, vice chair, or secretary of the proxy.

### Notification

Such notification will be in writing (electronic medium is acceptable). The proxy representatives and their affiliation will be named in the correspondence.

### Serving as Proxy

A voting member of a committee may not serve as a proxy for another voting member on the same committee (i.e. a member may not cast more than their own vote).

## Exclusions

### Regional Entity Staff

Regional Entity staff members who administer any portion of the Compliance and Enforcement program, Registration program, or Certification program for that Regional Entity, or for any other Regional Entity, may not serve as a member of the CCC.

### Organizations

No two individuals from the same organization, or affiliated organizations, may serve concurrently on the committee. Any committee member who has a membership conflict of this nature is obligated to notify the committee secretary, who shall inform the committee chair. Members impacted by such a conflict, such as through a merger of organizations, may confer between themselves to determine which member should resign from the committee and

notify the committee secretary and chair; however, if both members are within the same industry sector and cannot reach an amicable solution by determining the member to remain, the Nominating Subcommittee will review the qualifications of each member and propose the member to remain to the full committee who will determine which member shall continue to serve, subject to Board approval. If the conflict is not resolved in a timely manner by the impacted members, the committee chair shall notify all members of the affected industry sectors recommending actions to resolve the conflict. If the membership conflict is still unresolved, the committee chair shall take the conflict to the NERC Board for resolution.

### **NERC Staff**

The Director of Compliance Assurance shall not be a member of the committee or vote on committee business. The Director of Compliance Assurance and the secretary shall be recused from participating in any committee activity that involves monitoring of NERC's adherence to ROP or activity that the Director of Compliance Assurance oversees. If the NERC staff coordinator has been recused from participating in a Committee activity, the chair shall appoint another member of the committee as acting secretary for any meetings or other activities from which the NERC staff coordinator is recused.

### **Changes in Member Affiliation**

A committee member whose affiliation has changed may retain the membership position under these circumstances:

1. The new organization is in the same industry sector, and
2. The member meets all other membership requirements.

### **Conflict of Interest**

No committee member may have a conflict of interest that would impair his or her ability to fulfill obligations under this charter. Any committee member who knows of any form of membership conflict, such as working for an entity affiliated with that of another committee member, will notify the committee chair within 10 business days of obtaining that knowledge.

## Chapter 2: Meetings

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In the absence of specific provisions in this manual, all committee meetings will follow Roberts Rules of Order.

### Quorum

#### Two-thirds Requirement

The quorum necessary for transacting business at meetings of the committee is two-thirds of the voting members currently on the committee's roster.

#### Interim Basis

Voting members approved by the committee on an interim basis, pending appointment by the Board, will be counted in the determination of a quorum.

#### Lack of Quorum

If a quorum is not present at the beginning of the meeting, the committee may not take any actions requiring a vote by the committee; however, the chair may, with the consent of the members present, elect to allow discussion of the agenda items.

### Voting

Actions by members of the committee will be approved upon receipt of the affirmative vote of two-thirds of the votes present (including proportional votes by Regional Representatives) at any meeting at which a quorum is present.

### Antitrust Guidelines

All persons attending or otherwise participating in a NERC committee meeting will act in accordance with NERC's Antitrust Compliance Guidelines at all times during the meeting.

### Open Meetings

NERC committee meetings will be open to the public, except as noted below under Confidential Information.

### Confidential Sessions

At the discretion of the CCC chair, a meeting or portion of a meeting may have attendance limited based on confidentiality of the information to be disclosed at the meeting. Such limitations should be applied sparingly and on a non-discriminatory basis as needed to protect information that is sensitive information or confidential information to one or more parties. All hearings of compliance matters will be confidential sessions. Confidential information will only be disclosed as provided by NERC ROP 1500. Confidentiality agreements may also be applied, as necessary, to protect sensitive information or confidential information.

### Types of Meetings

Meetings may be conducted in person, by conference call, or by other means. The procedures contained in this manual will apply to all meetings regardless of how they are conducted.

### Majority and Minority Views

All members of a committee will be given the opportunity to provide alternative views on an issue. The results of committee actions, including recorded minutes, will reflect the majority as well as any minority views of the committee members. The chair will communicate both the majority and any minority views in presenting results to the Board.

## **Action Without a Meeting**

### **Two-thirds Majority**

Any action required or permitted at a meeting of the committee may be taken without a meeting if two-thirds of the total votes available to the members of the CCC (including the proportional votes available to Regional Representatives) approve taking the action outside of a meeting.

### **Procedure**

Such action without a meeting will be performed by mail or electronic ballot (e.g., telephone, fax, email, or Internet) and will be recorded in the minutes as a roll call ballot. The secretary will announce the action required at least 10 days before the date on which the action is to be voted. As time permits, members should be allowed a window of 10 business days to vote. The secretary will provide the results of such an action within 10 business days of the close of the voting period.

## Chapter 3: Officers and Staff

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### General

#### Number of Positions

The committee will have two officers and one secretary.

#### Officers

The committee officers will be one chair and one vice chair.

#### Executive

The committee shall retain an Executive Committee consisting of the committee officers, subcommittee chairs, secretary, and the Director of Compliance Assurance.

#### Secretary

The NERC staff coordinator will serve as the committee's secretary.

#### Voting of Officers

The committee chair and vice chair are voting members of the committee.

#### Officers Nominated by the Nominating Subcommittee

The CCC Nominating Subcommittee will recommend a chair and a vice chair who are then appointed by the NERC Board for a two-year term. The term of the chair and the vice chair, except for the first year, will begin on July 1 and end on June 30.

#### Officers as Sector Representatives

The chair and vice chair are selected from the membership of the committee and, in addition to their chair or vice chair responsibilities, will continue to serve as a member for the sector for which they were appointed to the committee.

#### Chair

The chair will direct and provide general supervision of committee activities, including the following:

1. Coordinate the schedule of all committee meetings, including approval of meeting duration and location;
2. Develop committee agendas and rule on any deviation, addition, or deletion from a published agenda;
3. Preside at and manage committee meetings, including the nature and length of discussion, recognition of speakers and proxies, motions, and voting;
4. Will lead or direct the conduct of any hearings and the preparation of any adjudicatory documents by the committee under Section 408 of the NERC ROP;
5. Will ensure actions and undertakings by the committee under the NERC ROP Section 408 meet all applicable legal and due process requirements;
6. Will act as spokesperson for the committee at forums inside and outside of NERC; and
7. May attend meetings of the NERC Board when necessary to report to the Board on committee activities.

#### Vice Chair

The vice chair will assume the responsibilities of the chair under the following conditions:

1. At the discretion of the chair (for brief periods of time);

2. When the chair is absent or temporarily unable to perform the chair's duties; or
3. When the chair is permanently unavailable or unable to perform the chair's duties. In the case of a permanent change, the vice chair will continue to serve until a new chair is nominated and selected by the Board.

### **Staff Coordinator**

A member of the NERC staff will be selected by NERC's Director of Compliance Assurance to serve as the staff coordinator and secretary of the committee. The staff coordinator is not a committee member and does not have a vote. Under the direction of the committee executive and applicable NERC bylaws, guidelines, and ROP, the staff coordinator will do the following:

1. Manage the day-to-day operation and business of the committee;
2. Prepare and distribute the notices of the committee meetings, prepare the meeting agenda, and prepare and distribute the minutes of the committee meetings; and
3. Act as the committee's parliamentarian.

## Chapter 4: Nominating Subcommittee

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### **Appointment**

The CCC will annually appoint a Nominating Subcommittee.

### **Five Members**

The subcommittee will consist of five members nominated by the committee chair and approved by the committee. The chair of the subcommittee will be selected by the CCC chair from among the five subcommittee members.

### **Appointed Annually**

The chair will appoint the subcommittee members at the first regular meeting of the committee of the calendar year.

### **Length of term**

The subcommittee members will serve for up to 14 months or until a new Nominating Subcommittee is authorized, whichever is earlier.

### **Duties**

In addition to the duties, rights, and privileges described elsewhere in this manual, members of the Nominating Subcommittee will:

1. Prepare a slate of committee officer candidates for submission to the NERC Board for approval, and
2. Prepare a slate of recommended individuals to fill designated committee vacancies as required.

## Chapter 5: Subordinate Groups

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### Committee Organization

The CCC organizational structure will be arranged as allowed in the NERC Bylaws to support a superior-subordinate hierarchy that is ordered as follows: a committee, a subcommittee, a working group, and a task force, with a committee being primary and a task force being quaternary.

### Subgroups

The committee may establish subcommittees, working groups, and task forces as necessary. The committee chair may also form any of these subordinate groups on behalf of the committee. The committee will be the responsible sponsor of all subordinate subcommittees, working groups, or task forces it may create, or that its subordinate subcommittees and working groups may create. The committee will keep the Board informed of all groups subordinate to the committee.

### Subcommittees

The committee may establish subcommittees to which the committee may delegate some of the committee's broadly defined continuing functions. The committee will approve the scope of each subcommittee it forms. The committee chair will appoint the subcommittee officers (typically a chair and a vice chair) for a specific term (generally two years). The subcommittee officers may be reappointed for up to two additional terms. The subcommittee will work within its assigned scope and be accountable for the responsibilities assigned to it by the committee. The formation of a subcommittee, due to the permanency of the subcommittee, will be approved by the Board.

### Working Groups

The committee or any of its subcommittees may delegate specific continuing functions to a working group. The sponsoring committee or subcommittee will approve the scope of each working group it forms. The chair of the sponsoring committee or subcommittee will appoint the working group officers (typically a chair and a vice chair) for a specific term (generally two years). The working group officers may be reappointed for up to two additional terms. The sponsoring committee or subcommittee will conduct a "sunset" review of each working group every two years. The working group will be accountable for the responsibilities assigned to it by the committee or subcommittee and will, at all times, work within its assigned scope.

### Task Forces

The committee, subcommittee, or working group may assign specific work of a finite duration to a task force. The sponsoring committee, subcommittee, or working group will approve the scope of each task force it forms. The chair of the sponsoring committee, subcommittee, or working group will appoint the task force officers (typically a chair and a vice chair). Each task force will have a finite duration, normally less than one year. The sponsoring group will review the task force scope at the end of the expected duration and at each subsequent meeting of the sponsoring group after that until the task force is retired. Action of the task force sponsoring group is required to continue the task force past its defined duration. The sponsoring group should consider promoting to a working group any task force that is required to work longer than one year.

### Membership and Representation

The membership of each subcommittee, working group, and task force should be established to address the need for expertise and balance of interests. Each group's membership requirements will be defined within the group's approved scope.

As a general guide, the broader the group's scope, the more emphasis there should be on balancing of interests. Therefore, subcommittees would be expected to have the broadest representation of appropriate industry sectors, while a task force may be more focused on simply having the necessary expertise, and a working group may be somewhere between.

Each member of a subordinate group, and its officers, will be appointed by the chair of the sponsoring committee or group.

To the extent subgroup membership is of a representative nature, recommendations for staffing of the group should be provided in a manner consistent with the principles outlined in the staffing of a committee, including the use of an open nominations process. Regional Entity representatives should be recommended by the Regional Entity and Canadian representatives by the Canadian Electricity Association.

Preference may also be given to representatives recommended by broadly-based industry associations.

To the extent that subgroup membership is based on providing requisite expertise, the chair of the sponsoring committee or group may appoint members based on the relevant technical qualifications.

## **Procedures**

Subcommittees, working groups, and taskforces will conduct business in a manner consistent with all applicable sections of this manual and Robert's Rules of Order.

## Chapter 6: Hearings

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### General

The CCC will conduct hearings, as necessary, to fulfill its function of serving as the hearing body for any contest between NERC and a Regional Entity regarding NERC findings, penalties, or sanctions for violation(s) of Reliability Standard(s) by the Regional Entity as described in Section 408 of the NERC ROP.

### Hearing Procedure

Unless specifically identified otherwise elsewhere in this charter, the CCC's hearing procedure shall follow the hearing procedure mandated and approved by jurisdictional authorities for use by NERC and the Regional Entities in the Compliance and Enforcement program.

### Hearing Panel

The committee shall not have a standing hearing panel. When a hearing is to be conducted, the CCC shall select five members to serve as the adjudicatory panel for that hearing. Members to serve on the panel shall be selected by vote of a valid quorum of the committee. Voting members of the committee at arm's length from parties to the hearing may be nominated or volunteer to stand for selection to the hearing panel. One or more alternates may also be selected, as the committee deems appropriate for the circumstances. A member may serve on more than one panel concurrently. A panel is disbanded upon conclusion of the hearing proceedings for which it was formed.

## Appendix A: CCC Membership Structure

Primary Sector	Sub-Sector	Number of Members	Full Voting	Proportional Voting	Non-Voting
Investor-Owned Utility		2	X		
State/Municipal Utility		2	X		
Cooperative Utility		2	X		
Federal or Provincial Utility/Federal Power Marketing Administration		2	X		
Transmission Dependent Utility		2	X		
Merchant Electricity Generator		2	X		
Electricity Marketer		2	X		
Large End-use Electricity Customer		2	X		
Small End-use Electricity Customer		2	X		
Independent System Operator/Regional Transmission Organization		2	X		
Regional Entity	FRCC	1		X	
	RFC	1		X	
	ERCOT	1		X	
	MRO	1		X	
	NPCC	1		X	
	SERC	1		X	
	SPP	1		X	
	WECC	1		X	
Government	U.S. State	2	X		
	U.S. Federal	2			X
	Canadian Provincial	1			X
	Canadian Federal	1			X
<b>Total</b>		<b>34</b>			

## Reliability Issues Steering Committee Membership

### Action

Approve

### Background

As required by the Reliability Issues Steering Committee (RISC) [charter](#), the RISC Nominating Committee (RISCNC) solicited a pool of candidates to fill open stakeholder-based positions (at-large and MRC) on the RISC. Additionally, since all five standing committee-based members' terms are expiring, the RISCNC requested from each standing committee a recommendation for a RISC representative.

### Summary

The RISCNC recommends that the Board of Trustees approve the appointment of the following representatives for the terms listed.

Name	Title and Company	Term Ending
<b>Mark Ahlstrom</b> , At-Large Member	Vice President of Renewable Energy Policy, NextEra Energy Resources	January 31, 2020
<b>Jeffery Cook</b> , At-Large Member	Vice President of Transmission Planning and Asset Management, Bonneville Power Administration	January 31, 2020
<b>Charles King</b> , At-Large Member	Vice President and Chief Information Officer, Kansas City Power & Light	January 31, 2020
<b>Dave Osburn</b> , At-Large Member	Chief Executive Officer, Oklahoma Municipal Power Authority	January 31, 2020
<b>Mark Rothleder</b> , At-Large Member	Vice President, Market Quality and Renewable Integration, California ISO	January 31, 2020
<b>Chris Shepherd</b> , At-Large Member	Senior Information Security Consultant, Gannett Fleming	January 31, 2020
<b>Brian Slocum</b> , At-Large Member	Vice President of Operations and NERC Compliance Officer, ITC Holdings	January 31, 2020
<b>Donald Holdsworth</b> , MRC Member	Director of NERC Compliance, Public Service Enterprise Group	January 31, 2020
<b>Katherine Prewitt</b> , MRC Member	Vice President, Transmission, Southern Company	January 31, 2020
<b>Herb Schrayshuen</b> , MRC Member	N/A (representing small electricity end-user)	January 31, 2019
<b>Lisa Carrington</b> , CIPC Member	Group Manager, IT Strategy & Enterprise Services, Arizona Public Service	January 31, 2019
<b>Brian Evans-Mongeon</b> , Planning Committee Chair	President and Chief Executive Officer, Utility Services	January 31, 2019
<b>Andrew Gallo</b> , Standards Committee Chair	Director, Reliability Compliance, Austin Energy	January 31, 2019
<b>Patti Metro</b> , Compliance & Certification Committee Member	Manager, Transmission & Reliability Standards, National Rural Electric Cooperative Association	January 31, 2019
<b>David Zwergel</b> , Operating Committee Vice Chair	Senior Director, Regional Operations, Midcontinent ISO	January 31, 2019

## **Personnel Certification Governance Committee Membership**

### **Action**

Approve

### **Background**

The Personnel Certification Governance Committee (PCGC) is recommending that the Board of Trustees approve the re-appointments of the following members to the PCGC for a two-year term ending on December 31, 2019:

- Michael Anderson, Supervisor I, Transmission Real Time Operations, American Electric Power
- Dave Carlson, T&S Manager Compliance, Commonwealth Edison Company
- Keith Carman, Sr. Manager Transmission System Operations, Tri-State Generation and Transmission Association, Inc.
- Brett Hallborg, System Control Manager – T&D System Operations, BC Hydro
- Michael Hoke, Sr. Lead Trainer, PJM Interconnection, LLC

The PCGC is also recommending that the Board of Trustees approve the appointments of the following officers to the PCGC:

- Chair: Michael Anderson, Supervisor I, Transmission Real Time Operations, American Electric Power
- Vice Chair: Margaret Adams, Lead Functional Coordinator, Southwest Power Pool

## **Operating Committee Membership**

### **Action**

Approval of the addition of two members to the OC membership as a result of member resignation and open sector positions for the term limits identified.

### **Operating Committee (OC) membership**

A member of the OC resigned in December, 2017 leaving a vacancy in Sector 12, State Government. OC leadership, per OC Charter provisions, requested that NERC staff request nominations for the vacant position in Sector 12 as well as other open positions in Sector 7 (Electricity marketer), Sector 8 (Large end-use electricity customer), and Sector 9 (Small end-use electricity customer). Two nominations were received for sectors 7 and 12:

- Sector 7: JT Thompson (NIPPC) – term ending December 31, 2018
- Sector 12: Ryan Laruwe (Michigan Public Service Commission) – term ending December 31, 2019

No other nominations were received. The positions for Sectors 8 and 9 will remain open until a future nomination period is held.

## **Memorandum of Understanding between the British Columbia Utilities Commission, the North American Electric Reliability Corporation and the Western Electricity Coordinating Council**

### **Action**

Authorize the execution of a Memorandum of Understanding (MOU) between the British Columbia Utilities Commission (BCUC), the North American Electric Reliability Corporation (NERC) and the Western Electricity Coordinating Council (WECC).

### **Background**

The proposed MOU is the first MOU between NERC and British Columbia provincial authorities. Prior to the MOU, BCUC had acknowledged through formal correspondence beginning in 2006 NERC's steps to establish the Electric Reliability Organization and indicated willingness to enter into an MOU at a future date. BCUC had also provided NERC formal direction on processes for filing of standards and other matters for BCUC consideration. WECC has been providing compliance monitoring and related assistance to BCUC under the terms of an Administration Agreement since October 2009.

The proposed MOU delineates the roles and responsibilities of each of the parties under their respective regulatory frameworks and in furtherance of NERC's effort to obtain recognition in Canada consistent with the *Energy Policy Act of 2005*. Pursuant to the British Columbia *Utilities Commission Act* and the *Mandatory Reliability Standards Regulation*, BCUC is responsible for adopting NERC Reliability Standards and subsequently monitoring and enforcing compliance with those standards as British Columbia Reliability Standards. Under British Columbia's *Administration Agreement*, WECC assists the BCUC with its compliance responsibilities. WECC also operates under a delegation agreement from NERC to perform reliability functions as a Regional Entity with a cross-border scope pursuant to the United States *Energy Policy Act of 2005*.

### **Overview of MOU Provisions**

#### **Signatories**

- The parties to the MOU are BCUC, NERC, and WECC.

#### **Definitions**

- The signatories recognize the definitions of "Confidential Information" under the NERC and BCUC Rules of Procedure as well as "Non-Public Information" which is limited to enforcement-related Confidential Information under the British Columbia Utilities Commission Act and Mandatory Reliability Standards Regulation.

#### **Reliability Standards**

- The signatories describe the process for NERC development of Reliability Standards and BCUC adoption of such standards for applicability in British Columbia.

- The signatories establish that NERC and WECC may comment on the adoption of such standards in British Columbia and participate in standards hearings consistent with the Utilities Commission Act and Mandatory Reliability Standards Regulation.

### **Compliance**

- WECC will provide NERC, for periodic review, with compliance and enforcement information and WECC recommendations regarding disposition of noncompliance. NERC may also request review of WECC's annual reports to the BCUC.
- NERC may comment on WECC's recommendations to the BCUC and upon the BCUC's request, NERC may assess WECC's performance.

### **Information Sharing**

- All signatories may share Confidential Information and Non-Public Information amongst themselves subject to the disclosure requirements of Section 1500 of NERC's Rules of Procedure, as amended from time to time, as well as with Section 6 of the BCUC Rules of Procedure.

### **Funding**

- NERC will provide BCUC with draft and final versions of its business plan and budget which includes British Columbia's share of total funding.

### **Limitation of Liability**

- The signatories only subject themselves to liabilities arising from breaches of confidentiality, intentional or gross fault or liabilities not permitted to be excluded under British Columbia law.

### **Termination**

- Any signatory may provide "notice to terminate" with one year's written notice.
- BCUC may terminate this MOU by providing 30 days' notice only in the case where there are significant legislative changes impacting its authority.

### **Next Steps**

Following NERC Board of Trustee authorization to enter into the MOU, NERC will execute the MOU with WECC and BCUC representatives.

## **Approvals in Connection with the Termination of the Regional Delegation Agreement with SPP, Inc.**

### **Action**

- Authorize NERC management to enter into a termination agreement for the Amended and Restated Delegation Agreement between NERC and SPP, Inc. in terms substantially similar to those described in this document.
- Approve the proposed reassignment of registered entities currently registered in the SPP Regional Entity (SPP RE) to the Midwest Reliability Organization (MRO) and SERC Reliability Corporation (SERC).
- Approve the proposed amendments to Regional Delegation Agreements with MRO and SERC to reflect the new geographic boundaries of each of these Regional Entities.

### **Background**

NERC and SPP, Inc. mutually decided to terminate SPP RE's role under SPP, Inc.'s Regional Delegation Agreement (RDA) with NERC. Per Section 12(c) of the RDA, NERC and SPP, Inc. are working together on a transition of SPP RE's Delegated Authority for the entities registered in its footprint, as well as for the resolution of wind-down costs associated with the termination of the RDA. The responsibilities of NERC and SPP, Inc. will be memorialized in a termination agreement, for which the material terms are summarized below.

As a result of the dissolution of SPP RE, NERC also proposes to allocate all registered entities currently in the SPP footprint to MRO or SERC as noted below. Per section 401 of the NERC Rules of Procedure (ROP), the transfer of these entities to new geographical boundaries is memorialized in the proposed amended RDAs of MRO and SERC – the transferee Regional Entities.

Upon approval by the NERC Board of Trustees of the above items, and in some cases noted below, approval by the boards of MRO and SERC, NERC will make a filing with the Federal Energy Regulatory Commission (Commission). The filing will seek Commission approval of the same items and will explain other details associated with the transition, including related matters that will be submitted to the Commission separately. Those additional transition issues are summarized herein. NERC expects to make this filing as soon as practicable and no later than June 30, 2018.

### **I. Termination of the NERC-SPP Regional Delegation Agreement**

In order to memorialize the wind down and transfer of SPP RE's responsibilities and activities, NERC proposes to enter into a termination agreement with SPP, Inc. The proposed termination agreement would provide for the following NERC obligations:

- (i) identify a transferee Regional Entity for each registered entity in the SPP RE footprint;
- (ii) identify the Load-Serving Entities associated with each SPP RE registered entity for billing purposes;
- (iii) assist with the transition of compliance monitoring and enforcement processes to each transferee Regional Entity;
- (iv) disconnect information technology interfaces with NERC;

- (v) indemnify and hold harmless SPP, Inc. from certain claims and liabilities; and,
- (vi) submit applicable agreements, governance materials, and other corporate documents necessary to effectuate the termination of the RDA to the Commission for approval both prior to and after the termination effective date.

The proposed termination agreement would provide for the following SPP, Inc. obligations:

- (i) transition relevant files and documents pertaining to SPP RE's delegated authority to transferee Regional Entities;
- (ii) submit to NERC at a mutually agreeable time a breakdown of wind-down and dissolution costs;
- (iii) submit unaudited quarterly financial reports for the periods leading up to the termination effective date;
- (iv) submit audited financial statements for the calendar year in which termination takes place;
- (v) submit a reconciliation of actual expenses with budgeted expenses after the termination effective date; and,
- (vi) transfer to the transferee Regional Entities any penalty payments, excess statutory assessments, and reserves related to SPP RE that will not be used for wind-down and dissolution of the SPP RE delegated authority.

RDA provisions regarding limitation of liability, third party beneficiaries, confidentiality, and NERC's right to review SPP RE's financial records survive termination of the RDA.

Upon approval by the NERC Board of Trustees, NERC management intends to execute the termination agreement as soon as practicable. The termination agreement would be included in the filing to the Commission referenced above. The termination would not become effective until approved by the Commission.

## **II. Reassignment of Registered Entities in the SPP RE Footprint**

Recognizing that the ROP do not contain criteria for the allocation of multiple registered entity transfers in the event of a Regional Entity dissolution, NERC's proposal was informed by ROP Section 1208, which contains the criteria for considering registered entity requests to transfer to another Regional Entity.

As described in NERC's first posting on December 1, 2017, in **Attachment A**, NERC reviewed each registered entity's transfer request and considered it pursuant to the criteria in ROP Section 1208, other entity-specific circumstances that could impact the decision for the recommended Regional Entity, and Regional Entity input. Where NERC's recommendations differed from the registered entities' requests, NERC contacted the registered entities and explained its rationale for the recommendations. On December 15, 2017, NERC submitted additional information regarding its proposed transfer of the SPP RE registered entities. The December 15 posting is available in **Attachment B**.

When evaluating the proposed transfer requests, NERC initially considered two Section 1208 criteria: (i) the location of the registered entity's BPS facilities in relation to the geographic and electrical boundaries of the transferee Regional Entity; and (ii) the impact of the proposed transfer on other BPS owners, operators, and users, including affected Reliability Coordinators, Balancing Authorities, and Transmission Operators, as appropriate. The impacted Regional Entities with geographic and electrical boundaries are WECC, MRO, SERC, and Texas RE; however, Texas RE and WECC were excluded from the reassignment analysis because they are in separate interconnections. NERC focused on the geographic and electrical boundaries between SPP RE registered entities and neighboring Eastern Interconnection Regional Entities. To ensure the continuity of functional alignment with geographic or electrical

boundaries, NERC proposes to transfer Transmission Owners, Generator Owners, Generator Operators, Transmission Planners and Distribution Providers to the same Regional Entity as their Transmission Operator.

Based on NERC's initial recommendation of the transfers, NERC requested that MRO and SERC provide information on the following ROP Section 1208 criteria: (i) the impact of the proposed transfer on the current and future staffing, resources, budgets, and assessments to other Load-Serving Entities of the transferee Regional Entity; (ii) the sufficiency of the proposed transferee Regional Entity's staffing and resources to perform compliance monitoring and enforcement activities with respect to the registered entity; (iii) the registered entity's compliance history with SPP RE; (iv) the manner in which pending compliance monitoring and enforcement matters concerning the Registered Entity would be transitioned from SPP RE to the transferee Regional Entity; and (v) any other reasons NERC and the transferee Regional Entity consider relevant.

MRO and SERC provided transition plans addressing NERC's proposed transfers of 109 SPP RE registered entities to MRO and 14 to SERC. Both MRO and SERC plan to leverage existing administrative resources to integrate the SPP RE registered entities. Therefore, there would be a marginal increase to administrative costs to accommodate the additional workload. Regarding increased personnel resources, MRO intends to add 12 Full-Time Equivalent staff members (FTEs) to accommodate the workload, 4 in 2018 and 8 in 2019. SERC intends to add 3-4 FTEs in 2018 to facilitate the transition in early 2019. For 2018, neither MRO nor SERC anticipate the need for additional assessment funding. Both are evaluating funding options, but the use of existing reserves and credit lines is the most likely method to fund 2018 transitional costs. To the extent that either MRO or SERC use reserves, each Regional Entity will develop its own strategy for replenishment of such reserves. Any such strategy as well as other details of these transition plans will be described in the aforementioned Commission filing. NERC does not plan to make a separate budget filing to amend the approved 2018 budgets.

Based on the information provided by MRO and SERC, NERC also conducted an initial evaluation of the impact of the transfers on assessments paid by registered entities in SPP RE, MRO, and SERC. NERC currently projects that the existing LSEs in MRO will see a decrease in assessments because the estimated increase in costs and assessments is less than the projected increase in the NEL for MRO. The projected percentage increase in costs and assessments in SERC is comparable to the increase in NEL, so existing LSEs should see little or no impact in 2019 as a result of the SPP RE transition. All SPP LSEs should see a decrease in assessments, whether transferred to MRO or SERC.

Regarding the transfer of SPP RE registered entities' compliance history, MRO and SPP RE use the same CMEP data platform, web Compliance Data Management System (webCDMS), while SERC uses the Compliance Issues Tracking System (CITS). SERC would need to migrate SPP RE's webCDMS data into CITS to retain the registered entity CMEP data. In either case, the transfer of such data will assist in a seamless transition for SPP RE registered entities and provide MRO and SERC with registered entity CMEP history needed for compliance monitoring and enforcement.

After reviewing the transition plans and holding discussions with each of the affected Regional Entities, NERC is confident that there will be no gaps in oversight of compliance monitoring and enforcement activities. The estimated FTE increases are reasonable and needed to accommodate increased workloads associated with the transfers.

In developing its proposed transfer recommendations to the Board of Trustees, NERC staff also considered comments received from registered entities. NERC received 15 sets of comments from industry stakeholders during the public comment period. The majority of commenters support NERC's proposed reassignment of registered entities in the SPP RE footprint.

Several commenters suggested that NERC should enhance the process for its analysis and decision-making for future proceedings involving large scale registered entity transfers to another Regional Entity. NERC will consider the suggested improvements. In this instance, NERC has taken steps to communicate with affected registered entities regularly throughout the process. For example, NERC hosted two webinars for SPP RE registered entities, where NERC outlined the transition process and responded to registered entities' questions. NERC encouraged SPP RE registered entities to contact NERC throughout the transition with any questions. NERC logged the questions along with NERC and applicable Regional Entity responses in a Frequently Asked Questions – SPP Transition document (FAQ), which was updated weekly and sent via email to the SPP RE registered entities.

Several commenters that are registered in more than one region raised administrative efficiency concerns in compliance monitoring and enforcement. The Multi-Region Registered Entity (MRRE) Coordinated Oversight Program (Program) provides for increased efficiencies in resource allocation for registered entities while maintaining the reliability of the BPS. The Program is designed to eliminate unnecessary duplication of compliance monitoring and enforcement activities. The ERO Enterprise remains committed to collaborate toward effective, consistent, and efficient implementation of the Program.

The comments received are summarized in NERC's Consideration of Comments, available in **Attachment C**. In addition, NERC contacted certain registered entities directly to discuss entity-specific comments in greater detail.

NERC's review of MRO's and SERC's transition plans and comments received did not result in changes to NERC's initial proposal for reassignment of registered entities in **Attachment A**.

### **III. Amendments to the MRO and SERC Regional Delegation Agreements with NERC**

NERC, SERC, and MRO propose to amend the Regional Delegation Agreements between NERC and SERC, and NERC and MRO, respectively, to reflect the new regional boundaries resulting from the reassignment of entities discussed above. The term of the revised Regional Delegation Agreements will not change. Clean and redlined versions of the proposed amendments to the MRO and SERC RDAs are attached as **Attachment D** and **Attachment E**, respectively.

Upon approval by the NERC Board of Trustees, the revised Regional Delegation Agreements would be submitted to the boards of MRO and SERC, respectively. Upon approval by those boards, the agreements would be included in the referenced filing with the Commission and posted on the NERC website. The revised RDAs will not take effect until approved by the Commission.

### **IV. Other Transition-Related Activities**

#### ***Automatic Termination of the SERC and SPP CEA Agreement***

In 2010, SERC and SPP, Inc. entered into a compliance monitoring and enforcement agreement to allow SERC to assume responsibility for the Compliance Monitoring and Enforcement Program activities with respect to the SPP registered functions within the SPP RE Region.

That agreement automatically renewed on January 1, 2018 and will terminate automatically at the end of the calendar year that SPP ceases to be a Regional Entity – December 31, 2018. To facilitate the transition, NERC will act as the compliance enforcement authority (CEA) for the SPP registered functions for two years following the termination effective date for the SPP, Inc. RDA. NERC will not act as the CEA for the remaining registered entities in the SPP RE footprint, which are being reassigned as discussed above.

### ***Transition of CMEP and other Activities***

Upon NERC Board of Trustees approval of the reassignments, NERC, SERC, and MRO will finalize transition plans for all CMEP and other activities from SPP RE to MRO and SERC.

An example of transition coordination that will occur is for Multi-Region Registered Entities (MRREs). To the extent that an MRRE is currently participating in Coordinated Oversight with SPP RE as the Lead Regional Entity (LRE), NERC will ensure that the transition to a new LRE is determined pursuant to the Coordinated Oversight process and communicated to the MRRE.

NERC will oversee all transition activities to ensure that the statutory obligations of the Regional Entities are met and that there are no gaps in reliability oversight or enforcement during, or as a result of, the transition.

### ***Budget Impacts***

NERC will continue to evaluate, and submit for NERC Board of Trustee and Commission approval, where necessary, any required reconciliations of budgeted-to-actual expenditures for SPP, Inc., SERC, and MRO. Currently, SPP, Inc. anticipates that it can address transitional costs by reallocating expenses between categories in their approved 2018 budget. As noted above, MRO and SERC anticipate transitional costs not to impact 2018 assessments and to be funded through reserves and a line of credit. As previously mentioned, the details of these transition plans will be discussed in the Commission filing, but absent any requests for additional assessments, NERC does not intend at this time to make a separate budget-related filing.

### ***Other Matters***

In addition to the three approval items discussed here, NERC will amend and submit for NERC Board of Trustees and Commission approval, where necessary, any NERC Rules of Procedure and committee charter amendments to account for or reflect the dissolution of the SPP RE and the termination of the SPP RE's Delegated Authority, responsibilities, and activities. As these revisions merely conform the ROP and other documents to the substantive changes discussed above, NERC intends to submit them to the NERC Board of Trustees and the Commission at a later date.

# SPP RE Transition

## Notice of Proposed Transfer Regional Entities

21-Day Comment Period: 12-1-2017 through 12-22-2017

On July 27, 2017, NERC issued a letter to entities registered in Southwest Power Pool, Inc. Regional Entity (SPP RE) footprint that NERC and SPP had mutually agreed to terminate the *Amended and Restated Delegation Agreement between North American Electric Reliability Corporation and Southwest Power Pool, Inc.* As part of the transition of SPP's delegated authority, NERC informed each SPP RE registered entity that it may submit a written request to NERC stating its preference for transfer to another Regional Entity within the Eastern Interconnection. NERC received 122 transfer requests. NERC reviewed and carefully considered each registered entity's transfer request. When reviewing the requests, consistent with Section 1208 of the NERC Rules of Procedure, NERC considered the following:

- (1) the location of the Registered Entity's Bulk Power System facilities in relation to the geographic and electrical boundaries of the transferee Regional Entity;
- (2) the impact of the proposed transfer on other Bulk Power System owners, operators, and users, including affected Reliability Coordinators (RC), Balancing Authorities (BA), and Transmission Operators (TOP), as appropriate;
- (3) the impact of the proposed transfer on the current and future staffing, resources, budgets and assessments to other Load-Serving Entities of the transferee Regional Entity;
- (4) the sufficiency of the proposed transferee Regional Entity's staffing and resources to perform compliance monitoring and enforcement activities with respect to the Registered Entity;
- (5) the Registered Entity's compliance history with SPP RE; and the manner in which pending compliance monitoring and enforcement matters concerning the Registered Entity would be transitioned from SPP to the transferee Regional Entity; and
- (6) any other reasons NERC and the transferee Regional Entity consider relevant.

NERC considered registered entity alignment within a contiguous and interconnected regional boundary to be a critical component of BES reliability because of the planning and operational synergies that would be achieved. Therefore, NERC reviewed the electrical boundaries between SPP RE registered entities and neighboring Eastern Interconnection Regional Entities. NERC's review of major transmission corridors found that placing such paths within a common regional boundary will enhance regional planning coordination and promote efficient and reliable system operations between entities. Moreover, recognizing the importance of interactions between functions to ensure the reliable operation of the BES, NERC considered the functional relationships between registered entities. NERC emphasized maintaining those relationships within a common Regional Entity footprint to promote the efficient and effective administration of BES reliability. In all instances, NERC considered the RC, BA, TOP and Planning Authority / Planning Coordinator alignment, as well as the physical location of the underlying facilities of the Transmission Owners, Generator Owners, Generator Operators, Transmission Planners and Distribution Providers.

Based on these considerations, NERC's proposed transfer Regional Entity for each of the 122 SPP RE registered entities is below. For current SPP RE multi region registered entities, this recommendation does not impact the registrations outside of the SPP RE footprint.

**Submission of Comments**

Comments are due December 22, 2017, and must be submitted electronically to [NERC.Registration@nerc.net](mailto:NERC.Registration@nerc.net). For further information, please contact Ryan Stewart at [Ryan.Stewart@nerc.net](mailto:Ryan.Stewart@nerc.net).

NERC will develop final recommendations to the NERC Board, taking into account its initial analyses and the comments received on the proposed Regional Entity transfers. The final decision on behalf of NERC will be made by the NERC Board, and then provided to FERC for its approval.

Registered Entity	NERC Compliance Registry ID#	Proposed Regional Entity
AE Power Services LLC (AEPS)	NCR11645	MRO
AEP as Agent for AEP OK Transco., PSCO, and SWEPCO (AEPW)	NCR01056	MRO
AES Shady Point, LLC (AESSP)	NCR01055	MRO
Arbuckle Mountain Wind Farm LLC (AMWF)	NCR11570	MRO
Arkansas Electric Cooperative Corporation (AECC)	NCR01060	MRO, SERC
Avangrid Renewables (AVNR)	NCR10259	MRO
Balko Wind, LLC (BALKO)	NCR11548	MRO
Blue Canyon II Windpower LLC (BCWII)	NCR06040	MRO
Blue Canyon Windpower LLC (BCWI)	NCR06041	MRO
Blue Canyon Windpower V, LLC (BCWV)	NCR03048	MRO
Blue Canyon Windpower VI, LLC (BC6)	NCR11201	MRO
Board Of Public Utilities (Kansas City KS) (BPU)	NCR01061	MRO
Board Of Public Utilities, City Of McPherson, Kansas (MCPHER)	NCR10319	MRO
Borger Energy Associates, LP (BOEA)	NCR01062	MRO
Boston Energy Trading and Marketing LLC (EMMT)	NCR00769	MRO
Buckeye Wind Energy, LLC (BEWE)	NCR11563	MRO
Buffalo Dunes Wind Project, LLC (BDWP)	NCR11407	MRO
Canadian Hills Wind, LLC (CHW)	NCR11354	MRO
Caney River Wind Project, LLC (CRWP)	NCR11230	MRO
Caprock Wind LLC (CAPROCK)	NCR05059	MRO
Carthage Water & Electric Plant (CAWEP)	NCR01067	MRO
Central Valley Electric Cooperative, Inc. (CVEC)	NCR06043	MRO
Chisholm View Wind Project, LLC (CHISHOLM)	NCR11291	MRO
Cimarron Bend Wind Project, LLC (CBW)	NCR11693	MRO
Cimarron Windpower II, LLC (CIMW)	NCR11240	MRO
City Of Abbeville (ABBEVLA)	NCR06033	SERC
City Of Alexandria (ALEXLA)	NCR01068	SERC
City Of Clarksdale, Mississippi (CCM)	NCR01071	SERC
City Of Ottawa (OTTAWA)	NCR10227	MRO
City Utilities Of Springfield, MO (SPRM)	NCR01081	MRO
City Water & Light - Jonesboro, Arkansas (CWL)	NCR01082	SERC
Cleco Corporate Holdings LLC (CLECO)	NCR01083	SERC
Cloud County Wind Farm, LLC, (CCWF)	NCR10302	MRO
Coffeyville Municipal Light & Power (CMLP)	NCR11151	MRO
CPV Keenan II Renewable Energy Company, LLC (KREC)	NCR11081	MRO
Dempsey Ridge Wind Farm, LLC (DRWF)	NCR11179	MRO
Dogwood Power Management, LLC (DPM)	NCR11250	MRO
Drift Sand Wind Project LLC (DRIFTSAND)	NCR11670	MRO
Duke Energy Renewables Services, LLC (DEGS)	NCR11241	MRO

Registered Entity	NERC Compliance Registry ID#	Proposed Regional Entity
East Texas Electric Cooperative Inc. (ETEC)	NCR01227	MRO
Eastman Cogeneration Limited Partnership (EASTMAN)	NCR01092	MRO
EDP Renewables North America LLC (EDPR NA)	NCR11662	MRO
Exelon Wind 4, LLC (EXWD4)	NCR10122	MRO
Farmers' Electric Cooperative, Inc. Of New Mexico (FARMCOOPNM)	NCR06046	MRO
Flat Ridge 2 Wind Energy LLC (FRWEII)	NCR11314	MRO
Flat Ridge Wind Energy, LLC (FRWE)	NCR10312	MRO
Frontier Windpower, LLC (FRONTIER)	NCR11692	MRO
Golden Spread Electric Cooperative, Inc. (GSEC)	NCR10020	MRO
Golden Spread Panhandle Wind Ranch, LLC (GSPWR)	NCR11153	MRO
Goodwell Wind Project, LLC (GOODWELL)	NCR11574	MRO
Grand River Dam Authority (GRDA)	NCR01101	MRO
Great Western Wind Energy, LLC (GWWE)	NCR11687	MRO
Green Country Energy, LLC (GREENCOGO)	NCR01103	MRO
Green Country Operating Services, LLC (GREENCOGOP)	NCR01104	MRO
Independence Power & Light (Independence, Missouri) (INDN)	NCR01072	MRO
Invenergy Services LLC (INVENERGY)	NCR11718	MRO
Ironwood Windpower, LLC (IRONWOOD)	NCR11257	MRO
ITC Great Plains, LLC (ITCGP)	NCR10400	MRO
Kansas City Power & Light Company (KCPL)	NCR01107	MRO
Kansas Electric Power Cooperative, Inc. (KEPC)	NCR01109	MRO
Kingfisher Wind, LLC c/o Apex Wind Asset Management (KING)	NCR11617	MRO
Kiowa Power Partners, LLC (KIOWAPP)	NCR01113	MRO
KODE Novus I, LLC (KODE)	NCR11329	MRO
Lafayette Utilities System (LAFA)	NCR01114	SERC
Lea County Electric Cooperative, Inc. (LCEC)	NCR06047	MRO
Lea Power Partners, LLC (LEAPP)	NCR10301	MRO
Llano Estacado Wind, LP (LLANOEWIND)	NCR10226	MRO
Louisiana Energy & Power Authority (LEPA)	NCR01116	SERC
Lubbock Power And Light (LPLTX)	NCR06048	MRO
Midcontinent Independent System Operator, Inc. (MISO)	NCR00826	SERC
Midwest Energy, Inc. (MIDW)	NCR01118	MRO
MISO-MBHydro Contingency Reserve Sharing Group (MRSG)	NCR03044	MRO
Mississippi Delta Energy Agency (MISSDEA)	NCR06050	SERC
NAES Corporation - Dogwood (NAESDOGW)	NCR06054	MRO
NAES Corporation - Goodman Energy Center (NAESGEC)	NCR11236	MRO
NAES Corporation - Oklahoma Cogeneration, LLC (NAESOKC)	NCR11451	MRO
NextEra Energy Resources, LLC (NEER)	NCR10019	MRO
Noble Great Plains Windpark, LLC (NOBLEGP)	NCR11070	MRO
Northeast Texas Electric Cooperative - HCPP (NTEC-HCPP)	NCR11607	MRO
Northeast Texas Electric Cooperative, Inc (NTEC)	NCR01124	MRO
NRG Energy Services - Golden Spread (NRGGS)	NCR11642	MRO
NRG Energy Services-Panhandle Wind Ranch (GOP) (NRGPWR)	NCR11730	MRO

Registered Entity	NERC Compliance Registry ID#	Proposed Regional Entity
Oklahoma Gas And Electric Co. (OKGE)	NCR01130	MRO
Oklahoma Municipal Power Authority (OMPA)	NCR04108	MRO
Oneta Power, LLC (ONETA)	NCR11485	MRO
Origin Wind Energy, LLC (ORGNWE)	NCR11496	MRO
Paragould Light & Water Commission (PARAGOULD)	NCR01135	MRO
Poplar Bluff (POPBLUFFMO)	NCR01137	SERC
Post Rock Wind Power Project, LLC (PRWP)	NCR11264	MRO
Public Service Commission Of Yazoo City (YAZO)	NCR01139	SERC
Rayburn Country Electric Cooperative, Inc. (RCEC)	NCR06010	MRO
Red Dirt Wind Project, LLC	NCR11779	MRO
Red Hills Wind Project, LLC. (RHWP)	NCR10304	MRO
Redbed Plains Wind Farm LLC (REDBED)	NCR11754	MRO
Rock Creek Wind Project, LLC (RCWP)	NCR11762	MRO
Rock Falls Wind Farm, LLC	NCR11780	MRO
Rocky Ridge Wind Project, LLC (ROCKY)	NCR11234	MRO
Roosevelt Wind Project, LLC (RWP)	NCR11560	MRO
Sikeston Board Of Municipal Utilities (SIKESTONMO)	NCR01142	SERC
Slate Creek Wind, LLC (SLATE)	NCR11586	MRO
Smoky Hills Wind Farm, LLC (SMOKY)	NCR11049	MRO
Smoky Hills Wind Project II, LLC (SMOKY2)	NCR10316	MRO
Southern Power Company (SPC)	NCR11616	MRO
Southwest Power Pool (SPP)	NCR01143	MRO
Southwestern Power Administration (SPA)	NCR01144	MRO
Southwestern Public Service Co. (Xcel Energy) (SPS)	NCR01145	MRO
Spearville 3, LLC (SPEAR3)	NCR11322	MRO
Spinning Spur Wind, LLC (SPINSPUR)	NCR11323	MRO
Sunflower Electric Power Corporation (SECI)	NCR01148	MRO
Tenaska Gateway Partners Ltd (TENASGATEW)	NCR00633	MRO
Terrebonne Parish Consolidated Government (TERREBONNE)	NCR01152	SERC
Tex-La Electric Cooperative Of Texas, Inc. (TEXL)	NCR01342	MRO
The Empire District Electric Company (EDE)	NCR01155	MRO
Thunder Ranch Wind Project, LLC	NCR11778	MRO
Transource Energy, LLC (TRANS)	NCR11539	MRO
Tri-County Electric Cooperative, Inc of Oklahoma (TRICEC)	NCR11231	MRO
USACE - Kansas City District (COEKS)	NCR01357	MRO
USACE - Little Rock District (COELR)	NCR06037	MRO
USACE - Tulsa District (COETULSA)	NCR06038	MRO
Waverly Wind Farm LLC (Waverly)	NCR11577	MRO
Westar Energy, Inc. (WR)	NCR00658	MRO
Western Farmers Electric Cooperative (WFEC)	NCR01160	MRO

# SPP RE Transition

## Additional Information Regarding NERC's Proposed Transferee Regional Entities

December 15, 2017

On December 1, 2017, the North American Electric Reliability Corporation (NERC) [posted its proposed Regional Entity transfer](#) for each of the 122 Southwest Power Pool, Inc. Regional Entity (SPP RE) registered entities.<sup>1</sup> NERC now provides additional information regarding its proposed transfers.

Recognizing that the NERC Rules of Procedure (ROP) does not contain criteria for the allocation of multiple registered entity transfers in the event of a Regional Entity dissolution, NERC looked to, and was informed by, ROP Section 1208, which contains the criteria for considering registered entity requests to transfer to another Regional Entity.<sup>2</sup> As described in the December 1, 2017 posting, NERC reviewed each registered entity's transfer request and considered it pursuant to the criteria in ROP Section 1208, as well as other entity specific circumstances that could impact the decision for the recommended Regional Entity.<sup>3</sup> Where NERC's recommendations differed from the registered entities' requests, NERC contacted the registered entities and explained its rationale for the recommendations. NERC also considered input from the Regional Entities. During its review, NERC remained committed to ensuring an effective and efficient transfer of SPP RE registered entities and providing for the reliable operation of the bulk power system (BPS).

NERC is extending the timeline for submission of comments until January 5, 2018, in order for entities to consider the additional information provided herein. Each comment must be submitted electronically to [NERC.Registration@nerc.net](mailto:NERC.Registration@nerc.net). Registered entities are encouraged to reach out to NERC before the comment period closes with any questions. For further information, please contact Ryan Stewart at [Ryan.Stewart@nerc.net](mailto:Ryan.Stewart@nerc.net).

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<sup>1</sup> SPP RE multi-regional registered entity (MRRE) registrations outside of the SPP RE footprint will not be impacted by the proposed transfers.

<sup>2</sup> The NERC ROP is available at: [http://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/NERC\\_ROP\\_Effective\\_20161031.pdf](http://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/NERC_ROP_Effective_20161031.pdf).

<sup>3</sup> In approving Section 1208 of the NERC's Rules of Procedure, the Federal Energy Regulatory Commission (FERC) noted that "a registered entity does not have a right to choose the Regional Entity that will be its Compliance Enforcement Authority." *North American Electric Reliability Corp.*, 133 FERC ¶ 61,061 at P 72-75 (2010), *order denying reh'g*, 134 FERC ¶ 61,179 (2011). FERC further explained that any change to the boundary of a Regional Entity should not merely benefit an individual registered entity. 133 FERC ¶ 61,061 at P 72.

## Review of SPP RE Registered Entity Transfer Requests

NERC received 122 registered entity transfer requests spanning five Regional Entities. Six registered entities expressed no preference for a transferee Regional Entity.

Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	No Preference
<b>14</b>	<b>1</b>	<b>46</b>	<b>0</b>	<b>32</b>	<b>23</b>	<b>0</b>	<b>6</b>
<b>11%</b>	<b>1%</b>	<b>38%</b>	<b>0%</b>	<b>26%</b>	<b>19%</b>	<b>0%</b>	<b>5%</b>

Following an initial review and analysis of the requests received, NERC found that granting all of the requests would neither result in effective and efficient administration of compliance and enforcement activities nor a cohesive functional alignment to support and promote BPS reliability and security.

When reviewing the requests NERC evaluated the following criteria:

- the location of the Registered Entity’s BPS facilities in relation to the geographic and electrical boundaries of the transferee Regional Entity; and
- the impact of the proposed transfer on other BPS owners, operators, and users, including affected Reliability Coordinators (RC), Balancing Authorities (BA), and Transmission Operators (TOP), as appropriate.

This evaluation resulted in NERC’s initial recommendations of proposed transferee Regional Entities for SPP RE registered entities. NERC has contacted the affected Regional Entities and requested they provide information on the following ROP Section 1208 criteria:

- the impact of the proposed transfer on the current and future staffing, resources, budgets and assessments to other Load-Serving Entities of the transferee Regional Entity;
- the sufficiency of the proposed transferee Regional Entity’s staffing and resources to perform compliance monitoring and enforcement activities with respect to the Registered Entity;
- the Registered Entity’s compliance history with SPP RE; and the manner in which pending compliance monitoring and enforcement matters concerning the Registered Entity would be transitioned from SPP RE to the transferee Regional Entity; and
- any other reasons NERC and the transferee Regional Entity consider relevant.

NERC expects to receive responses from the affected Regional Entities in mid-December. NERC will consider those responses, as well as responses to the posted transferee Regional Entities, and any other relevant information when making its final transferee Regional Entity recommendations to the NERC Board of Trustees.

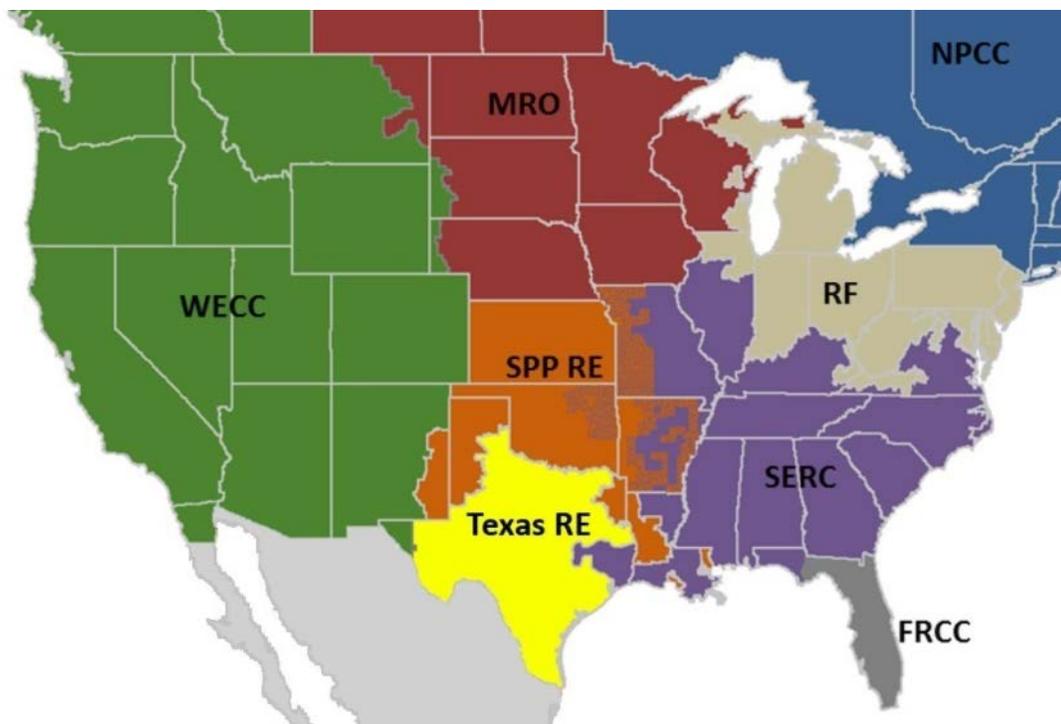
### NERC Initial Evaluation of Transferee Regional Entities

When evaluating the proposed transfer requests, consistent with ROP Section 1208, NERC considered two primary factors: (1) the location of the Registered Entity’s BPS facilities in relation to the geographic and electrical boundaries of the transferee Regional Entity; and (2) the impact of the proposed transfer on other BPS owners, operators, and users, including affected RCs, BAs, and TOPs, as appropriate.

### The location of the registered entity’s BPS facilities in relation to the geographic and electrical boundaries of the transferee Regional Entity

#### Existing Regional Boundaries

NERC’s review of the SPP RE registered entity transfer requests began with the NERC US Regions Map.



**Figure 1: NERC Regions Map<sup>4</sup>**

As shown in Figure 1, SPP RE has geographic boundaries with four existing Regional Entities: WECC, MRO, SERC, and Texas RE. The shading of two Regional Entities in the Arkansas and northeast Oklahoma geographic areas represents an overlap between Regional Entity footprints at their respective Regional Entity geographic borders.

<sup>4</sup> The NERC Regions Map is available at: [http://www.nerc.com/AboutNERC/keyplayers/PublishingImages/2017\\_NERC\\_Regions\\_May2017.jpg](http://www.nerc.com/AboutNERC/keyplayers/PublishingImages/2017_NERC_Regions_May2017.jpg). Please note that Figure 1 represents the NERC Regional Entity footprints and does not represent the SPP RTO footprint.

### **Geographic and Electrical Boundary Analysis**

As a starting point, NERC reviewed the existing electrical boundaries within the Eastern Interconnection that connect to the SPP RE geographic and electrical footprint (MRO and SERC). SPP RE has geographic and electrical boundaries with four Regional Entities: WECC, MRO, SERC, and Texas RE. However, two of these boundaries are in separate Interconnections (WECC and Texas RE) and were therefore not included in this analysis. Other Regional Entities that do not have geographic and electrical boundaries with SPP RE (FRCC, NPCC, and RF) were also not included in the analysis.

NERC commenced its analysis by reviewing the TOP areas in SPP RE. This review included an assessment of the geographic and electrical boundaries, including transmission corridors, between existing TOPs in SPP RE, MRO and SERC. Specifically, NERC reviewed the transmission system in Louisiana and the transmission corridors throughout SPP RE.

### **Transmission System in Louisiana**

NERC reviewed the TOP registered entities located only in Louisiana, as shown in the shaded pink area in Figure 2. Based on their existing geographic and electrical boundaries, NERC recommended that those registered entities be transferred to SERC.

This recommendation includes the following TOPs:

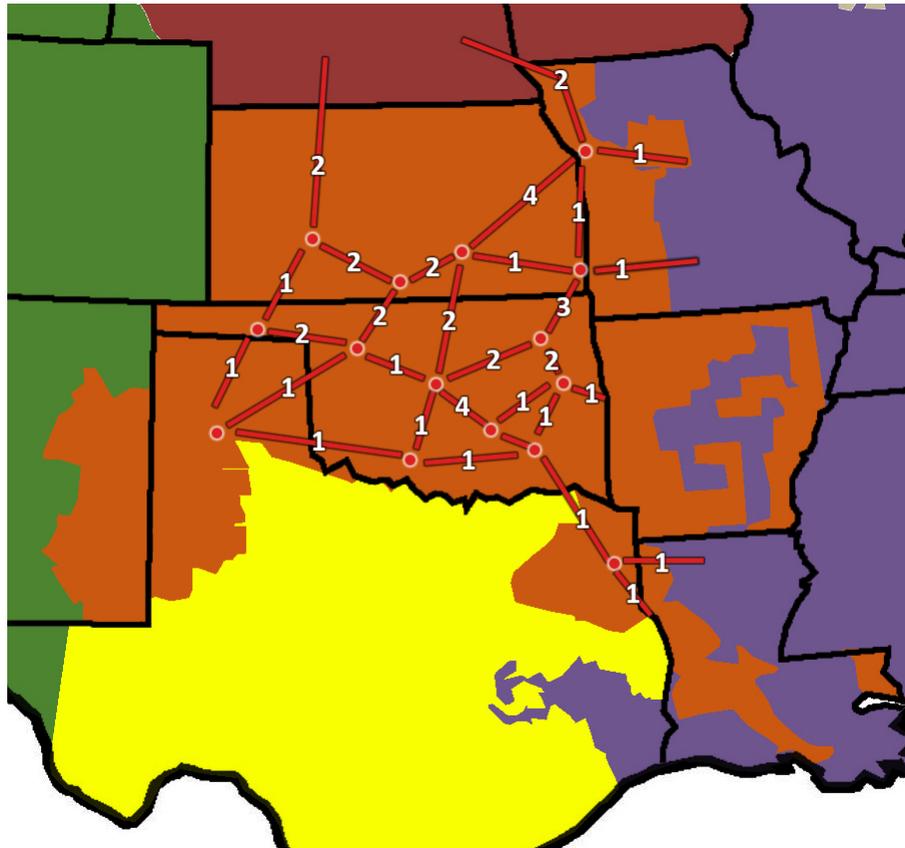
- Cleco Corporate Holding, LLC
- Lafayette Utilities System



**Figure 2: Louisiana Footprint**

### Transmission Corridors throughout SPP RE

NERC’s review of the transmission corridors consisted of the 345kV tie lines connecting to and spanning throughout the SPP RE electrical footprint. These transmission corridors and the number of 345kV tie lines for each are depicted in Figure 3.



**Figure 3: Transmission Corridors<sup>5</sup>**

NERC reviewed TOPs that border MRO and the transmission corridors in central and western Kansas. As shown in Figure 4, there is a transmission corridor with two 345kV tie lines that crosses the Kansas / Nebraska border which is also the current border between SPP RE and MRO. This corridor connects the TOPs in central and western Kansas with MRO. NERC concluded that this connection supports transferring the TOPs in this area to MRO.

<sup>5</sup> This diagram is intended to show a simplified representation of the 345kV transmission system in SPP RE and is for illustration purposes only. It is an approximation of the major transmission corridors and 345kV tie lines contained in SPP RE that is based on the Southwest Power Pool 2015 Transmission Grid map. The red dots on the map are electrical “nodes” used for illustration and do not represent actual transmission connections or substation locations. The red lines, and their numerical values, are transmission “corridors” showing the approximate number of 345kV tie lines in those corridors. Similarly, these corridors and tie line estimates are for illustration and should not be construed to represent defined transmission corridors.



NERC then reviewed the corridors between the TOP areas in eastern Kansas and the TOP areas in northwestern Missouri. As shown in Figure 6, there are two corridors that connect the TOP areas of eastern Kansas and northwestern Missouri. The first corridor has four 345kV tie lines and the second corridor has one 345kV tie line. Based on the multiple connections between these areas, NERC recommended that these TOPs be transferred to the same Regional Entity. To determine whether these TOPs should transfer to MRO or SERC, NERC reviewed applicable transmission corridors. NERC reviewed the corridor with two 345kV tie lines that connects to MRO as shown in Figure 6. In addition, NERC considered the corridor, as shown in Figure 5, between the western/central and eastern Kansas TOPs, which NERC had recommended be transferred to MRO. NERC also considered the one corridor with a 345kV tie line that connects these TOPs with SERC, as shown in Figure 6. NERC determined that there are more corridors connecting to MRO than there are to SERC. Therefore, NERC recommended that the eastern Kansas TOPs and northwest Missouri TOPs be transferred to MRO.

This recommendation includes the following TOPs:

- Westar Energy, Inc.
- Kansas City Power & Light Company
- Board of Public Utilities (Kansas City KS)



**Figure 6: Transmission Corridors with TOPs in northwestern Missouri**

NERC continued the analysis of the TOP areas in Oklahoma and Texas to determine whether these areas should transfer to MRO or SERC. As shown in Figure 7, there are four corridors with a total of eight 345kV tie lines across the border between Oklahoma and Kansas. In addition, NERC acknowledged that there are many corridors and 345kV tie lines that are meshed across the state of Oklahoma and into the Texas panhandle and northeast Texas. NERC concluded that the meshed configuration of the electrical network in this area supports all of the associated TOPs being transferred to the same Regional Entity. In comparison,

there is one corridor with a single 345kV tie line across the border between Oklahoma and Arkansas that connects with a SERC TOP. Based on the analysis of corridors to Kansas, and the meshed network, NERC recommended transferring these TOPs to MRO.

This recommendation includes the following TOPs:

- American Electric Power Corp. as Agent for AEP Oklahoma Transmission Company, Inc., Public Service Company of Oklahoma and Southwestern Electric Power Company
- Grand River Dam Authority
- Oklahoma Gas and Electric Co.
- Southwestern Public Service Co. (Xcel Energy)
- Western Farmers Electric Cooperative



**Figure 7: Transmission Corridors with TOPs in Oklahoma and Texas**

The remaining area to review was southwestern Missouri and northern Arkansas. As shown in Figure 8, there are four corridors that connect with this area. There are three corridors with a total of five 345kV tie lines that connect to the TOP areas in Oklahoma and Kansas that NERC had recommended be transferred to MRO. In contrast, there is one corridor with one 345kV tie line that connects with a TOP area in SERC. NERC concluded from this review that TOP areas in southwestern Missouri and northern Arkansas should be transferred to MRO.

This recommendation includes the following TOPs:

- The Empire District Electric Company
- City Utilities of Springfield, MO
- Independence Power & Light (Independence, Missouri)

- Southwestern Power Administration



**Figure 8: Transmission Corridors with TOPs in southwestern Missouri**

**The impact of the proposed transfer on other BPS owners, operators, and users, including affected Reliability Coordinators (RC), Balancing Authorities (BA), and Transmission Operators (TOP), as appropriate**

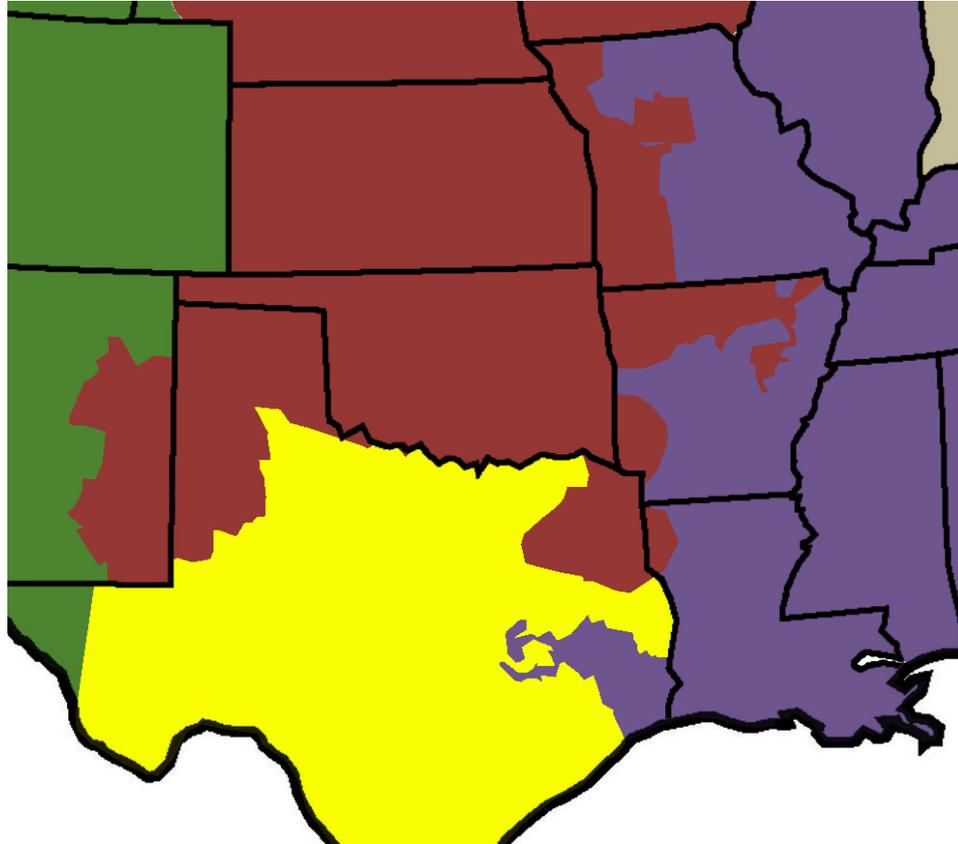
As part of this process and consistent with ROP Section 501, NERC must ensure the continuity of functional alignment within geographic or electrical boundaries. Recognizing the importance of interactions between functions to ensure the reliable operation of the BPS, NERC considered the functional relationships between registered entities. NERC emphasized maintaining those relationships within a common Regional Entity footprint to promote the efficient and effective administration of BPS reliability. In all instances, NERC considered the RC, BA, TOP and Planning Authority / Planning Coordinator alignment, as well as the physical location of the facilities of the Transmission Owners, Generator Owners, Generator Operators, Transmission Planners, and Distribution Providers. NERC’s proposed recommendations align the TOPs with the applicable RCs and BAs to maintain those relationships in the same Regional Entity footprint. Therefore, in consideration of the functional relationships in support of BPS reliability, NERC further recommended that Transmission Owners, Generator Owners, Generator Operators, Transmission Planners and Distribution Planners transfer to the same Regional Entity as their TOP.

NERC contacted all registered entities where NERC’s recommendations differed from the registered entities’ requests and explained the importance of maintaining functional relationships.

**Resulting Proposed Transferee Regional Entities**

As explained above, NERC was informed by the criteria in ROP Section 1208 in its review of each transfer request submitted by registered entities, along with follow up discussions with Registered Entities and input from the Regional Entities. NERC also considered registered entity alignment within a contiguous and interconnected regional boundary to be a critical component of BPS reliability because of the planning and operational synergies that would be achieved. Therefore, NERC reviewed the electrical boundaries between SPP RE registered entities and neighboring Eastern Interconnection Regional Entities. NERC’s review of

major transmission corridors found that placing such paths within a common regional boundary will enhance regional planning coordination and promote efficient and reliable system operations between entities. The visual depiction of NERC’s Initial recommended transferee Regional Entities is in Figure 9 below.



**Figure 9: NERC Initial Recommendation**

### **NERC Continuing Evaluation of Proposed Transferee Regional Entities**

The analysis above resulted in the proposed transferee Regional Entities, as posted on December 1, 2017. After completing its initial analysis, NERC contacted the affected Regional Entities and requested that they provide information on the following, consistent with ROP Section 1208 criteria: (1) the impact of the proposed transfer on the current and future staffing, resources, budgets and assessments to other Load-Serving Entities of the transferee Regional Entity; (2) the sufficiency of the proposed transferee Regional Entity’s staffing and resources to perform compliance monitoring and enforcement activities with respect to the Registered Entity; (3) the Registered Entity’s compliance history with SPP RE; and the manner in which pending compliance monitoring and enforcement matters concerning the Registered Entity would be transitioned from SPP RE to the transferee Regional Entity; and (4) any other reasons NERC and the transferee Regional Entity consider relevant.

**The impact of the proposed transfer on the current and future staffing, resources, budgets and assessments to other Load-Serving Entities of the transferee Regional Entity**

NERC continues to review Regional Entity staffing and resource requirements to ensure the impacted Regional Entities will effectively perform delegated duties when the transfers are finalized. Based on the preliminary proposed transfers, NERC is working with the recommended Regional Entities to better understand possible impacts to staffing and other resources. NERC does not anticipate major changes to the assessments of the Load-Serving Entities of the transferee Regional Entities.

**The sufficiency of the proposed transferee Regional Entity's staffing and resources to perform compliance monitoring and enforcement activities with respect to the Registered Entity**

As mentioned above, NERC is reviewing the sufficiency of the staffing level and other resources of the proposed transferee Regional Entities to address anticipated increased activities and workload.

**The Registered Entity's compliance history with SPP RE; and the manner in which pending compliance monitoring and enforcement matters concerning the Registered Entity would be transitioned from SPP RE to the transferee Regional Entity**

NERC and the transferee Regional Entities will develop and implement transition plans that will include compliance history and pending compliance monitoring and enforcement matters concerning each registered entity. NERC and the transferee Regional Entity will coordinate with the registered entities.

If an MRRE is participating in Coordinated Oversight with SPP RE as the Lead Regional Entity (LRE), NERC will ensure that the transition to a new LRE is determined pursuant to the Coordinated Oversight process, and communicated to the MRRE. For MRREs where SPP RE is not the LRE, no changes are expected at this time.

**Any other reasons NERC and the transferee Regional Entity consider relevant**

NERC reviewed and considered each transfer request submitted by registered entities. NERC appreciates the registered entities time and effort in submitting these requests, as well as the registered entities' participation in follow-up discussions with NERC. The requests and discussions assisted NERC in its initial recommendations. Throughout the process, NERC also coordinated with the Regional Entities and appreciates their perspectives. NERC will review comments received on its proposed transferee recommendations and consider them, along with other pertinent information, when making its recommendation to the NERC Board of Trustees. NERC will continue to engage the Regional Entities and registered entities throughout the transition period.

**Next Steps**

NERC will continue to follow a rigorous process to ensure affected Regional Entities will be able to efficiently and effectively meet their obligations. NERC will consider registered entity comments on proposed transferee Regional Entities, Regional Entities responses addressing the criteria found in ROP Section 1208, and any other relevant information when making transferee Regional Entity recommendations to the NERC Board of Trustees. The final decision on behalf of NERC will be made by the NERC Board of Trustees, and then filed with FERC.

## Consideration of Comments

Proposed reassignment of registered entities currently registered in the SPP Regional Entity (SPP RE) to the Midwest Reliability Organization (MRO) and SERC Reliability Corporation (SERC)

The North American Electric Reliability Corporation (NERC) thanks all commenters who submitted comments on the proposed SPP RE registered entity transfers to MRO and SERC. NERC's proposed transfer recommendations were initially posted for public comment on December 1, 2017 for a comment period closing on December 22, 2017. NERC then posted additional information regarding NERC's proposed transfer recommendations on December 15, 2017, and extended the comment period to January 5, 2018.

NERC received 15 sets of comments, including submittals from two trade organizations and a joint registered entity group, representing 10 registered entities. NERC carefully considered each comment received. As shown in the table below, NERC identified the main themes raised in the comments and grouped the comments by topic area. NERC then provided a summary of the comments received in each topic area and addressed the feedback received. In addition, NERC contacted certain registered entities directly to discuss entity-specific comments in greater detail.

## Comments

**Summary of Changes:** No changes made to NERC’s initial transfer recommendations based on comments received.

Topic Area	Summary of Stakeholder Comments	Action/Response and Notes
<p>Industry Support for NERC’s Proposed Regional Entity Transfers for the SPP RE registered entities</p>	<ul style="list-style-type: none"> <li>• The majority of commenters support NERC’s proposed Regional Entity transfer recommendations of registered entities in the SPP RE footprint.</li> <li>• Several commenters note that the proposed Regional Entity transfers will enhance the reliability of the Bulk Power System (BPS).</li> <li>• One commenter states that “NERC staff has crafted an outcome that promotes ‘the efficient and effective administration of BPS reliability.’”</li> <li>• One commenter acknowledges that NERC’s proposed transfer recommendations are reasonable given (1) the geographic and electrical boundaries of the SPP RE registered entities’ BPS facilities and (2) the continuity of certain functional alignments within the geographic and electrical boundaries.</li> </ul>	<ul style="list-style-type: none"> <li>• NERC appreciates all comments received.</li> </ul>

Topic Area	Summary of Stakeholder Comments	Action/Response and Notes
Process	<ul style="list-style-type: none"> <li>Two commenters suggest that NERC should enhance the process in its analysis and decision-making in proceedings involving large scale registered entity transfers to another Regional Entity.</li> </ul>	<ul style="list-style-type: none"> <li>NERC remains committed to communicating with SPP RE stakeholders throughout the SPP RE transition.</li> <li>The NERC Rules of Procedure (ROP) do not contain specific criteria for the allocation of multiple registered entity transfers in the event of a Regional Entity dissolution. Federal Energy Regulatory Commission (FERC) precedent and ROP Section 1208 provide useful criteria for considering how to address the dissolution of a Regional Entity. NERC management elected to apply Section 1208 criteria as the most relevant guidance contained in the ROP and as consistent with prior FERC orders on transfer considerations. NERC provided advance notice to the affected registered entities of the use of this criteria and was consistent in its application.</li> <li>On July 27, 2017, NERC informed the 122 SPP RE registered entities that they may submit a written request to NERC stating their respective preference for transfer to another Regional Entity. Taking guidance from FERC precedent and the ROP, NERC management announced that it would consider Section 1208 criteria when reviewing registered entities' transfer requests as the most appropriate in this situation.</li> <li>NERC has taken steps to keep stakeholders informed of its analysis and decision-making process throughout the transition of the SPP RE 122 registered entities to another Regional Entity. NERC hosted an initial webinar on August 25, 2017 with the SPP RE registered entities. During the webinar, NERC outlined the transition</li> </ul>

Topic Area	Summary of Stakeholder Comments	Action/Response and Notes
		<p>process and responded to registered entities’ questions. NERC directed registered entities to email any additional questions to NERC registration.</p> <ul style="list-style-type: none"> <li>• NERC encouraged SPP RE registered entities to contact NERC throughout the duration of the transition with any questions.</li> <li>• NERC logged the registered entities’ questions along with NERC and applicable Regional Entity responses in a Frequently Asked Questions – SPP Transition document (FAQ), which was updated weekly and sent via email to the SPP RE registered entities.</li> <li>• On October 24 and 25, 2017, NERC’s General Counsel provided additional information regarding the transition at SPP RE’s fall workshop.</li> <li>• NERC then held a subsequent webinar on October 27, 2017 with the SPP RE registered entities to address any additional comments or questions regarding the transition process.</li> <li>• On December 1, 2017, NERC published its proposed transfer recommendations for each of the 122 SPP RE registered entities. Registered entities were given until December 22, 2017 to submit written comments on NERC’s proposed transfer recommendations.</li> <li>• On December 12, 2017, NERC informed the SPP RE registered entities that additional information was planned to be posted on December 15, 2017, and that the comment period would be extended from December 22, 2017 to January 5, 2018.</li> </ul>

Topic Area	Summary of Stakeholder Comments	Action/Response and Notes
		<ul style="list-style-type: none"> <li>• On December 15, 2017, NERC provided additional information (December 15 Posting) regarding NERC’s proposed transfer recommendations concerning its evaluation of the SPP RE registered entities’ transfer requests.</li> <li>• Where NERC’s recommendations differed from the registered entities’ requests, NERC contacted the registered entities by phone and explained NERC’s rationale for the recommendations.</li> <li>• NERC applied the Section 1208 criteria as presented to the SPP RE registered entities at the beginning of the transition process in a consistent manner.</li> </ul>
<p>Coordinated Oversight Program</p>	<ul style="list-style-type: none"> <li>• Several commenters that are registered in more than one region raise administrative efficiency concerns regarding compliance monitoring and enforcement.</li> <li>• Several commenters question potential modification to existing coordinated oversight.</li> </ul>	<ul style="list-style-type: none"> <li>• The Coordinated Oversight Program (Program) provides for increased efficiencies in resource allocation for registered entities while maintaining the reliability of the BPS. Specifically, the Program is designed to eliminate unnecessary duplication of compliance monitoring and enforcement activities.</li> <li>• For multi-region registered entities (MRREs) participating in the Program with SPP RE as the Lead Regional Entity (LRE), NERC will ensure the transition to a new LRE pursuant to the coordinated oversight process. For MRREs where SPP RE is not the LRE, no changes are expected at this time.</li> <li>• NERC contacted several registered entities to clarify that for current SPP RE MRREs, NERC’s proposed transfer recommendations is not expected to</li> </ul>

Topic Area	Summary of Stakeholder Comments	Action/Response and Notes
		<p>impact registrations outside of the SPP RE footprint.</p> <ul style="list-style-type: none"> <li>• NERC contacted several registered entities to review their questions regarding future participation in the Program.</li> <li>• NERC contacted one registered entity to explain that it would become an MRRE as a result of NERC’s proposed transfer recommendation and would have the option to participate in the Program.</li> </ul>
<p>Location of Assets</p>	<ul style="list-style-type: none"> <li>• One commenter suggests that the ROP 1208 criterion addressing location of assets should not be a primary factor for evaluating registered entity transfer requests.</li> </ul>	<ul style="list-style-type: none"> <li>• NERC announced at the beginning of the SPP RE transition process that applying Section 1208 criteria in this situation is appropriate based on the guidance in the NERC ROP and FERC precedent on registered entity transfers to another Regional Entity. Geographic location is one of the Section 1208 criteria NERC considered.</li> <li>• In NERC’s December 15 Posting, NERC noted that it considered two initial criteria: (1) the location of the registered entity’s BPS facilities in relation to the geographic and electrical boundaries of the transferee Regional Entity; and (2) the impact of the proposed transfer on other BPS owners, operators, and users, including affected Reliability Coordinators, Balancing Authorities, and Transmission Operators, as appropriate.</li> </ul>

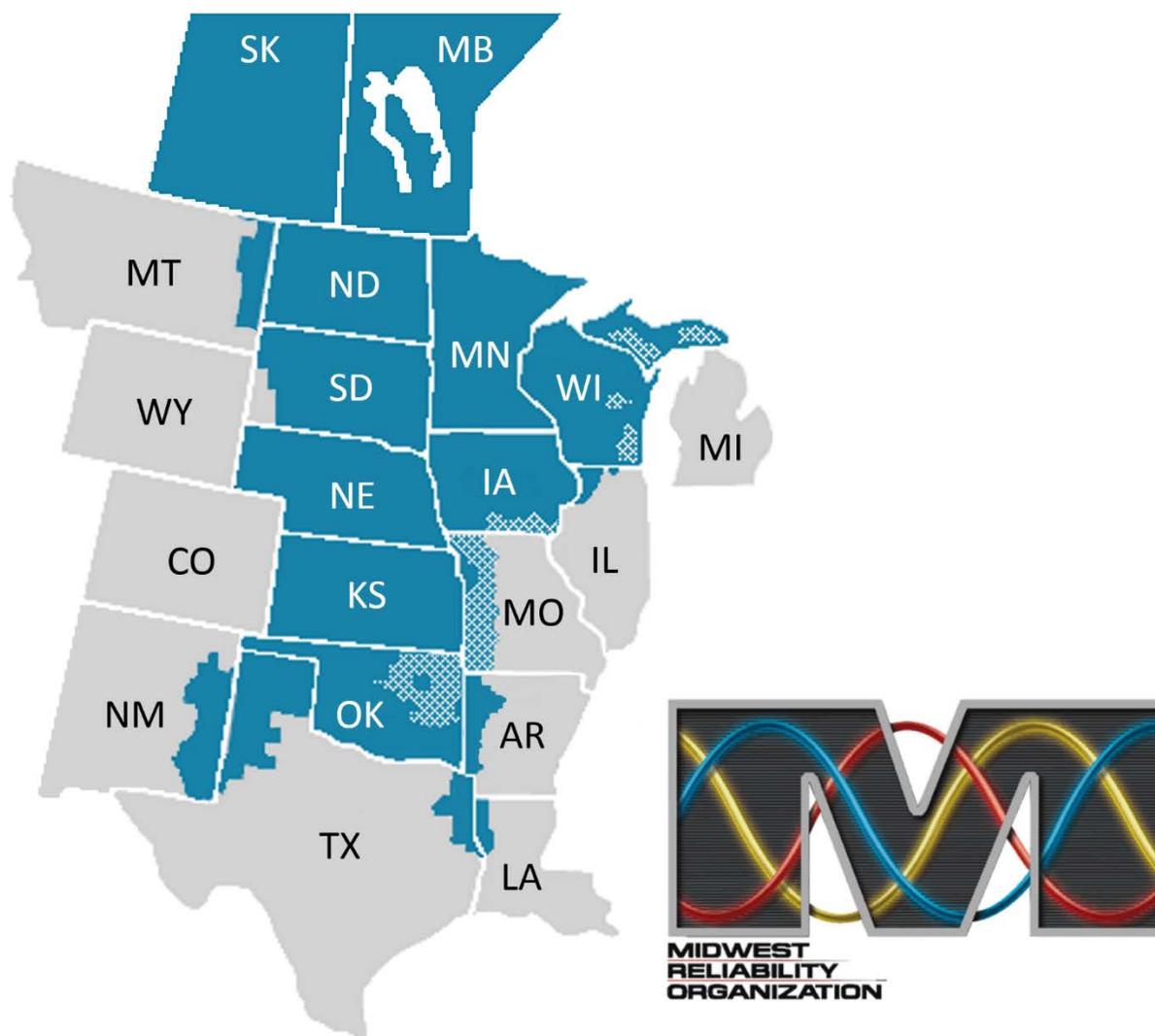
Topic Area	Summary of Stakeholder Comments	Action/Response and Notes
		<ul style="list-style-type: none"> <li>Also in the December 15 Posting, NERC stated it will consider registered entity comments on the proposed transferee Regional Entities, Regional Entities' responses addressing the criteria found in Section 1208, and any other relevant information when making transferee Regional Entity recommendations to the NERC Board of Trustees.</li> </ul>
Regional Entity Expertise	<ul style="list-style-type: none"> <li>One commenter states that NERC should consider specific Regional Entity experience with an entity's business functions and responsibilities associated with its organizational structure.</li> </ul>	<ul style="list-style-type: none"> <li>All Regional Entities meet the requirements of the Federal Power Act, the ERO Regulations, and the NERC ROP as approved by FERC necessary to qualify for delegated authority by NERC, and approved by FERC, to perform compliance monitoring and enforcement activities as set forth in NERC's Uniform Compliance Monitoring and Enforcement Program (CMEP) and the annual ERO CMEP Implementation Plan.</li> <li>NERC conducts continuous oversight of the Regional Entities' CMEP activities.</li> <li>All Regional Entities have experience with entities of various organizational structures registered for all NERC registered functions.</li> </ul>

Topic Area	Summary of Stakeholder Comments	Action/Response and Notes
		<ul style="list-style-type: none"> <li>• Pursuant to Section 1208, a registered entity may request a transfer to another Regional Entity.</li> <li>• Registered entities have various existing tools, such as the Consistency Reporting Tool, to inform NERC of any concerns regarding a Regional Entity’s performance of CMEP activities.</li> </ul>

### Exhibit A — Regional Boundaries

MRO is one of ~~eight~~ seven Regional Entities that ~~comprise the North American Electric Reliability Corporation (NERC)~~ operates under a Delegation Agreement with the North American Electric Reliability Corporation (NERC). MRO is a not for profit entity committed to safeguarding and improving the reliability of the Bulk Power System in all or part of the states of Arkansas, Illinois, Iowa, Kansas, Louisiana, Michigan, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wisconsin as indicated in the map below and ~~provided in the NERC Compliance Registry the upper Midwest part of North America~~ and the Canadian provinces of Manitoba and Saskatchewan

~~There are several Regional Transmission Organizations that overlap MRO and other Regional Entity footprints. MRO coordinates its delegated responsibilities with these neighboring Regional Entities to avoid duplicity and ensure consistency and accuracy. MRO does not have affiliates and does not perform any reliability functions that would result in a conflict or inability to perform the delegated responsibilities of this Agreement.~~





## 1.0 Regional Boundaries

The geographic boundaries of SERC Reliability Corporation (SERC) are determined by the service areas of its membership, comprised of investor-owned utilities, municipal, cooperative, state and federal systems, merchant electricity generators, and power marketers.

SERC covers an area of approximately 574,000 square miles in sixteen states: all of Alabama, Georgia, Mississippi, North Carolina, South Carolina; most of Arkansas, Louisiana, Missouri, and Tennessee; and portions of Florida, Illinois, Iowa, Kentucky, Oklahoma, Texas, and Virginia.

Service provided by SERC members in areas which overlap with neighboring regions include:

- The area in southern Iowa is served by N.E. Missouri Electric Power Cooperative, a member of Associated Electric Cooperative, Inc., and N.W. Electric Power Cooperative, a member of Associated Electric Cooperative, Inc.
- The area in eastern Oklahoma is served by KAMO Electric Cooperative, Inc., a member of Associated Electric Cooperative, Inc.
- The area in western Missouri is served by N.W. Electric Power Cooperative, a member of Associated Electric Cooperative, Inc., and KAMO Electric Cooperative, Inc., a member of Associated Electric Cooperative, Inc.
- The area in N.E. Florida (part of Baker and Nassau counties) served by Okefenoke Rural Electric Membership Corporation (OREMC), a member of Georgia System Operations Corporation; and facilities physically located in Baker County, Florida owned by Georgia Transmission Corporation (GTC) are part of the SERC Region and not the FRCC Region.

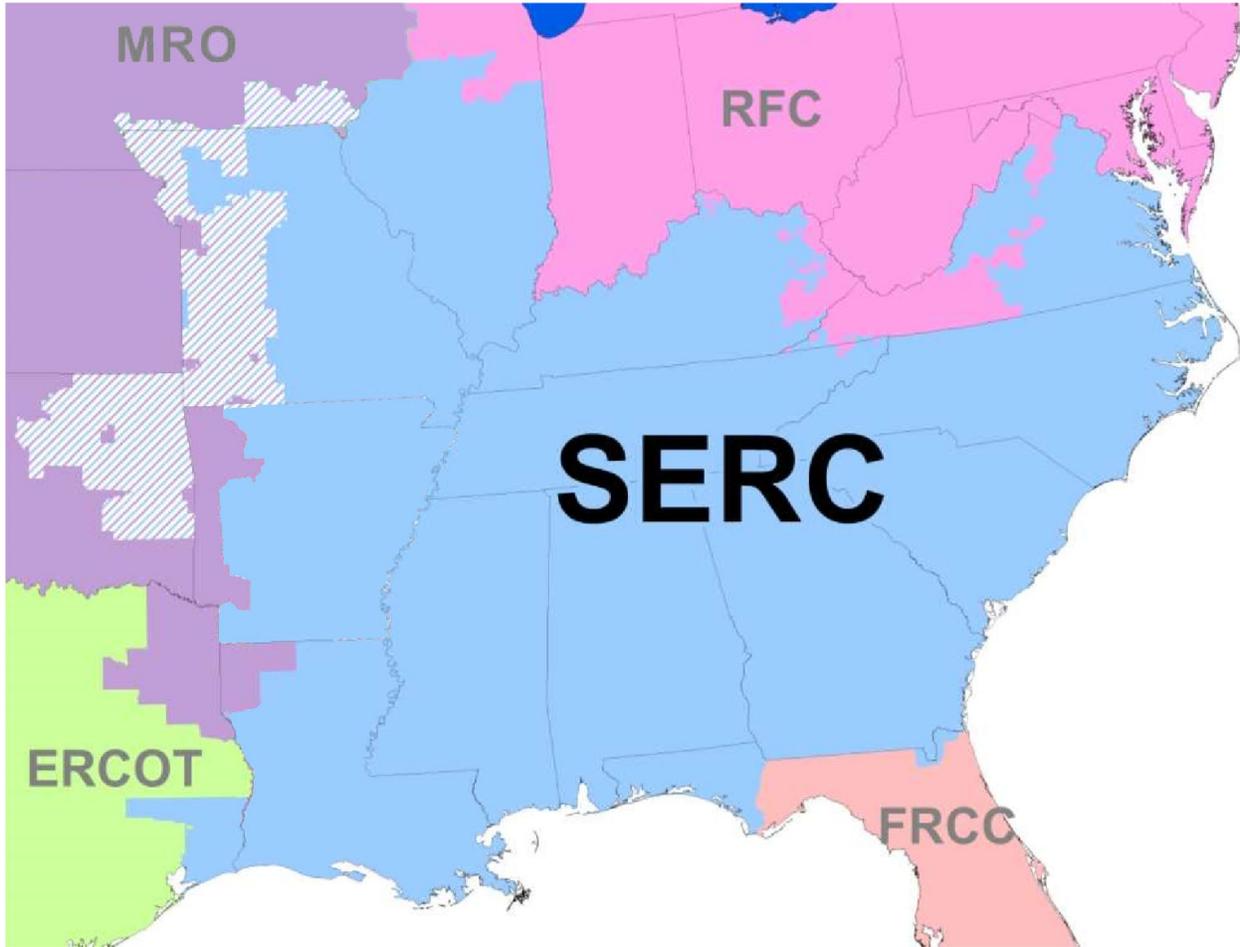
A regional map is show in Section 1.1.

SERC may also perform compliance and enforcement activities outside of the Regional Entity, on behalf of NERC and/or other Regional Entities, such activities to be undertaken pursuant to a contract between the Regional Entities that is approved by the SERC Board, the NERC Board, and the Federal Energy Regulatory Commission.

## Regional Boundaries

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### 1.1 SERC Regional Map



## Rules of Procedure Revisions - Consolidated Hearing Process

### Action

Approve the proposed revisions to Section 400, and Appendices 2 and 4C to the NERC Rules of Procedure (ROP) and direct staff to file the revised ROP with the appropriate regulatory authorities for approval.

Attachment 1 [Redline Changes to Section 400](#)

Attachment 2 [Redline Changes to Appendix 2](#)

Attachment 3 [Redline Changes to Appendix 4C](#)

Attachment 4 [Consideration of Comments](#)

### Background

On July 26, 2016, NERC posted the introduction of a Consolidated Hearing Process for a 45-day public comment period. After the comment period ended, the NERC Board of Trustees approved the proposed hearing process. NERC then filed a petition on December 9, 2016 with the Federal Energy Regulatory Commission (“FERC”) for approval of the applicable ROP revisions. FERC staff raised concerns related to the proposal to give the Hearing Officer the ability to cast the deciding vote in the event that any Hearing Body vote results in a tie. To address FERC staff’s concerns, NERC proposes to modify the composition of the consolidated Hearing Body by increasing the number of members by one. The proposed Hearing Body would be composed of five members, instead of four, to prevent a tie. The Hearing Officer would not have a vote on any matter brought before the Hearing Body for decision.

FERC staff also recognized that the current ROP uses the terms “segment” and “sector” inconsistently. As discussed in the Summary of Proposed Revisions below, NERC proposes to delete the term “segment” and replace it with “sector” in the provisions pending before FERC regarding the Consolidated Hearing Process.

Upon approval by the Board of Trustees, NERC would amend the filing currently pending at FERC to propose the modifications described above.

### Proposed Consolidated Hearing Process Summary

The currently effective NERC ROP contemplate that hearings to resolve contested noncompliance, mitigation plans, remedial action directives, penalties may be held at each Regional Entity (RE). NERC’s proposed Consolidated Hearing Process would allow REs the *option* to move the hearing process to NERC. The July 26, 2016 posting, available [here](#), provides a summary of the benefits of the proposed Consolidated Hearing Process and addresses each proposed change to the ROP to incorporate the hearing process.

Under the updated proposed revisions to ROP Section 403.15B, for which approval is now being sought, the consolidated Hearing Body would generally be composed of five members and

would choose a Hearing Officer to administer the proceedings. As previously contemplated, up to two members of the Hearing Body may be appointed by the RE from which the case originates. The NERC Board of Trustees Compliance Committee (BOTCC) will appoint two members chosen among NERC trustees not serving on the BOTCC at the time of the request for hearing.

To address the concerns raised by FERC staff with respect to a possible tie, the updated proposed revisions now contemplate that these members so appointed to the Hearing Body would then appoint an additional member. The additional member may be chosen among NERC trustees not serving on the BOTCC at the time of the request for hearing or from the RE which the case originates (provided all qualifications applying to Hearing Body members are met). If the Hearing Body does not select a NERC trustee or a regional representative, the Hearing Body may appoint the additional member in accordance with the criteria specified in Appendix 4C, Attachment 2, Section 1.4.3(a). In the event a RE chooses not to appoint members to the Hearing Body and there are not five NERC trustees available to participate on the Hearing Body, as determined by the BOTCC, the Hearing Body may be composed of three members (three NERC trustees not serving on the BOTCC).

NERC also proposes changes to the provisions in ROP Section 400 and Appendix 4C pending before FERC regarding the Consolidated Hearing Process that use the terms “segment” and “sector” to align with the Appendix 2 definitions and the Regional Delegation Agreements between NERC and each RE. The term “segment” is used in the context of NERC’s Reliability Standards development process. The term “sector” refers to members of NERC that are Bulk Power System owners, operators, or users or other persons and entities with substantially similar interests, including governmental entities. The membership “sectors” are defined in Article II, Section 4 of the NERC Bylaws. To align the use of terminology with the appropriate context, NERC proposes to delete the term “segment” and replace it with the term “sector” in the ROP provisions related to the proposed hearing process.

### **Public Comment Period**

NERC posted its proposed revisions publicly on November 30, 2017 for a comment period ending on January 14, 2018. NERC received limited comments from industry stakeholders. One commenter suggested that the Appendix 2 definition of Hearing Officer should be modified to clarify that the Hearing Officer is not a member of the Hearing Body. NERC modified the Hearing Officer definition to state that the Hearing Officer is not a member of the Hearing Body.

All the comments received are described and addressed in Attachment 4, through the hyperlink provided above. The actual submittals are also posted on the ROP page of the NERC website. Lastly, this agenda item and accompanying materials were posted on the NERC website on January 24, 2018, at least 15 days prior to consideration of these revisions by the Board of Trustees, as contemplated in NERC’s process for proposed ROP revisions.

## **ERO Reliability Risk Priorities Report**

### **Action**

Accept

### **Background**

The Reliability Issues Steering Committee's (RISC's) [ERO Reliability Risk Priorities Report](#) (RISC report) provides recommendations to the Board of Trustees (Board) regarding the approach the ERO and industry should take to enhance reliability and manage bulk power system (BPS) risks. The RISC report reflects the RISC's determination of the most pressing risks to the BPS taking into account input from stakeholders, particularly from discussions held during the Reliability Leadership Summit on March 21, 2017.

The RISC report includes nine risk profiles, and each is mapped against the likelihood and impact further described in the RISC report. This mapping represents the unmitigated or inherent risks of each risk profile as determined by the RISC. Regardless of the categorization, all risk profiles warrant attention as the rapidly changing BPS can quickly raise the risk. Each risk profile includes a description of the risk and recommendations for mitigation. These recommendations are presented to the Board and industry stakeholders as input into the strategic planning process.

## PRC-025-2 – Generator Relay Loadability

### Action

Adopt the following standard documents and authorize staff to file with applicable regulatory authorities:

- **Reliability Standard PRC-025-2 Generator Relay Loadability**  
[\[Clean\]](#) [\[Redline to last approved\]](#)
- **Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs)**  
[\[VRF/VSL Justification\]](#)
- **Implementation Plan**  
[\[Implementation Plan\]](#)
- **Retirements**  
[\[PRC-025-1\]](#)

### Background

Reliability Standard PRC-025-1 was approved by the Federal Energy Regulatory Commission in Order No. 799 on July 17, 2014 and became effective on October 1, 2014. Under the phased implementation plan, applicable entities have five or seven years to become compliant with the standard depending on the scope of work required by the Generator Owner or Transmission Owner. In the course of implementing the standard, industry stakeholders identified a number of issues and submitted a Standards Authorization Request (SAR) to modify PRC-025-1. The SAR was accepted by the Standards Committee on April 19, 2017.

Proposed Reliability Standard PRC-025-2 revises the PRC-025 standard in accordance with the SAR as follows: (1) provides alternative loadability (Option 5b in Table 1) specific to dispersed power producing resources; (2) clarifies the inclusion of the 50 relay element (i.e., instantaneous tripping) in Table 1 Options where the 50 element was not previously identified; (3) modifies Table 1 for proper inclusion of individual applications where there is more than one application listed within an Option; (4) clarifies Options 14b, 15b, and 16b that simulation must be performed by depressing the voltage at the remote end of interconnecting transmission lines; (5) eliminates the term “pickup” in “Setting Criteria” in Table 1 since it is intended for relays to “not trip” for the specified setting criteria; and (6) provides clarity on identified miscellaneous items.

### FERC Order Directives

None

### Standard Development Process

The PRC-025-2 standard was balloted two times before the final ballot. The initial ballot resulted in 80.99 percent approval. The implementation plan was modified and required an additional ballot that resulted in 88.25 percent approval. The proposed standard was posted for final ballot on January 09, 2018 that closed on January 18, 2018. Results from the final ballot will be presented to the NERC Board of Trustees at the February meeting.

### **Cost Effectiveness**

The vast majority of stakeholders did not have concerns about cost effectiveness as the standard is going into its fourth year of implementation. A number of stakeholder comments were specific to dispersed power producing resources. There were concerns that work already completed should be “grandfathered” under the proposed revisions; however, comments did not reveal any circumstances where the proposed revisions affect relays that are already compliant. Additionally, the drafting team did not identify any conditions where the proposed dispersed power producing resources revisions creates a duplication of effort. Lastly, some stakeholders suggested that the standard be written to address dispersed power producing resources in an aggregate fashion rather than by individual resources. The team did not address those comments as they would substantively change the required performance approved under the currently effective version of the standard.

### **Minority Issues**

None

### **Additional Information**

A link to the project history and files is included here for reference:

[\[Project 2016-04 Modifications to PRC-025-1\]](#)

- Reliability Standard Audit Worksheet (RSAW)

[\[PRC-025-2 Draft RSAW\]](#)

## FAC-501-WECC-2 – Transmission Maintenance

### Action

Adopt the following Regional Reliability Standard FAC-501-WECC-2 – Transmission Maintenance standard documents and authorize NERC staff to file with applicable regulatory authorities:

- **Regional Reliability Standard FAC-501-WECC-2 and associated Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs)**

[\[FAC-501-WECC-2 – Clean\]](#)

[\[FAC-501-WECC-2 – Redline\]](#)

- **Implementation Plan**

[\[FAC-501-WECC-2 Implementation Plan\]](#)

### Retirement

- [\[Regional Reliability Standard FAC-501-WECC-1 – Transmission Maintenance\]](#)

### Background

In accordance with the Western Electricity Coordinating Council (WECC) Reliability Standards Development Procedures, WECC Regional Reliability Standards are to be reviewed at least once every five years from the effective date of the most recent version. WECC Regional Reliability Standard FAC-501-WECC-1 became effective on July 1, 2011. In 2016, WECC determined as a result of its review that it was necessary to revise the standard.

### Summary

In the proposed FAC-501-WECC-2 Regional Reliability Standard, the WECC drafting team made changes to conform the existing document to the NERC standard template and made clarifying revisions to Measure M3 and Attachment A (specifying the content of required Transmission Maintenance and Inspection Plans).

FAC-501-WECC-2 was approved by the WECC Standards Committee on July 31, 2017 and passed the WECC final ballot on October 11, 2017. On December 6, 2017, the WECC Board of Directors approved sending the proposed standard to NERC for adoption and subsequent filing with applicable regulatory authorities. NERC staff supports the Regional Reliability Standard, which was posted for a 45-day public comment period from December 1, 2017 through January 16, 2018. Any adverse comments or minority opinions received during the comment period will be reviewed at the Board of Trustees meeting.

### Pertinent FERC Directives

None

### Additional Information

A link to the project history and files is included here for reference:

[\[FAC-501-WECC-2 Transmission Maintenance\]](#)

## BAL-004-WECC-3 – Automatic Time Error Correction

### Action

Adopt the following Regional Reliability Standard BAL-004-WECC-3 – Automatic Time Error Correction standard documents and authorize NERC staff to file with applicable regulatory authorities:

- **Regional Reliability Standard BAL-004-WECC-3 and associated Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs)**  
[\[BAL-004-WECC-3 – Clean\]](#)  
  
[\[BAL-004-WECC-3 – Redline\]](#)
- **Implementation Plan**  
[\[BAL-004-WECC-3 Implementation Plan\]](#)
- **Retirement**  
[\[Regional Reliability Standard BAL-004-WECC-2 – Automatic Time Error Correction\]](#)

### Background

On September 16, 2016, the Western Electricity Coordinating Council (WECC) received a Standard Authorization Request requesting modification of BAL-004-WECC-2 to further refine system operations to lessen Automatic Time Error Correction (ATEC).

### Summary

The following are the revisions included in Regional Reliability Standard BAL-004-WECC-3:

- Addition of On-Peak and Off-Peak parameters in Requirement R1 and Measure M1;
- Addition of language “or its successor electronic confirmation tool” after references to the Western Interchange Tool software; and
- Other non-substantive changes.

On December 6, 2017, after passing the WECC final ballot, the WECC Board of Directors approved sending the proposed Regional Reliability Standard to NERC for adoption and subsequent filing with applicable regulatory authorities. NERC staff supports the Regional Reliability Standard, which was posted for a 45-day public comment period from December 1, 2017 through January 16, 2018. Any adverse comments or minority opinions received during the comment period will be reviewed at the NERC Board of Trustees meeting.

### Pertinent FERC Directives

None

### Additional Information

A link to the project history and files is included here for reference:

[\[BAL-004-WECC-03, Automatic Time Error Correction – Modification\]](#)

**PRC-004-WECC-2**  
**Protection System and Remedial Action Scheme Misoperation**

**Action**

Retire the following Regional Reliability Standard and authorize NERC staff to request approval of the retirement with applicable regulatory authorities:

- **Regional Reliability Standard PRC-004-WECC-2**

[\[PRC-004-WECC-2\]](#)

**Background**

On November 19, 2015, the Federal Energy Regulatory Commission (FERC) approved Regional Reliability Standard PRC-004-WECC-2 (Protection System and Remedial Action Scheme Misoperation). A Standards Authorization Request (SAR) was submitted to Western Electricity Coordinating Council (WECC) on October 26, 2016, stating that the entire reliability-related substance of PRC-004-WECC-3 is redundant to other continent-wide Reliability Standards and is no longer needed to support reliability. The WECC Board of Directors approved its retirement on December 6, 2017.

**Summary**

The WECC Drafting Team reviewed NERC Standards, both in effect and those filed and pending regulatory approval, and concluded that the Regional Reliability Standard PRC-004-WECC-2 should be retired in its entirety, as the reliability-related substance is addressed in other NERC Reliability Standards including the NERC PRC standards and FAC-003-4 Transmission Vegetation Management.

NERC posted the Regional Reliability Standard for a 45-day public comment period on November 3, 2017, and no adverse comments were received. NERC staff reviewed the Regional Reliability Standard and agrees that it should be retired.

It remains the intent of WECC to support the development of consistent NERC continent-wide Reliability Standards. With the existence of continent-wide standards, there is no reliability benefit to Regional Reliability Standard PRC-004-WECC-2.

**Pertinent FERC directives**

None.

**Additional Information**

A link to the project history and files is included here for reference:

[\[PRC-004-WECC-2\]](#)

## **VAR-002-WECC-2 - Automatic Voltage Regulators**

### **Action**

Retire the following Regional Reliability Standard and authorize NERC staff to request approval of the retirement with applicable regulatory authorities:

- **Regional Reliability Standard VAR-002-WECC-2**  
[\[VAR-002-WECC-2\]](#)

### **Background**

On March 3, 2015, the Federal Energy Regulatory Commission (FERC) approved Regional Reliability Standard VAR-002-WECC-2 (Automatic Voltage Regulators). A regional Standards Authorization Request (SAR) was submitted to Western Electric Coordinating Council (WECC) on November 8, 2016, stating that the entire reliability-related substance of VAR-002-WECC-2 is redundant to other continent-wide Reliability Standards and is no longer needed to support reliability. The WECC Board of Directors approved its retirement on December 6, 2017.

### **Summary**

The WECC Drafting Team reviewed NERC Standards, both in effect and those filed and pending regulatory approval, and concluded that the Regional Reliability Standard VAR-002-WECC-2 should be retired in its entirety, as the reliability-related substance is addressed in other NERC Reliability Standards (VAR-001-4.2 Voltage and Reactive Control and VAR-002-4.1 Generator Operation for Maintaining Network Voltage Schedules).

NERC posted the Regional Reliability Standard for a 45-day public comment period on November 3, 2017, no adverse comments were received. NERC staff reviewed the Regional Reliability Standard and agrees that it should be retired.

It remains the intent of WECC to support the development of consistent NERC continent-wide Reliability Standards. With the existence of continent-wide standards, there is no reliability benefit to Regional Reliability Standard VAR-002-WECC-2.

### **Pertinent FERC Order directives**

None.

### **Additional Information**

A link to the project history and files is included here for reference:

[\[VAR-002-WECC-2\]](#)

## **SERC Regional Reliability Standards Development Procedure**

### **Actions**

Approve the following standard documents and authorize staff to file with applicable regulatory authorities:

- **SERC Reliability Standards Development Procedure**  
[\[SERC Reliability Standards Development Procedure - Clean\]](#)

[\[SERC Reliability Standards Development Procedure - Redline\]](#)

### **Background**

SERC Reliability Corporation (SERC) completed a revision to its Reliability Standards Development Procedure (RSDP). The revisions to the document include updates to the NERC Reliability and Market Principles, NERC registered functions, and SERC Committee titles. The document also includes a new Process Roles flowchart and several clarifying and errata changes. The SERC Board of Directors approved the revised RSDP on October 25, 2017.

As required by the Section 311 of the NERC Rules of Procedure, NERC Staff conducted a careful review of SERC's RSDP and concluded the document met all of the evaluation criteria. The RSDP was posted on the NERC website for a 45-day industry stakeholder comment period through January 5, 2018. Any adverse comments along with SERC's responses will be reviewed at the NERC Board of Trustees meeting.

### **Additional Information**

A link to the project history and files is included here for reference:

<https://www.serc1.org/program-areas/standards-regional-criteria>

## Operating Committee Report

### Action

#### Information

### Operating Committee's Major Accomplishments for 2017

1. Reliability Guidelines/Reference Documents – The Operating Committee (OC) develops and maintains reliability guidelines and reference documents and has taken the following actions this year:
  - a. Approved:
    - i. Situational Awareness for the System Operator (Approved March 2017)
    - ii. Reliability Guideline: Generating Unit Winter Weather Readiness (Approved August 2017 via e-mail ballot)
    - iii. Pseudo Tie Reference Document (Approved December 2017)
    - iv. Dynamic Tag Exclusion Reference Document (Approved December 2017)
    - v. Reliability Guideline: Operating Reserve Management (Approved December 2017)
    - vi. Reliability Guideline: ACE Diversity Interchange (Approved December 2017)
    - vii. Reliability Guideline: Inadvertent Interchange (Approved December 2017)
    - viii. Reliability Guideline: Gas and Electrical Operational Coordination Considerations (Approved December 2017)
    - ix. Risks and Mitigation for Losing Energy Management Systems (EMS) Functions Reference Document (Approved December 2017)
  - b. Approved for posting and obtaining stakeholder comments:
    - i. Reliability Guideline: Cyber Intrusion Guide for System Operators
    - ii. Reliability Guideline: Methods for the Establishment of IROs
  - c. Retired:
    - i. NERC Interchange Reference Guideline (Retired June 2017)
  - d. Archived:
    - i. NERC Operating Manual (Retired September 2017) (both posted versions will remain in the archive)
2. OC Charter and Strategic Plan – At its March 2017 meeting, the OC formed a task team to review and revise its Charter and 2016-2020 Strategic Plan. The OC leadership and NERC staff held a meeting in July, 2017 to develop revisions to the charter and strategic plan. These revisions were approved by the OC at its September 2017 meeting.

3. OC and Subcommittee Work Plans – The OC Executive Committee and the leadership of its subcommittees met on January 12, 2017 to review and adjust the Work Plans for the next three years. At the March 2017 OC meeting, the revised Work Plans were presented to the OC. The OC reviewed and updated these Work Plans at its September meeting and continues to track progress on the work plan items.
4. Essential Reliability Services Working Group (ERSWG) – The OC reviewed and accepted the revised ERSWG scope. The ERSWG continues work on reliability measures.
5. Personnel Subcommittee (PS) – The PS presented and the OC approved, revisions to the Continuing Education Administrative Manual, creating version 4.4. The revisions included alignment of terminology with the updated SOCCEED platform, consolidation and clarification of criteria, the removal of Level 1 audits, and the definition of Provider audit criteria.

### **OC's Major Initiatives for 2017**

1. Essential Reliability Services Working Group (ERSWG) and the Distributed Energy Resources Task Force (DERTF) – The OC is providing leadership to the ERSWG which focuses on the continued development and refinement of ERS Sufficiency Assessments. The DERTF was dissolved by OC action in December, 2016. All of its work will be absorbed by the ERSWG.
2. Resources Subcommittee (RS) – The RS will review and revise several reliability guidelines, reference documents and training guides under its purview. The RS will also undertake the development and roll out of a generator survey tool designed to assess unit performance during events.
3. Personnel Subcommittee (PS) – The PS has started development of Continuing Education Program Manual, Version 4.5.
4. Event Analysis Subcommittee (EAS) – The EAS collaborates with the North American Transmission Forum (NATF) and the North American Generator Forum (NAGF) regarding the development of Lessons Learned. The EAS also reviewed and revised the Reliability Guideline: Generating Unit Winter Weather Readiness.
5. Operating Reliability Subcommittee (ORS) – The ORS will review and revise several reliability guidelines and reference documents under its purview. The ORS will also develop a Reliability Guideline to address approval of Reliability Coordinator Reliability Plans. These plans were formerly approved by the OC but the NERC Standards Requirement for such approval was retired.
6. OC Strategic Plan and Charter – The OC revised its Charter and 2016-2020 Strategic Plan. These revisions were approved at the September 2017 meeting.
7. Coordination with other groups – The OC continues efforts to better coordinate its activities with other industry groups such as the NATF, NAGF and ISO/RTO Council (IRC).

### **December 2017 Meeting Summary:**

The following is a summary of the OC's December 2017 meeting, which highlights the latest activities of the OC and its associated subcommittees in support of the NERC or OC mission and corporate goals. The [December 2017 OC Meeting Minutes](#) are posted on the NERC website.

1. Joint Planning and Operating Committee Meeting – A joint meeting of the Planning Committee and the Operating Committee was held from 10:00 a.m. to 12:00 p.m. on

December 12, 2017. The agenda for the joint session allowed the committees to discuss agenda items of mutual interest to both committees which included:

- a. Grid Assurance Overview
  - b. Inverter-based Resource Integration and Performance Efforts
  - c. Methods For Establishing IROLs Task Force (MEITF) Update
  - d. Comisión Reguladora de Energía – Mexico (CRE) Overview
  - e. Report on the FERC-NERC-Regional Entity Joint Study of Planning Restoration absent SCADA or EMS (PRASE)
  - f. NATF Update
  - g. NAGF Update
  - h. Standards Efficiency Review
2. OC Membership and Subcommittee leadership changes – Chair Linke announced that Greg Darnell was a newly appointed member of the OC. He also noted the resignation of Patricia Poli from Sector 12. Chair Linke also made the following appointments to various OC Subcommittees due to personnel changes:
- a. Resources Subcommittee:
    - i. Chair - Tom Pruitt
    - ii. Vice Chair - Sandip Sharma
  - b. Personnel Subcommittee
    - i. Chair - Rocky Williamson
    - ii. Vice Chair - Leslie Sink
  - c. Events Analysis Subcommittee
    - i. Chair - Rich Hydzik
    - ii. Vice Chair - Vinit Gupta
3. Essential Reliability Services Working Group (ERSWG) – The ERSWG requested, and the OC approved, the ERS historical Measures 1, 2, and 4 technical brief; and the ERS historical Measures 1, 2, and 4 policy brief documents.
4. Operating Reliability Subcommittee (ORS) – Chair David Devereaux requested, and the OC approved, the NERC ORS Gas and Electrical Operational Coordination Considerations Guideline Overview, the Pseudo Tie Reference Document, and the Dynamic Tag Exclusion Management Guidelines. The ORS also requested and received OC authorization to post for a 45-day industry comment period, the draft Reliability Guideline for Operator Recognition of Cyber Intrusion into Operating Systems. The ORS is working with the NERC Critical Infrastructure Protection Committee (CIPC) to develop this guideline.
5. Resources Subcommittee - RS Chair Troy Blalock provided an overview of subcommittee's status report which included the following:
- a. NERC RS Working Group Chair Selections (effective Jan 1, 2018)
    - i. Danielle Croop, PJM, Frequency Working Group (FWG) Chair

- ii. Bill Henson, ISO-NE, Inadvertent Interchange Working Group (IIWG) Chair
    - iii. Tony Nguyen, BC Hydro, Reserves Working Group (RWG) Chair
  - b. The FWG selected M-4 (formerly ALR1-12) and BAL-003-1 frequency events for June 2017, July 2017 and August 2017 for the Eastern, Texas, Western and Quebec Interconnections. The final quarter event selection is expected early January 2018.
  - c. The RS requested, and received, approval of the following documents:
    - i. Reliability Guideline: Area Control Error Diversity Interchange (ADI) Process
    - ii. Reliability Guideline: Operating Reserve Management
    - iii. Reliability Guideline: Inadvertent Interchange
  - d. Chair Blalock also noted that the OC had, by e-mail ballot, endorsed the 2017 Frequency Response Annual Analysis (FRAA).
6. Events Analysis Subcommittee (EAS) – EAS Chair Hassan Hamdar requested OC approval of a Reference Document on the loss of EMS functions that has been developed by the EMSWG. This document identifies and discusses the risk associated with losing EMS functions and shares mitigation strategies used to reduce these risk when operators lose situational awareness tools. He also provided a summary of the EAS activities:
- a. The fifth annual Monitoring and Situation Awareness Conference was hosted by the Energy Management System (EMS) Working Group on October 3-4, 2017 at the Georgia Power Company corporate headquarters in Atlanta, GA. The conference brought together more than 120 Operations and EMS experts from registered entities, government regulators, and a variety of vendors and consultants from all regions and Canada. The focus this year was on energy management systems quality, including modeling and real-time assessments. William Ball, chief transmission officer and executive vice president of Southern Company, delivered the keynote presentation and spoke on the importance of continued development of elegant EMS tools and systems with built-in security and resiliency to face the challenges of the future. Conference highlights include a presentation on the Modeling and Real-Time Assessment Tool, a presentation of lessons learned from recent EMS outages, and several panel discussions led by industry experts and EMS vendors. The presentations from this event are now available on the NERC website.
  - b. Due to a large number of entities being impacted by Hurricanes Harvey and Irma and understanding their time constraints during the aftermath, the Winter Preparation for Severe Weather Events Webinar, originally scheduled for September 7, 2017, was postponed and has since been turned into a multimedia presentation. The presentation and streaming webinar were posted on the NERC website October 19, 2017 for industry stakeholders to review the webinar at their convenience.
  - c. EAS is conducting outreach to drive lessons learned submittals through not only the ERO EA Process but through other occurrences or near occurrences experienced by entities.

The EAS continues to analyze events for Lessons Learned to identify trends and to make improvements to reliability. Lessons Learned may be accessed from the NERC website [here](#).

7. Personnel Subcommittee – Chair Lauri Jones presented a summary of proposed changes to the PS Scope. The proposed revisions were approved by the OC. Chair Jones also provide the following items to the OC:
  - a. The PS is working with NERC staff on the implementation, communication and training for the new SOCCED platform.
  - b. The PS is working on a comprehensive evaluation of adult learning principles and instructional design concepts in order to develop program criteria that results in quality learning events.
  - c. The PS is recruiting new members for the Continuing Education Review Panel (CERP).
8. Real-time Assessments Task Force (RTATF) update - Doug Peterchuck, chair of the RTATF, presented an update on the preparation of Implementation Guidance. The RTATF received OC approval of the Implementation Guidance via an e-mail ballot which ended on May 5, 2017. The guidance was submitted to NERC Compliance staff for approval on May 8, 2017 but was rejected by the ERO Enterprise. The RTATF has received comments regarding the guidance and made conforming revisions to the guidance to address the comments. The OC endorsed the RTATF Implementation Guidance for submittal to the ERO.
9. Lessons Learned – Breaker Failure event – Meg Albright (Bonneville Power Administration) presented information on an event that occurred during an extended period of extreme cold temperatures when a B-phase fault occurred on a 500 kV line due to icing. Three breakers subsequently experienced breaker failure (fail to trip) events, de-energizing the entire 500kV substation and tripping a generation station off line. The breakers were rated to -40 degrees Celsius.

## Planning Committee Report

### Action

Information

### Forward Perspectives

#### NERC Essential Reliability Services Working Group (ERSWG) Briefs

No Board Approval Required

- The PC is expecting to approve the following items from the ERSWG:
  - Technical Brief on ERS Measure 6 Ramping/Balancing using a Forward-Looking Perspective
  - Brief for Regulators and Policymakers on ERS Measure 6 Ramping/Balancing using a Forward-Looking Perspective
  - Technical Brief on ERS Measures 1, 2, and 4 Frequency Response using a Forward-Looking Perspective
  - Brief for Regulators and Policymakers on ERS Measures 1, 2, and 4 Frequency Response using a Forward-Looking Perspective
  - Technical Brief on Data Collection Recommendations for Distribution Energy Resources

The ERSWG is developing a white-paper proposal on Measure 3 Frequency Response for Balancing Authorities. The purpose for which Measure 3 was originally proposed has been addressed by other processes developed by the ERSWG, therefore the ERSWG recommends no further action on the measure. However, the ERSWG believes that the Measure may provide some value as a working tool available to the Balancing Authorities or the Resources Subcommittee under the Operations Committee.

Based upon the work scope for the ERSWG, the group has completed all expected activities outlined. Between March and June, the ERSWG will be assessing whether there are further recommendations that need to be addressed.

#### Reliability Guidelines - Posted for Comment

No Board Approval Required

- **Modeling Accuracy:** The PC authorized posting for 45-day stakeholder comment period the reliability guideline ***Power Plant Model and Verification Testing for Synchronous Machines***. The guideline covers testing considerations, procedures, and how those tests are used to derive or verify the model parameters related to MOD-025-2, MOD-026-1, and MOD-027-1 Reliability Standards. The guideline primarily applies to Generator Owners, Generator Operators, Planning Coordinators, Transmission Planners, Transmission Operators, and Reliability Coordinators.
- **Operating Limits:** The PC authorized posting for 45-day stakeholder comment period the reliability guideline ***Methods for Establishing IROs***. The guideline is being

developed by joint OC-PC task force to support ongoing standards project that is considering revisions to System Operating Limit reliability standards.

## **Implementation Guidance**

### *No Board Approval Required*

The PC reviewed Implementation Guidance for PRC-024-2 developed by the System Protection and Control Subcommittee for generator voltage protective relaying requirements. The Implementation Guidance suggested technical information, examples, and methods for Generator Owners to comply with requirements that ensure generators remain connected during defined voltage excursions. The PC found that the proposal needed some additional consideration and remanded it back to the SPCS. We expect a new proposal at our next meeting.

- **Geomagnetic Disturbance Section 1600 Data (GMD) Request**

*Anticipate Requesting Board Approval in August 2018*

The PC authorized posting of the **NERC Rules of Procedure Section 1600 Data Request for Geomagnetic Disturbance Data** for a 45-day stakeholder comment period. The data request was developed by NERC staff and the Geomagnetic Disturbance Task Force (GMDTF). The data request meets the directive in FERC Order No. 830 to require collection of geomagnetically-induced current (GIC) and magnetometer data.

- **Planning Committee Charter**

*Anticipate Requesting Board Approval in August 2018*

The PC Executive Committee (PCEC) initiated a review of the PC Charter to consider the need for clarifications or updates to deliverables, international representation, and PCEC authority. PC action is anticipated no later than the June 2018 PC meeting.

## **Recently Completed Committee Activities and Initiatives**

### **Approved Reliability Guidelines**

#### *No Board Approval Required*

- **Resource Integration:** The PC approved the reliability guideline for **Integrating Inverter-based Resources into Low Short Circuit Strength Power Systems**. This guideline addresses potential issues with increasing penetration of renewable energy resources. It provides the electric utility industry with background and reference information for identifying weak grid conditions and potential issues that may arise when connecting or operating inverter-based resources.

### **Endorsed Implementation Guidance**

#### *No Board Approval Required*

- **Protective Relaying:** The PC endorsed **Implementation Guidance for PRC-023-4 – Transmission Relay Loadability** to be submitted to the ERO-Enterprise. The Implementation Guidance provides technical information, examples, and methods for establishing criteria that can be used to determine protective relay settings that meet the reliability objective of PRC-023-4. The Implementation Guidance pertains to Transmission Owners, Generator Owners, and Distribution Providers (DP).

## **Endorsed Interconnection Reliability Operating Limits (IROL) White Papers**

### **No Board Approval Required**

- The PC endorsed the ***Proposed NERC Glossary Definitions*** white paper and the ***IROL Framework*** white paper developed by joint OC-PC task force. The white papers were developed in response to a request for technical assistance by the NERC Standards Committee (SC) and will be provided to the SC and Standards Drafting Team (SDT) for consideration in the standards project to revise System Operating Limit reliability standards.

## **Approved NERC Essential Reliability Services Working Group Briefs**

### **No Board Approval Required**

- The PC approved the following items from the ERSWG:
  - Brief for Regulators and Policymakers on ERS Measure 6 Ramping/Balancing using a Historical Perspective
  - Technical Brief on ERS Measures 1, 2, and 4 Frequency Response using a Historical Perspective
  - Brief for Regulators and Policymakers on ERS Measures 1, 2, and 4 Frequency Response using a Historical Perspective

## **Future Meetings**

- March 6-7, 2018 – Jacksonville, FL
- June 5-6, 2018 – New Orleans, LA
- September 11-12, 2018 – TBD
- December 11-12, 2018 – Atlanta, GA

## Critical Infrastructure Protection Committee Report

### Action

Approve

### Status Update

#### Updates to CIPC Governing Documents

At the December 2017 committee meeting, the CIPC approved the Strategic Plan, Charter, and Organizational Chart. The CIPC Strategic Plan defines clear deliverables and priorities for 2018 and 2019. The CIPC Executive Committee will annually assess its work plan and strategic imperatives in order to ensure that the work being performed by the committee will align to the NERC Strategic Plan.

#### Key Activities and Initiatives for 2018 and 2019

Strategic Input	Activity
<b>ERO Enterprise Long-term Strategy Focus Area #5</b> <b>ERO Reliability Risk Priority - Risk Profile #8 &amp; #9</b>	Identification and reduction of cyber and physical security Risks while improving resilience.
<b>FERC-Led Audits Compliance Report</b>	Assess the cyber security risk of Fuel Handling SCADA systems for Generation.
<b>Remote Access Study Report</b>	Address Remote Access Security Findings #1-#18
<b>GridEx Planning &amp; Preparation</b>	Collaborate with E-ISAC and industry stakeholders to plan for next GridEx and share lessons learned.
<b>Supply Chain Risk Management</b>	Vendor Essential Security Practices Model.
<b>Supply Chain Risk Management</b>	Legacy system testing coordination with National Labs.
<b>CIP-014 High Impact Control Center Report</b>	Security practices for High Impact Control Centers.
<b>CIPC Priority Topic in coordination with PC</b>	Reduction in asset criticality by developing design standards.
<b>CIPC Priority Topic</b>	Security implications of UAVs and clarifying the rights of stakeholders.
<b>CIPC Priority Topic</b>	Key management security guideline.
<b>GridEx Planning &amp; Preparation</b>	Collaborate with E-ISAC and industry stakeholders to plan for next GridEx and share lessons learned.

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# Critical Infrastructure Protection Committee Strategic Plan 2018-2019

CIPC Executive Committee

Updated: January 10, 2018

**RELIABILITY | ACCOUNTABILITY**



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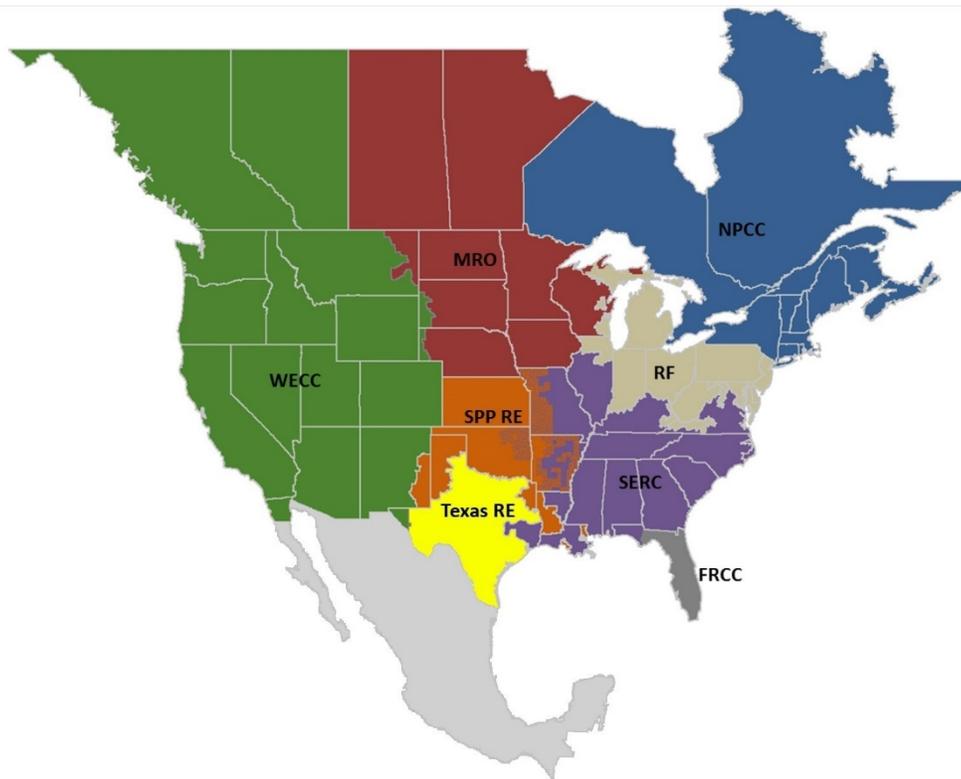
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## Preface

The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to assure the reliability and security of the bulk power system (BPS) in North America. NERC develops and enforces Reliability Standards; annually assesses seasonal and long-term reliability; monitors the BPS through system awareness; and educates, trains, and certifies industry personnel. NERC’s area of responsibility spans the continental United States, Canada, and the northern portion of Baja California, Mexico. NERC is the Electric Reliability Organization (ERO) for North America, subject to oversight by the Federal Energy Regulatory Commission (FERC) and governmental authorities in Canada. NERC’s jurisdiction includes users, owners, and operators of the BPS, which serves more than 334 million people.

The North American BPS is divided into eight Regional Entity (RE) boundaries as shown in the map and corresponding table below.

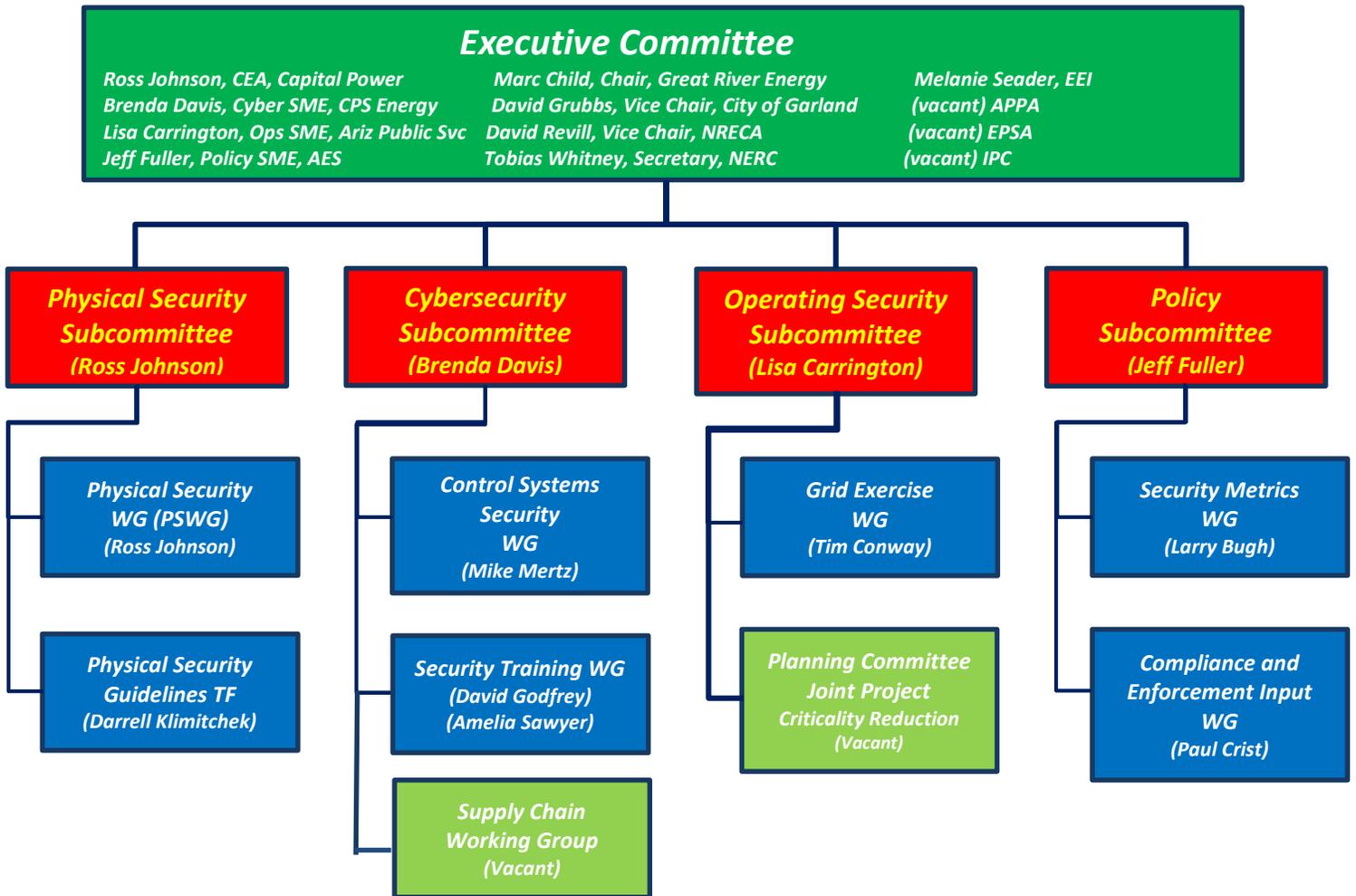


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<b>RF</b>	ReliabilityFirst
<b>SERC</b>	SERC Reliability Corporation
<b>SPP RE</b>	Southwest Power Pool Regional Entity
<b>Texas RE</b>	Texas Reliability Entity
<b>WECC</b>	Western Electricity Coordinating Council

# CIPC Organizational Structure

The Executive Committee members of the Critical Infrastructure Protection Committee (CIPC) developed the CIPC Work Plan and comprehensively reviewed the work activities and deliverables to be produced for each CIPC subcommittee. This level of Executive Committee involvement promotes firsthand knowledge of group activity. The CIPC Executive Committee engaged all subgroup leadership in appropriate discussions of deliverables to be produced by each group, and the expectations of the analysis and reports.



## Introduction

---

This is a living document, meant to address the current and future CIPC strategic issues. The landscape in which the electric industry operates is dynamic and rapidly changing. Therefore, a regular review of the strategic plan by the CIPC Executive Committee should be conducted to ensure that it remains accurate.

The CIPC chair will provide regular strategic plan updates to the CIPC members, and will send status reports to the NERC Board of Trustees (Board).

Furthermore, if there are any key changes that emerge, CIPC will revisit the work plan to ensure alignment with the strategic plan of the Electric Reliability Organization (ERO) Enterprise. This work plan addresses activities, interests, and concerns of the ERO Enterprise related to critical infrastructure planning of the interconnected bulk power system (BPS).

This document is created to identify strategic activities as well as highlight the alignment of CIPC activities from several perspectives, including:

- Conforming to priorities of the ERO Enterprise, the Reliability Issues Steering Committee (RISC), and Federal, state/provincial regulators;
- Providing a technical foundation for reliability issues;
- Matching CIPC resources with priorities; and
- Efficiently using CIPC resources.

# Chapter 1: Mission, Vision, and Guiding Principles

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## CIPC Mission

To support the objectives of the NERC Board and standing committees by serving as an expert advisory panel on physical and cyber security, focusing on operations, compliance and policy matters. CIPC will advance the reliability of the critical bulk electricity infrastructure of North America by addressing the technical and organizational dimensions of security; through collaboration, sharing of best practices, and identifying and quantifying emerging risks.

## CIPC Vision

Foster information sharing, provide industry leadership with a forum for exchanging ideas, and promote dialogue on key issues regarding the Critical Infrastructure Protection of the Bulk Electric System (BES).

## Guiding Principles

- Coordinate with the RISC on priorities and align the CIPC Strategic Plan with the ERO Strategic Plan;
- Maintain relationships and promote information sharing with other committees;
- Maintain high levels of expertise;
- Maintain the structure, processes and relationships with other NERC standing committees, foster relationships with other forums to maintain and nurture high levels of reliability for the BES;
- Ensure CIPC resources are used efficiently;
- Maintain a focus on identification and mitigation of emerging technology risks;
- Maintain and enhance reliability through the pursuit of clear Technical Reports, Security Guidelines, and NERC Alerts;
- Maintain high levels of industry specific expertise to provide sound conclusions and opinions on security issues;
- Strive for a high level of industry awareness and accountability as related to security risks, mitigation strategies, and lessons learned;
- Serve as advocate for voluntary information sharing.

## Advisory Panel to Board

CIPC will fulfill this commitment with the following activities:

1. Provide reports of CIPC activities at the Board meeting.
2. Provide a representative to serve on the RISC.
3. Coordinate across all NERC committees and working groups to assure the highest degree of collaboration possible.
4. Encourage and solicit CIPC engagement and assist NERC staff as appropriate.

## Cyber and Physical Security Guidelines and Technical Reports

CIPC will continue to support the NERC Reliability Standards with the following activities:

1. Create and maintain appropriate Task Forces and Working Groups to develop, periodically review, and revise CIPC security guidelines.

2. Issue guidelines in accordance with the work plan activities.
3. Develop and issue technical reports that contribute to the reliable operation of the BPS.

## **NERC Reliability Standards Implementation and Compliance Input**

CIPC will continue to support the NERC Reliability Standards with the following activities:

1. Assist in the development of guidance and implementation of NERC Reliability Standards.
2. Assist the standards development process by providing expertise in support of the development of critical infrastructure protection standard authorization requests and standards.
3. Assist the standards development process by providing a forum for education, sharing of views, and informed debate of critical infrastructure protection standards.
4. Facilitate the implementation of critical infrastructure protection standards by developing reference documents and performing other activities.
5. Contribute to the Compliance Operations and Enforcement initiatives at NERC through the Compliance and Enforcement Input Working Group (CEIWG) by providing timely topical expertise on matters related to cyber and physical security.

## **BES Security Metrics**

CIPC will provide technical insight and advice into the development and improvement of BES security metrics, and identify a set of security performance measures to benchmark BES security. CIPC will utilize the expertise of its members, NERC staff and others to provide direction, technical oversight, feedback on the collection of industry metrics, and reporting of BES security performance metrics.

CIPC will continue to deliver recommendations with the following actions:

1. The BES Security Metrics Working Group (BESSMWG) will develop measureable security metrics of cyber and physical security threats to the BES and industry responses.
2. The BESSMWG will provide BES security metrics to the NERC annual State of Reliability report.
3. The BESSMWG will continue to develop additional context to existing metrics to assist asset owners and NERC to understand and react to dramatic changes in trends.
4. The BESSMWG will develop and implement one new metric for the 2018 NERC State of Reliability Report.

## **Public-Private Partnership**

The protection of the BPS requires the prompt dissemination of security-related information between public and private stakeholders and across international boundaries.

CIPC will deliver recommendations by the following actions:

1. Contribute expertise to government initiatives.
2. Act as a coordinating body for dissemination of information from government to CIPC members.
3. Develop and test logistics for holding closed-session meetings when needed.
4. Foster relations with the Department of Energy (DOE) National Labs to identify collaboration opportunities.

## Information Sharing

Common information-sharing protocols will enhance passage of information, ensuring that vital actionable information is disseminated quickly and accurately. CIPC will:

1. Study present protocols existing between industry and government. The Committee will continue to identify and research the information sharing structures, methods and requirements, and search for efficiencies and alternatives to improve or recommend changes in protocols.
2. Present recommendations to the Electricity Information and Sharing and Analysis Center (E-ISAC) and NERC staff for consideration and improvement of the Public-Private Partnership, streamlining of the event reporting process for the industry with the E-ISAC, and the sharing of actionable information between government and industry.
3. Propose solutions that will build on practices and tools already in place.
4. CIPC quarterly meetings will be enhanced by the inclusion of regional information-sharing briefings. Once every two-years, voting members from each of the eight regions will deliver a briefing to CIPC (closed session if necessary) with the stated purpose of sharing security successes and challenges faced by each region.

## Risks and Emerging Issues

Utilizing the expertise of its members and NERC staff, CIPC will stay abreast of new and emerging issues related to Critical Infrastructure Protection of the BPS, take action where appropriate to address these issues, provide expertise, and direction to NERC and the electric industry by doing the following:

1. Respond to the issues raised from the biennial GridEx by developing CIPC actions to address lessons learned by tasking CIPC Task Force and Work Group to develop recommendations.
2. Modify its work plan to directly address emerging technology, cyber security, and physical security recommendations.

## CIP Training and Educational Outreach

CIPC will deliver with the following actions:

1. Conduct exercises, forums, and workshops related to the scope of CIPC and in cooperation with NERC.
2. Collaborate with the E-ISAC to:
  - a. Identify and prioritize current topics related to the scope of CIPC.
  - b. Coordinate by requesting NERC resources, if necessary, to support its activities for the forums and workshops.
  - c. Schedule security training and education.

## CIPC Member and Industry Observer involvement

CIPC will deliver on this strategy by:

1. Encouraging and engaging CIPC voting member active participation.
2. Encouraging and engaging CIPC alternate members as active participants.
3. Encouraging and engaging industry observers as active participants.
4. CIPC Executive Committee will identify potential leadership candidates for subgroups.

5. CIPC subcommittees will review Task Force and Work Group rosters to identify gaps in expertise.
6. CIPC subcommittees will review Task Force and Work Group deliverables.
7. CIPC Executive Committee will encourage and recognize excellence.

## Chapter 2: Areas of Strategic Focus in Support of ERO Goals

The majority of the strategic areas of focus that support ERO goals are derived from the [ERO Reliability Risk Priorities](#), the [ERO Enterprise Long-term Strategy](#), and the [E-ISAC Long Term Strategic Plan](#). In addition, other ERO activities are considered as input to the CIPC’s Strategic Plan. The activities listed below are driven from initiatives in association with the Supply Chain Risk Management Program, NERC’s Remote Access Study, CIP-014- High Impact Control Center Report, and other CIPC priority topics that warrant inclusion in the Strategic Plan. The resulting activities from these program documents address information sharing, security vulnerability risk management, and risk reduction methods to improve the reliability of the BES. This section summarizes the major activities CIPC will pursue in support of the strategic program documents.

### Major Activity 1: Advisory Panel to the NERC Board

CIPC serves as an expert advisory panel to the NERC Board, E-ISAC, RISC, and standing committees in the areas of physical and cyber security. The CIPC Chair or the designee will brief the NERC Board with regard to Strategic Plan progress, areas of risk that may impact the BES any significant updates to the CIPC program documents.

Strategic Input	Activity
Quarterly Board of Trustees Update	Board package, update and presentation materials.

### Major Activity 2: Cyber Security Risk Management

CIPC has identified guidelines and technical reports to reduce the reliability risk due to system compromise from malicious threat actors. CIPC will develop implementation guides or security guidelines depending on the best method to address the topic. CIPC will utilize the expertise of its members and collaborate with NERC staff to identify risks and emerging issues and to recommend timely and appropriate action. A CIPC representative will be nominated to the RISC to assist in the analysis and prioritization of risks and emerging issues for Board consideration. Additionally, CIPC will act on the lessons learned from the biennial NERC grid security exercise (GridEx) to improve industry’s security posture. A list of the proposed cyber security guidelines and technical reports are listed below.

Strategic Input	Activity
ERO Enterprise Long-term Strategy Focus Area #5 ERO Reliability Risk Priority - Risk Profile #8 & #9	Identification and reduction of cyber and physical security Risks while improving resilience.
FERC-Led Audits Compliance Report	Assess the cyber security risk of Fuel Handling SCADA systems for Generation.
Remote Access Study Report	Address Remote Access Security Findings #1-#18
GridEx Planning & Preparation	Collaborate with E-ISAC and industry stakeholders to plan for next GridEx and share lessons learned.
Supply Chain Risk Management	Vendor Essential Security Practices Model.
Supply Chain Risk Management	Legacy system testing coordination with National Labs.

### Major Activity 3: Physical Security Risk Management

CIPC has identified guidelines and technical reports to reduce the reliability risk due to physical damage initiated by malicious threat actors. CIPC will develop implementation guides or security guidelines depending on the best method to address the topic. CIPC will utilize the expertise of its members and collaborate with NERC staff to identify risks and emerging issues and to recommend timely and appropriate action. A CIPC representative will be nominated to the RISC to assist in the analysis and prioritization of risks and emerging issues for Board consideration. Additionally,

CIPC will act on the lessons learned from the biennial NERC grid security exercise (GridEx) to improve industry’s security posture.

Strategic Input	Activity
<b>CIP-014 High Impact Control Center Report</b>	Security practices for High Impact Control Centers.
<b>CIPC Priority Topic <i>in coordination with PC</i></b>	Reduction in asset criticality by developing design standards.
<b>CIPC Priority Topic</b>	Security implications of unmanned aerial vehicles and clarifying the rights of stakeholders.
<b>CIPC Priority Topic</b>	Key management security guideline.
<b>GridEx Planning &amp; Preparation</b>	Collaborate with E-ISAC and industry stakeholders to plan for next GridEx and share lessons learned.

### Major Activity 4: NERC Standards Implementation Input

CIPC will support NERC standards and compliance initiatives, including implementation guidance, by providing timely topical expertise on matters related to cyber and physical security in association with the NERC CIP Standards. The Compliance and Enforcement Input Working Group (CEIWG) is established to solicit industry stakeholders for input to NERC staff and to assist and clarify compliance monitoring or enforcement documents. CIPC will utilize the expertise of its members and collaborate with NERC staff to identify risks and emerging issues, and to recommend timely and appropriate action.

Strategic Input	Activity
<b>Emerging Technology Roundtable</b>	Implications of Cloud Services for CIP Assets (Pilot Study).
<b>CIPC Priority Topic</b>	Implications of Voice-over-IP and the CIP Standards.
<b>CIPC Priority Topic</b>	CIP Implications of Shared Transmission Facilities.

### Major Activity 5: BES Security Metrics

CIPC will utilize the expertise of its members, NERC staff, and others to provide direction, technical oversight, feedback on the collection of industry metrics, and reporting of BES security performance metrics. The BES Security Metrics Working Group (BESSMWG) is established to develop measureable security metrics of cyber and physical security threats to the BES. The BESSMWG will collaborate with NERC to produce an annual security assessment of the BES.

Strategic Input	Activity
<b>ERO Enterprise Long-term Strategy Focus Area #5</b>	Security Metrics derived from E-ISAC or Compliance data.
<b>CIPC Priority Topic</b>	Annual Security Assessment of the BES.

### Major Activity 6: CIPC Training, Outreach and Industry Communications

CIPC, through its Outreach and Training Working Group (OTWG), will coordinate and communicate with those responsible for both physical and cyber security in all industry segments, including, among others E-ISAC, American Public Power Association (APPA), Canadian Electric Association (CEA), Edison Electric Institute (EEI), Electric Power Research Institute (EPRI), Electric Power Supply Association (EPSA), ISO/RTO Council (IRC), National Rural Electric Cooperative Association (NRECA), North American Standards Board (NAESB), the Nuclear Energy Institute (NEI), and

the NERC Regional Entities (REs). In addition, CIPC will liaise with government, including the DOE national labs, about critical infrastructure protection matters. CIPC will provide to industry the opportunity to participate in physical, cyber and operational security training, and educational outreach activities.

- CIPC will support the training development through workshops and webinars.
- CIPC will develop or support outreach and training efforts related to NERC standards implementation.
- CIPC will ensure security related deliverables are accessible to CIPC members and industry.

<b>Strategic Input</b>	<b>Activity</b>
<b>CIPC Priority Topic</b>	Update CIPC Website on NERC.com.
<b>CIPC Priority Topic</b>	Develop CIPC Collaboration Site on NERC.com.
<b>E-ISAC Long-term Strategic Plan</b> <b>ERO Enterprise Long-term Strategy Focus Area #3</b>	Develop Information Sharing, Outreach and Training Plan.

## Chapter 3: Strategic Plan Descriptions

### Alignment with NERC Enterprise Operating Plan

As a NERC Board committee, CIPC is dedicated to the success of the ERO mission and works to ensure the goals of the committee maps directly to the goals of the enterprise.

#### CIPC Work Plan

CIPC Executive Committee will annually assess its work plan and strategic imperatives in order to ensure that the work being performed by the committee will align to the areas of strategic focus.

### Major Activity #1: Advisory Panel to the NERC Board

Activity	Description of Deliverable	Timing
Board package, update and presentation materials	The quarterly presentation made by the CIPC Chair or his/her designee will provide updates on the CIPC's progress on strategy and work plan items.	On-going

### Major Activity #2: Cyber Security Risk Management

Activities	Description of Deliverable	Timing
Identification and Reduction of Cyber and Physical Security Risks	CIPC in coordination with the OC and PC will define measures to reduce cyber and physical security risks.	Q4 2019
Assess the cyber security risk of Fuel Handling SCADA systems for Generation	CIPC, in coordination with the Operating Committee, will coordinate with stakeholders and perform a study on the risks associated with fuel handling systems that supply generation facilities. An emphasis will be place on natural gas-sourced facilities.	Q1 2019
Address Remote Access Security Findings #1-#18	CIPC will coordinate with stakeholders and will either develop security guidelines or offer training (as necessary) on the topics identified in the Remote Access Study.	Q3 2019
GridEx Preparation and Planning	CIPC, in coordination with industry stakeholders, will develop lessons learned from the completed GridEx activities and begin preparing for the upcoming GridEx.	On-going
Vendor Essential Security Practices Model	In support of the Supply Chain Risk Management Program, the CIPC will work with vendors and industry stakeholders to develop a controls matrix that can be used to help industry work with vendors to address supply chain risks.	Q3 2018
Legacy system testing coordination with National Labs	In support of the Supply Chain Risk Management Program, CIPC will work with vendors and industry stakeholders to test legacy systems and supply chain. CIPC will share lessons learned with industry.	Q4 2019

### Major Activity #3: Physical Security Risk Management

Activities	Description of Deliverable	Timing
<b>Security practices for high impact Control Centers</b>	CIPC will perform a study to determine the types of operational control comprised by high impact controls centers and identify effective measures to mitigate risks.	Q1 2019
<b>Reduction in Asset Criticality (in coordination with PC)</b>	A security guideline will be developed to address effective practices to reduce the criticality or the risk of loss of any critical substation as a means to improve resiliency and reduce applicability to CIP-014-2.	Q4 2019
<b>Security implications of UAVs</b>	CIPC will research and communicate current practices and considerations for drones and other unmanned aerial vehicles.	Q3 2018
<b>GridEx Preparation and Planning</b>	CIPC, in coordination with industry stakeholders, will develop lessons learned from the completed GridEx activities and begin preparing for the upcoming GridEx.	On-going
<b>Key management security guideline</b>	Identify and describe security best practices associated with the management of physical keys BES assets. Specific examples for low impact CIP assets will be considered.	Q2 2018

### Major Activity #4: NERC Standards Implementation Input

Activity	Description of Deliverable	Timing
<b>Implications of Cloud Services for CIP Assets</b>	CIPC, in coordination with NERC and industry stakeholders will conduct a pilot to determine the CIP Standards implication of cloud services on the BES. The study may result in implementation guides, security guidelines, or other deliverables to industry.	Q4 2018
<b>Implications of Voice-over-IP and the CIP Standards</b>	Provide implementation recommendations for the categorization of voice communications under Reliability Standard CIP-002-5.1. Provide suggested guidance for the use and protection of Cyber Assets used for voice communications, particularly within Control Center environments, including issues surrounding authenticity and integrity.	Q1 2018
<b>CIP Implications of Shared Transmission Facilities</b>	Provide a common understanding of the challenges surrounding shared facilities relating to CIP Reliability Standards and compliance. In addition, provide suggested solutions to some of the issues related to these challenges, specifically focused on ways to meet compliance obligations through joint agreements between entities.	Q2 2018

## Major Activity #5: BES Security Metrics

Activity	Description of Deliverable	Timing
Security Metrics derived from E-ISAC or Compliance data	CIPC, in coordination with NERC and industry stakeholders will develop additional metrics to improve security metrics used as part of NERC's State of Reliability Report. The metrics can be derived from E-ISAC, compliance performance, or third party data sources.	On-going
Annual Security Assessment of the BES	CIPC, in coordination with NERC and industry stakeholders will evaluate the process and approach for developing an assessment of Security of the BES.	Q4 2019

## Major Activity #6: CIPC Training, Outreach and Industry Communications

Activity	Description of Deliverable	Timing
Update CIPC Website on NERC.com	Consolidate all CIPC deliverables and content and post the content NERC.com website. The content should include guides, CIPC meeting materials, or training documentation.	Q3 2018
Develop CIPC Collaboration Site on NERC.com	CIPC will work with NERC to create and maintain a collaboration site used to facilitate the coordination and development of CIPC subcommittees deliverables and draft content.	Q2 2018
Develop Information Sharing, Outreach and Training Plan	CIPC will develop a plan to manage training and outreach to CIPC members and industry stakeholders that will outline the timing, resources, and topics for upcoming CIPC engagements.	Q1 2018

## **Personnel Certification Governance Committee Report**

### **Action**

Information

### **Background**

This report summarizes the key activities of the Personnel Certification Governance Committee (PCGC) during 2017. The PCGC meets four times per year. Standing Task Force meetings via conference call and/or Web Ex are held as needed between meetings. The fourth quarter 2017 meeting minutes are under review and pending approval. Draft minutes were posted to the NERC website.

### **Exam Development Activities Scheduled for 2018**

Items Review/Analyze Statistical Performance

Jan – Dec 2018

Write New Items

Mar – Dec 2018

Item Writing Workshop

Q4 – 2018

### **Strategic Planning**

The System Operator Certification Program has been in existence since 1998. The program has evolved into a solid certification program through continuous improvement. The Committee will focus on strengthening the current program through a set of directions and priorities aligned with the goals of the System Operator Certification Program.

The PCGC created a survey which allowed industry to provide input on the current System Operator Certification program and potential changes for the future. The survey was emailed and posted to the NERC website on December 12, 2017. The survey period ends January 31, 2018. The PCGC will use the results of the survey to develop a white paper, which will cover a broad range of topics; including returning to one credential, credential maintenance, recertification requirements, and length of certification period.

### **Accomplishments for 2017**

- Review and Updated Appendix A (Based on Job Task Analysis results)
- Publish new exams
- Implement LOFT
- Test center options for Canadian provinces
- Review Exam Development Process – Ongoing
- Launch new SOCCED
- Map Strategic Plan

### **Future Tasks**

- Detailed Strategic Plan
- Enhancements to new SOCCED

## **Standards Committee Report**

### **Action Information**

### **Background**

Attached is the Reliability Standards Quarterly Status Report. Highlights include:

- **Standards Development Forecast**
  - Forecasts the NERC Reliability Standards anticipated for completion and submission to the NERC Board of Trustees for adoption through November 2018. This section also includes a listing of all standards development projects with regulatory directives.
- **Regulatory Directives Update**
  - Provides a summary of standards-related to the Federal Energy Regulatory Commission (FERC) directives and details NERC filings to FERC in support of standards development. This section provides a summary update based on the previous quarter.
- **Trend in Number of Reliability Standards**
  - Provides analysis of the trends for continent-wide and Regional Reliability Standards requirements over time and projected through 2027.
- **Standards Efficiency Review**
  - Provides an update on activities completed and underway for the Standards Efficiency Review initiative.
- **Supply Chain Activity**
  - Provides an update on activities completed and underway in support of the Supply Chain standard.
- **Standards Committee Report**
  - Provides a summary of Standards Committee activity in the previous quarter.

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Agenda Item 7f  
Attachment 1  
Board of Trustees Meeting  
February 8, 2018

# Reliability Standards

Quarterly Report

February 8, 2018

**RELIABILITY | ACCOUNTABILITY**



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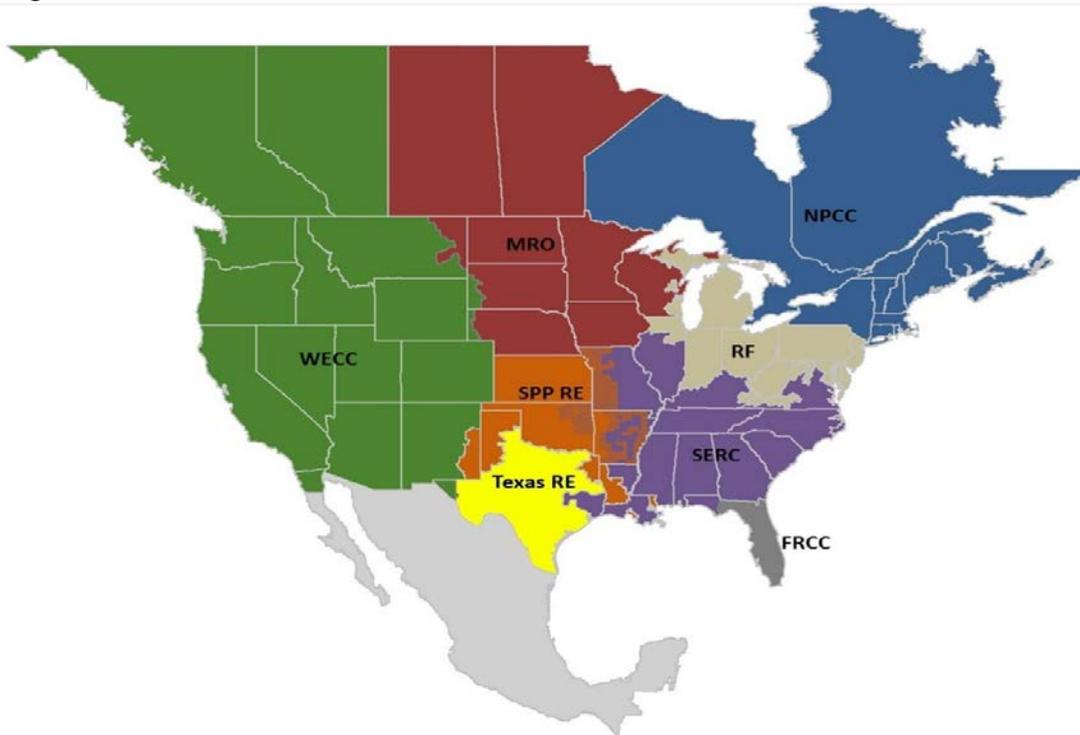
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# Preface

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<b>WECC</b>	Western Electricity Coordinating Council

# Standards Development Forecast (Continent-wide)

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## Board Forecast for Standard Projects in Active Development

### February 2018

- Project 2016-04: Modifications to PRC-025-1 (PRC-025)

### May 2018

- Project 2016-02: Modifications to CIP Standards (Revisions related to Control Center and Communications Networks Directives)
- Project 2016-02: Modifications to CIP Standards (Revisions related to Transition Advisory Group Identified Issues)

### August 2018

- Project 2015-09: Establish and Communicate System Operating Limits (FAC-010, FAC-011, FAC-014)
- Project 2015-10: Single Points of Failure (TPL-001)
- Project 2017-02: Modifications to Personnel Performance, Training, and Qualifications Standards (PER-003, and PER-004)
- Project 2017-06: Modifications to BAL-002-2
- Project 2017-07: Standards Alignment with Registration

### November 2018

- None projected currently

## Projects with Regulatory Directives

Table 1 below, lists the current projects with regulatory directives. As of January 30, 2018, there were 8 standards-related directives to be resolved through standards development activities. (Not including non-standards related directives).

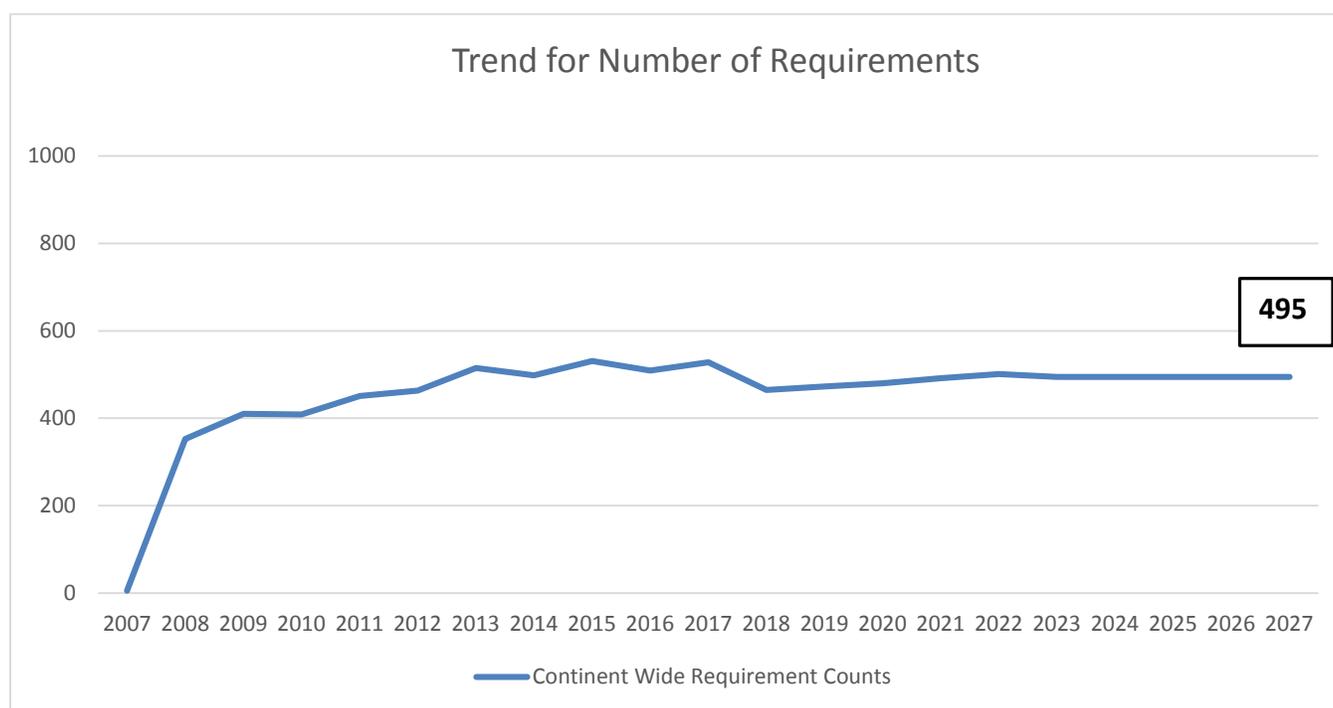
Table 1: Projects with Regulatory Directives		
Project	Regulatory Directives	Regulatory Deadline
Project 2015-09 Establish and Communicate System Operating Limits	2	N/A
Project 2015-10 Single Points of Failure	2	N/A
Project 2016-02 Modifications to CIP Standards (Revisions unrelated to Definition of “Low Impact External Routable Connectivity”)	2	N/A
Project 2017-06 Modifications to BAL-002	2	N/A

## Trend in Number of Reliability Requirements

As NERC Reliability Standards continue to mature, NERC analyzes the trend in the total number of requirements in the United States since 2007 when Reliability Standards became enforceable.

The *US Effective Date Status/Functional Applicability*<sup>1</sup> spreadsheet was used to analyze the number of requirements based on the U.S. Effective Date for each requirement shown in the charts below. Figure 1 displays the Trend in Number of Requirement for Continent-wide standards, while Figure 2 displays Regional Reliability Standards.<sup>2</sup> Standards with variances were not included in the requirement count. Projections from projects that include standards currently under development and Board of Trustees (Board) adopted standards are also included in the total number of requirements based on their projected effective date.<sup>3</sup>

The trend for total number of requirements indicates a constant trend line for the last four years, with a slight decline from 2017 to 2018 for Continent-wide standards, and a significant decline in total number of requirements from 2016 to 2017 for Regional Reliability standards. Figure 1 indicates a total of 495 continent-wide requirements; Figure 2 indicates a total of 73 Regional Reliability standards forecast for 2027.

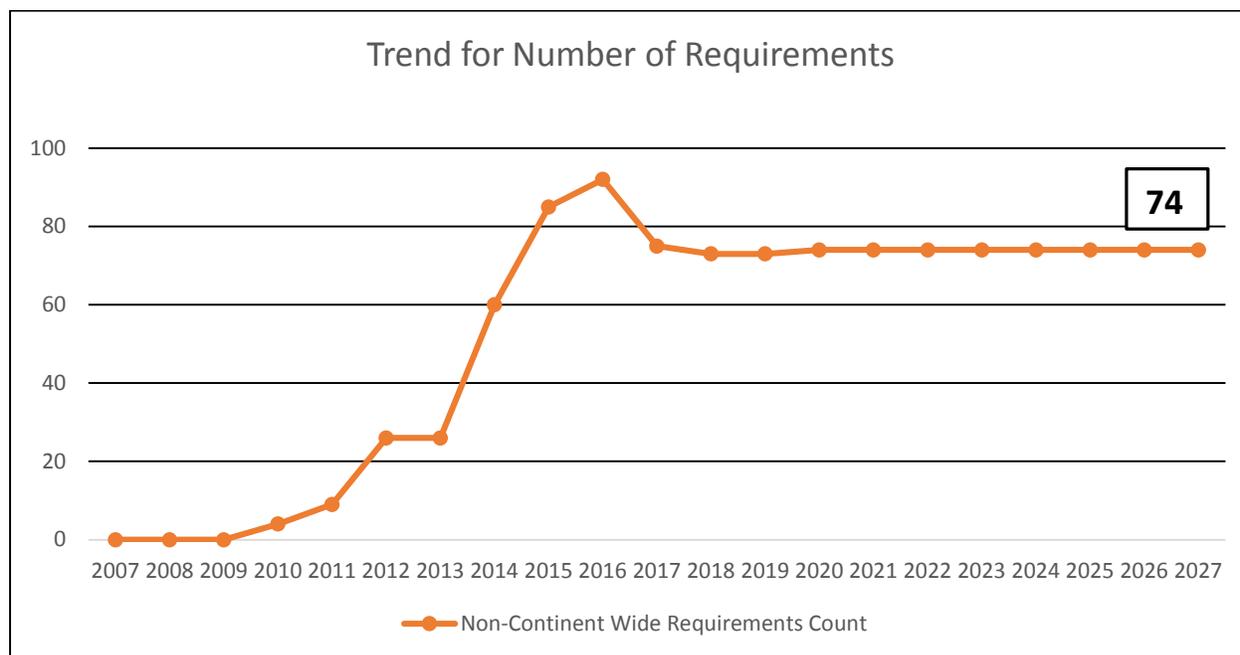


**Figure 1: Trend for Number of Requirements for Continent-wide standards**

<sup>1</sup> Available from the Standards section of the NERC website: <http://www.nerc.com/pa/Stand/Pages/default.aspx>

<sup>2</sup> Charts were developed using Q3 2017 data.

<sup>3</sup> These projects include the following: Project 2013-03 (TPL-007-2), Project 2016-04 (PRC-025-2), Project 2015-08 (EOP-004-4, EOP-005-3, EOP-006-3, EOP-008-2), Project 2015-09 (FAC-010-4, FAC-011-4, FAC-014-3), Project 2017-01 (BAL-003-2), Project 2015-10 (TPL-001-5), Project 2017-02 (PER-003-2, PER-004-2), Project 2016-02 (CIP-003-7(i)), Project 2017-06 (BAL-002-3), and Project 2016-03 (CIP-005-6, CIP-010-3, CIP-013-1).



**Figure 2: Regional Reliability Standards**

## Standards Efficiency Review

As part of its continuing focus on supporting the success and evolution of NERC Reliability Standards to ensure they appropriately address risks to the bulk power system, NERC has a process to review the existing body of Reliability Standards to determine whether any requirements have little or no reliability benefit and could be retired or modified. NERC staff has assembled a group of industry experts to define the scope of this review and the criteria for evaluation. Once this is established, NERC will solicit industry participants to compile candidate requirements that meet the established criteria.

Through open and transparent industry participation, the criteria and list will be formed and vetted with industry. Lessons from both the “Paragraph 81” effort and the Independent Expert Review Panel underscore the importance of moving forward through open discussion and open solicitation for participants. NERC will also coordinate with the industry team to ensure all of the information developed through the 2016 and 2017 Standards grading efforts, which includes consideration of content, quality, cost, and reliability impact analysis. In addition, consideration of anonymized compliance history (e.g. audit numbers, types of violations and effectiveness of mitigation plans, evidential requirements and other compliance efficiency, and effectiveness aspects) will be included in the analysis. Any modifications to Reliability Standards will follow the process outlined in the Standard Processes Manual.

### Key Deliverables and Timeline

- Advisory Team first conference call to discuss scope, criteria, and approach (October 2017)
- Create project page on NERC website (October 2017)
- Solicitation of industry experts for review teams (November 2017 – January 2018)
- Assemble review teams to compile candidate list of standards and/or requirements (Mid-January 2018)
- Solicitation of candidate retirements for review teams (January 2018)
- Face-to-face meetings of review teams in Atlanta (February 20-22, 2018)

- Review teams submit draft Standard Authorization Requests (SARs) to industry for comment (2018 Q2)
- Standards Committee to solicit for standard drafting team(s) for SARs (2018 Q3)
- Industry ballots on proposed retirements/modifications to standards (2018 Q3 – 2018 Q4)
- Propose balloted standards efficiencies to NERC Board – 2018 Q4 to 2019 Q1 (changes to standards to include consolidation, modification, and retirement)

## Supply Chain Standard activities

On July 21, 2016, the Federal Energy Regulatory Commission (Commission) issued Order No. 829, directing NERC to develop a new or modified Reliability Standard that addresses supply chain risk management for industrial control system hardware, software, and computing and networking services associated with Bulk Electric System (BES) operations.

Following the issuance of Order No. 829, NERC initiated a project to develop a set of Critical Infrastructure Protection (CIP) supply chain risk management standards (“Supply Chain Standards”). Following industry approval of the Supply Chain Standards on July 20, 2017, the Board adopted the Supply Chain Standards at its August 10, 2017 meeting. NERC staff filed the Supply Chain Standards with the Commission on September 26, 2017, where they are currently pending action by the Commission.

In adopting the Supply Chain Standards, the Board concurrently adopted additional resolutions related to the implementation and evaluation.<sup>4</sup> The resolutions outlined in detail six actions by NERC management and stakeholders to assist in the implementation and evaluation of the Supply Chain Standards and other action to address potential supply chain risks for assets not currently subject to the Supply Chain Standards. In support of meeting the Board resolution, NERC has developed a list of planned activities to support increased understanding of the various requirements in the Supply Chain Standards and to promote transparency and confidence in industry’s implementation of them. A complete description of these activities may be found on the Supply Chain Risk Mitigation Program initiative page, found [here](#). NERC will also use these and other activities to measure the Supply Chain Standards’ effectiveness and impact in addressing existing and emerging cyber security supply chain risks.

The following activities occurred in 2017 Q3:

- E-ISAC issued a level 2 alert in September 2017, pursuant to Section 810 of the NERC Rules of Procedure, regarding supply chain risks identified in Department of Homeland Security’s (DHS’s) Binding Operational Directive (“BOD”) 17-01 regarding the use of a vendor’s products.
- Technical committees (OC, PC, CIPC) were informed in September 2017 of potential need to develop Implementation Guidance assistance.
- NERC and the Institute of Electrical and Electronics Engineers (IEEE) discussed the topic of supply chain risk management at their quarterly coordination group meeting.
- NERC engaged the American Public Power Association and the National Rural Electric Cooperative Association in September to coordinate expectations and deliverables.

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<sup>4</sup> The Proposed Additional Resolutions for Agenda Item 9.a: Cyber Security – Supply Chain Risk Management – CIP-005-6, CIP-010-3, and CIP-013-1, NERC Board of Trustees Meeting, August 10, 2017, is available at: <http://www.nerc.com/gov/bot/Agenda%20highlights%20and%20Mintues%202013/Proposed%20Resolutions%20re%20Supply%20Chain%20Follow-up%20v2.pdf>.

The following activities occurred in 2017 Q4:

- The Supply Chain Risk Mitigation Program initiative [website](#) was established on NERC website in October 2017.
- The topic of the supply chain standard was introduced to vendors at GridSecCon in October 2017.
- E-ISAC initiated outreach to Department of Energy and DHS on supply chain topics.
- NERC engaged the North American Transmission Forum and the North American Generator Forum (NAGF) in October 2017 to coordinate expectations and white paper deliverables.

The following activities are planned in 2018 Q1:

- NERC to initiate engagement with drafting team members to identify common concerns and lessons, to validate the Implementation Guidance developed by the Supply Chain Standards Drafting Team, and to evaluate the impact of the Supply Chain Standards on all BES Cyber Systems, to include low impact.
- Advisory Task Force to be assembled by CIPC.
- Schedule for webinars, workshops, and technical conferences to be developed in consultation with Advisory Task Force.
- NERC will begin investigating accreditation model.
- Vendor advisory group to be assembled in late Q1 of 2018 with input from Advisory Task Force.
- NERC will engage Advisory Task Force to either directly obtain representative equipment, or facilitate direct industry contact with national labs to test equipment.
- NERC and IEEE will develop a schedule of specific deliverables.
- NAGF to deliver first work product of white papers to address best and leading practices in supply chain management, as described in the resolution.
- NERC to engage Advisory Task Force to identify common implementation concerns and lessons and to evaluate the impact of the Supply Chain Standards on all BES Cyber Systems, to include low impact.

## Regulatory Update

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### NERC Regulatory Update- Standards October 1, 2017 – December 31, 2017

#### NERC FILINGS TO FERC

FERC Docket No.	Filing Description	FERC Submittal Date
RM17-11-000	<a href="#">Comments of NERC in Response to CIP-003-7 NOPR</a> NERC submits comments in response to a Notice of Proposed Rulemaking (NOPR) proposing to approve Reliability Standard CIP-003-7 (Cyber-Security - Security Management Controls).	12/22/2017
RM05-17-000, RM05-25-000 and RM06-16-000	<a href="#">Informational Filing of NERC of Reliability Standards Development Plan 2018-2020</a> NERC submits its 2018-2020 Reliability Standards Development Plan.	12/21/2017
RM13-11-000	<a href="#">2017 Informational Filing of NERC Regarding Frequency Response Annual Analysis Report</a> NERC submits its 2017 Frequency Response Annual Analysis report for administration and support of Reliability Standard BAL-003-1.1 (Frequency Response and Frequency Bias Setting).	11/29/2017
RM17-12-000	<a href="#">Comments of NERC in Response to EOP Reliability Standards NOPR</a> NERC submits comments in response to the NOPR proposing to approve Emergency Preparedness and Operations (EOP) Reliability Standards EOP-004-4 (Event Reporting), EOP-005-3 (System Restoration from Blackstart Resources), EOP-006-3 (System Restoration Coordination), and EOP-008-2 (Loss of Control Center Functionality).	11/27/2017
RR18-1-000	<a href="#">Petition for Approval of Proposed Revisions to Appendix 3D to the Rules of Procedure</a> NERC submits proposed revisions to Appendix 3D (Registered Ballot Body Criteria) of the NERC Rules of Procedure. The purpose of the proposed revisions is to help ensure that the votes of Independent System Operators and Regional Transmission Organizations are appropriately represented in Segment 2 of NERC's Registered Ballot Body for voting on NERC Reliability Standards.	11/21/2017

FERC Docket No.	Filing Description	FERC Submittal Date
RM14-15-000	<a href="#">CIP-014 Report of NERC Regarding Physical Security Protection for High Impact Control Centers</a> NERC submits a report assessing whether all Control Centers with High Impact Bulk Electric System Cyber Systems should be protected under the CIP-014 Reliability Standard.	10/2/2017

## FERC ISSUANCES

FERC Docket No.	Issuance Description	FERC Issuance Date
RM18-2-000 and AD17-9-000	<a href="#">NOPR on Cyber Security Incident Reporting Reliability Standards</a> FERC issues a NOPR proposing to direct NERC to develop and submit modifications to the CIP Reliability Standards to improve the mandatory reporting of Cyber Security Incidents.	12/21/2017
RM16-22-000	<a href="#">Notice of Proposed Rulemaking Proposing to Approve Reliability Standards PRC-027-1 and PER-006-1</a> FERC issues a NOPR proposing to approve (i) Reliability Standards PRC-027-1 (Coordination of Protection Systems for Performance During Faults) and PER-006-1 (Specific Training for Personnel); (ii) new and revised definitions of Protection System Coordination Study, Operational Planning Analysis and Real-time Assessment; (iii) the associated VRFs/VSLs and Implementation Plans; and (iv) the retirement of currently-effective Reliability Standard PRC-001-1(ii).	11/16/2017
RR17-5-000	<a href="#">Letter Order Approving WECC SDP Manual Revisions</a> FERC issues a letter order accepting NERC's petition to approve the Western Electricity Coordinating Council's Regional Entity Standards Development Process Manual.	10/27/2017
RM17-11-000	<a href="#">Notice of Proposed Rulemaking Proposing to Approve Reliability Standard CIP-003-7</a> FERC issues a NOPR proposing to approve (i) Reliability Standard CIP-003-7 (Cyber Security - Security Management Controls); (ii) revised definitions of	10/19/2017

Regulatory Update

	Removable Media and Transient Cyber Asset to be included in the NERC Glossary; (iii) the associated VRFs and VSLs; (iv) the associated Implementation Plan; and (v) the retirement of currently-effective Reliability Standard CIP-003-6 and the NERC Glossary definitions of Low Impact External Connectivity and Low Impact BES Cyber System Electronic Access Point.	
RD17-9-000	<a href="#"><u>Letter Order Approving regional Reliability Standard PRC-006-SERC-02</u></a> FERC issues a letter order approving regional Reliability Standard PRC-006-SERC-02 (Automatic Underfrequency Load Shedding (UFLS) Requirements).	10/16/2017
RD17-8-000	<a href="#"><u>Letter Order Approving regional Reliability Standard BAL-502-RF-03</u></a> FERC issues an order approving regional Reliability Standard BAL-502-RF-03 (Planning Resource Adequacy Analysis, Assessment and Documentation).	10/16/2017
RD17-6-000	<a href="#"><u>Letter Order Approving revisions to VRFs for BAL-002-2</u></a> FERC issues a letter order approving revisions to the violation risk factors for Requirements R1 and R2 of Reliability Standard BAL-002-2 (Disturbance Control Standard-Contingency Reserve for Recovery from a Balancing Contingency Event).	10/2/2017
RM16-18-000	<a href="#"><u>Order Terminating Proceeding re the Cyber Systems in Control Centers</u></a> FERC issues an order terminating the Notice of Inquiry seeking comments on possible modifications to the Critical Infrastructure Protection Reliability Standards to address the cybersecurity of control centers used to monitor and control the Bulk Electric System.	10/2/2017

# Standards Committee Report

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## Background

This report highlights some of the key activities of the Standards Committee (SC) during the fourth quarter of 2017.

## Summary

At its December 6, 2017 meeting, the following actions took place:

- Acknowledged the dedicated work of outgoing Chair and Vice Chair, Brian Murphy and Michelle D'Antuono, respectively, and welcomed the incoming leadership, Andrew Gallo and Amy Casuscelli.
- The SC endorsed its 2018-2020 Strategic Work Plan, which is attached. The SC asks the NERC Board to endorse the Strategic Work Plan.
- An update on the Technical Rationale Advisory Group activities which described a proposed approach for converting Guidelines & Technical Bases into Technical Rationale.
- A discussion regarding the nomination period of Standards Efficiency Review team members and the process of gathering industry input for suggested requirements to retire.
- The SC endorsed having the Standards Committee Executive Committee (SCEC) work with NERC staff to develop guidelines on the appointment of consultants to SAR and standard drafting teams and provide them for endorsement at the March 2018 SC meeting.
- The SC approved retiring the Standards Committee's Definition Development Procedure document because its content is adequately represented in other NERC documents.
- The Functional Model Advisory Group leadership provided an update and sought adjustment to its scope of work.
- The SC approved the Standard Drafting Team Scope document.

## **Reliability Issues Steering Committee Report**

### **Action** Information

### **Background**

The Reliability Issues Steering Committee's (RISC) met via conference call on December 13 and January 12 to finalize the ERO Reliability Risk Priorities Report (RISC report) to submit to the Board of Trustees (Board) for acceptance on February 8. An overview of the report was presented to the Member Representatives Committee (MRC) on February 7.

The RISC also discussed the request from the Board that the RISC provide a framework for discussion of resilience, which was also presented to the MRC on February 7. The RISC will hold its next conference call in mid-March to review the outcomes of the discussion and proceed with determined next steps.

The next Reliability Leadership Summit will be held in early 2019. The RISC will look to set a date and location in the near future.

Mr. Peter Brandien, chair of the RISC, will provide an update on RISC activities.

## Compliance and Certification Committee Report

### Action

Information and approval.

### Items for Approval

**CCC Work Plan:** The CCC linked its 2018 Work Plan to the Electric Reliability Organization (ERO) Enterprise strategic and operational documents to ensure the CCC activities support the strategic objectives.

**CCC Procedure CCCPP-012:** This is a new procedure written by NERC staff, in conjunction with the CCC, to outline how CCC observers may participate in Appendix 4A audits of the Regional Entities executed by NERC's Internal Audit and Corporate Risk Management (IACRM) function. Specifically, this procedure addresses the following:

- CCC input into IACRM's annual audit planning process;
- CCC participation in selected audits as an observer; and
- Information sharing concerning the status of audits, observations, and management actions to mitigate audit observations and recommendations.

### Additional Items for Highlights

The CCC conducted its fourth quarter meeting on November 29-30, 2017 at the offices of Florida Power and Light. During the meeting, the CCC took the following actions, closing key activities from its 2017 work plan:

- Approved its 2018 work plan, which is now before the Board of Trustees (Board) for approval during February 2018 meeting, Agenda Item 7h.i.
- Approved CCC procedures:
  - NERC Compliance and Certification Committee Hearing Procedure (CCCPP-004-2);
  - NERC Compliance and Certification Committee Mediation Procedures (CCCPP-006-2);
  - Compliance and Certification Committee Confidentiality Protocol (CCCPP-009-2);
  - Participation in NERC's Audits of Regional Entity Compliance Monitoring Enforcement Program (CMEP) Programs in Accordance with Appendix 4A of the NERC Rules of Procedure (CCCPP-012), now before the Board for approval during February 2018 meeting, Agenda Item 7h.ii.
    - Note: CCCPP-004-2 and CCCPP-006-2 are appendices to the NERC Rules of Procedure (ROP) and therefore require public posting and comment. After public notice and opportunity for comment, these procedures will be presented to the Board for approval.

- Approved CCC Charter revision, for approval by the Board during February 2018 meeting, Agenda Item 7h.ii, then subsequently filed with the Federal Energy Regulatory Commission.
- Endorsed the NERC submitted self-certifications for CMEP and the Organization and Registration Certification Program (ORCP) that were completed by NERC staff in collaboration with the Regional Entities. The CCC transmitted the self-certification results to the chair of the Board Enterprise -wide Risk Committee (EWRC) on January 2, 2018.

The CCC working groups and subcommittees took the following actions:

- The CCC ERO Alignment Working Group (AWG) met by conference call to review and determine next steps for items that were submitted via the Consistency Reporting Tool.
- The ERO Monitoring Subcommittee (EROMS) presented: 1) for CCC approval, CCCPP-012 - CCC Participation in NERC's Audits of Regional Entity CMEP Programs in Accordance with Appendix 4A of the NERC Rules of Procedure; and 2) for transmittal to the EWRC, the NERC - submitted self-certifications for CMEP and ORCP. In addition, EROMS is supporting the ERO Enterprise Effectiveness Survey activity.
- The Compliance Processes and Procedures Subcommittee (CPPS) presented for CCC approval the following CCC procedures: NERC Compliance and Certification Committee Hearing Procedure (CCCPP-004-2); NERC Compliance and Certification Committee Mediation Procedures (CCCPP-006-2); and Compliance and Certification Committee Confidentiality Protocol (CCCPP-009-2).
- The Organization Registration and Certification Subcommittee (ORCS) is working with NERC to consider possible ROP revisions to ensure alignment with current organization and certification activities.
- The CCC Chair appointed the 2018 Nominating Subcommittee and new vice-chairs to three subcommittees to execute the CCC succession plan for future leadership of the CCC. At the May 2018 Board meeting, the CCC will make recommendations for approval of the CCC Chair and Vice-chair for the July 1, 2018 to June 30, 2020 term.

The next CCC meeting will be March 20-21, 2018 hosted by NERC, in Atlanta, GA.

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# NERC Compliance and Certification Committee 2018 Work Plan

NERC Board Approved: [Insert Date]

**RELIABILITY | ACCOUNTABILITY**



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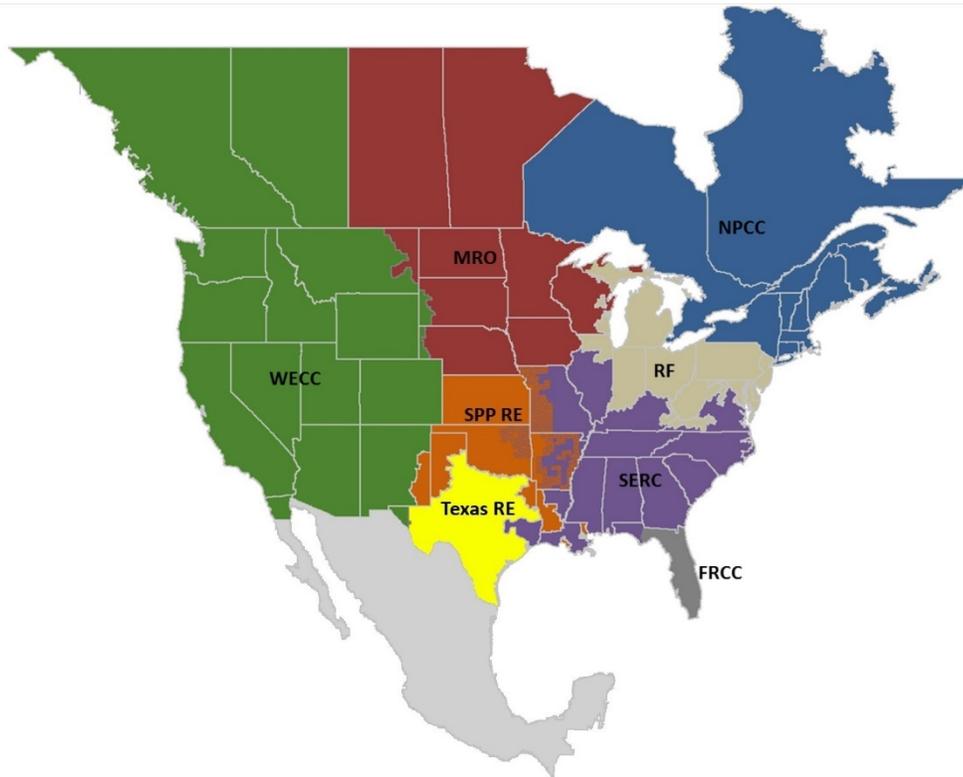
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# Preface

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The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to assure the reliability and security of the bulk power system (BPS) in North America. NERC develops and enforces Reliability Standards; annually assesses seasonal and long-term reliability; monitors the BPS through system awareness; and educates, trains, and certifies industry personnel. NERC’s area of responsibility spans the continental United States, Canada, and the northern portion of Baja California, Mexico. NERC is the Electric Reliability Organization (ERO) for North America, subject to oversight by the Federal Energy Regulatory Commission (FERC) and governmental authorities in Canada. NERC’s jurisdiction includes users, owners, and operators of the BPS, which serves more than 334 million people.

The North American BPS is divided into eight Regional Entity (RE) boundaries as shown in the map and corresponding table below.



*The North American BPS is divided into eight RE boundaries. The highlighted areas denote overlap as some load-serving entities participate in one Region while associated transmission owners/operators participate in another.*

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

## Executive Summary

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The purpose of this work plan is to identify the anticipated activities and deliverables of the NERC Compliance and Certification Committee (CCC) for 2018. The plan is based on the responsibilities assigned to the CCC by the NERC Board of Trustees (Board) for programs across the Electric Reliability Organization (ERO) Enterprise and tasks identified by the CCC that are required to fulfill these responsibilities. Additionally, the CCC identified projects and deliverables that will further support the goals of the ERO Enterprise Operating Plan and the ERO Enterprise Long-term Strategy.

There are several ERO focus areas where CCC activities will support:

1. **Objective and Risk-informed Compliance Monitoring, Enforcement, and Organization Registration and Certification:** As a committee providing support and advice but otherwise independent of the execution of NERC's Compliance Monitoring and Enforcement Program (CMEP) and the Organization Registration and Certification programs (ORCP), the CCC will develop criteria to assess NERC's adherence to the Rules of Procedure (ROP) for these programs on an ongoing basis. In a similar manner, as a committee independent of the NERC Reliability Standards development process, the CCC will develop criteria to assess NERC's adherence to the ROP regarding the NERC Reliability Standards development process until such time as proposed changes to procedural rules are approved. In 2018, the CCC will continue to work with NERC staff and stakeholders refine the CCC's role with respect to the ERO's adherence to its processes, procedures, and statutory obligations in light of the maturation of the ERO and its processes, as well as NERC's internal audit functions.
2. **Effective and Efficient ERO Enterprise Operations:** Provide continued and ongoing input and support into the design of ERO Program development and revision efforts. The CCC will assist in identifying modifications for improvements, associated changes to the NERC ROP, and associated documents or processes.
3. **Identification and Mitigation of Significant Risks to Reliability:** In 2018, the CCC will continue working with NERC staff and stakeholders to identify areas where collaboration with stakeholder committees will assist with the further development and maturation of successful risk mitigation, and program administration to support the success of the ERO Enterprise.
4. **Identification of Emerging Risks to Reliability:** The CCC will participate in discussions on the continued development of risk metrics to further evaluate potential emerging issues or threats and trends to facilitate reliability of the bulk power system. The CCC will also identify necessary actions as inputs to NERC management.

The CCC has subcommittees and working groups performing certain assigned tasks on behalf of and under the supervision of the CCC. The CCC will use the following subcommittees and working groups, along with NERC and Regional Entity staff, as the primary resource for projects and activities:

- Organization Registration and Certification Subcommittee (ORCS)
- Compliance Processes and Procedures Subcommittee (CPPS)
- ERO Monitoring Subcommittee (EROMS)
- CCC Nominating Subcommittee
- ERO Program Alignment Working Group

The following pages represent an outline of the deliverables of the work plan and detailed project information.

# Introduction

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The CCC is a Board-appointed stakeholder committee serving and reporting directly to the Board. In that capacity under a NERC Board-approved charter,<sup>1</sup> and as approved by FERC<sup>2</sup> and set forth in NERC's ROP, the CCC will engage with support, and advise the Board, the NERC Board of Trustees Compliance Committee (BOTCC), and the NERC Board of Trustees Enterprise-wide Risk Committee (EWRC) regarding all facets of the NERC CMEP, Organization Registration program, Organization Certification program, and Reliability Standards Development Process.

The CCC partners with NERC leadership on a variety of key NERC initiatives and criteria for evaluation and assessment of the effectiveness of NERC programs. In order to support this endeavor, the CCC has developed this work plan to identify the activities that the CCC intends to perform in 2018 to fulfill the responsibilities the Board has established for the CCC.

The CCC provides for balanced discussion, commentary, and recommendations on compliance issues by bringing together a diversity of opinions and perspectives from NERC member sectors. Members are appointed to the CCC by the Board and serve on the committee at the pleasure of the Board.

Individuals deemed qualified to serve on the committee will generally include senior-level industry experts who have particular familiarity, knowledge, and experience in the areas of compliance, compliance enforcement, compliance administration and management, organization responsibilities and registration, organization certification, and NERC and Regional standards. These individuals are normally involved with internal compliance programs within their respective organizations. Committee members are expected to support the interests of the sector they represent, to the best of their ability and judgment.

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<sup>1</sup> <http://www.nerc.com/comm/CCC/Documents/CCC%20Charter%20Approved%20RR15-11-000.pdf>

<sup>2</sup> [http://www.nerc.com/files/Order\\_on\\_Comp\\_Filing\\_06.07.2007\\_CCC\\_VSL\\_Order.pdf](http://www.nerc.com/files/Order_on_Comp_Filing_06.07.2007_CCC_VSL_Order.pdf)

## Chapter 1: 2018 Work Plan Deliverables

The tables below summarize the list of CCC work plan deliverables for projects in 2018. Further details on the deliverables and projects are discussed in the next section by project number identified below.

<b>Focus Areas 1 and 2: Objective Risk Informed Programs and Efficient and Effective Operations</b>				
<b>Applicable ERO Enterprise Operating Plan Goal No. 2: The ERO Enterprise is a strong enforcement authority that is objective, fair, and promotes a culture of reliability excellence through risk-informed compliance monitoring, enforcement, certification and registration.</b>				
<b>Applicable ERO Enterprise Operating Plan Goal No. 6: The ERO Enterprise embraces transparency, collaboration, consistency, quality, efficiency and timeliness of results and operates as a coordinated and collaborative enterprise.</b>				
<b>Project #</b>	<b>Project Name</b>	<b>Activities</b>	<b>Schedule</b>	<b>Resource(s)</b>
1	<b>Assistance with Review of Information Production, Capture and Response for ORCP</b>	<ul style="list-style-type: none"> <li>Review information production for opportunities to improve efficiency and effectiveness</li> <li>Assist with evaluation of oversight and monitoring tools for issue resolution</li> <li>Evaluate programs and associated ROP sections for necessary revisions as program development occurs</li> <li>Review the 2017 Organization Certification Program activities document</li> </ul>	Ongoing	CCC Chair, ORCS Chair and Vice-Chair
2	<b>ERO Enterprise Program Alignment</b>	<ul style="list-style-type: none"> <li>Address potential ERO program alignment issues to support success of CMEP and ORCP</li> <li>Assist NERC with screening of information, support further review of reported items, and provide suggested resolutions if warranted</li> <li>Assist ERO team developing the CMEP Technology Tool</li> </ul>	Ongoing	CCC, NERC Management, ERO Alignment Working Group
3	<b>Program Support Efforts (CMEP, Standards Development)</b>	<ul style="list-style-type: none"> <li>Identify and participate in risk-based compliance assurance outreach and feedback discussions</li> <li>Support outreach on internal controls, such as through an</li> </ul>	Ongoing	CCC, NERC Management, CPPS

		<p>industry panel at the 2018 NERC Standard and Compliance Workshop.</p> <ul style="list-style-type: none"> <li>• Identify outreach needs and conduct activities focused on registered entities that are small or pose lower risk to the bulk power system.</li> <li>• Support rollout of key activities or program revisions as requested</li> <li>• Partner with ERO Enterprise to address issues related to RSAWs</li> <li>• Review stakeholder requests to become a qualified entity to submit compliance guidance</li> <li>• Evaluate programs and associated ROP sections for necessary revisions as program development occurs</li> </ul>		
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**Ongoing Responsibilities<sup>3</sup>**

**Applicable ERO Enterprise Operating Plan Goal No. 2: The ERO Enterprise is a strong enforcement authority that is objective, fair, and promotes a culture of reliability excellence through risk-informed compliance monitoring, enforcement, certification and registration.**

**Applicable ERO Enterprise Operating Plan Goal No. 6: The ERO Enterprise embraces transparency, collaboration, consistency, quality, efficiency and timeliness of results and operates as a coordinated and collaborative enterprise.**

	Project Name	Activities	Schedule	Resource(s)
1	ERO Effectiveness Survey	<ul style="list-style-type: none"> <li>• Participate on the ERO Effectiveness Survey Advisory Group</li> <li>• Support development efforts for future surveys</li> <li>• Develop survey questions specific to the ERO Enterprise Coordinated Oversight Program for Multi-Regional Registered Entities.</li> </ul>	1 <sup>st</sup> and 2 <sup>nd</sup> Quarters 2018	CCC, EROMS, TalentQuest, NERC Management

<sup>3</sup> <http://www.nerc.com/comm/CCC/Documents/CCC%20Charter%20Approved%20RR15-11-000.pdf>

**2018 Work Plan Deliverables**

		<ul style="list-style-type: none"> <li>Evaluate results to provide reporting and recommend improvements</li> </ul>		
<b>2</b>	<b>ERO Regional Entity Compliance Program Audits</b>	<ul style="list-style-type: none"> <li>Support Regional Entity Compliance Program audits executed by NERC's Internal Audit and Corporate Risk Management function, consistent with Appendix 4A of the ROP.</li> </ul>	3 <sup>rd</sup> and 4 <sup>th</sup> Quarters 2018	CCC, NERC Internal Audit
<b>3</b>	<b>NERC Self-Certifications</b>	<ul style="list-style-type: none"> <li>Participate in and support Self-Certification and reporting</li> <li>Coordinate with NERC on criteria development, process, and assessment of adherence to NERC ROP</li> </ul>	2 <sup>nd</sup> and 3 <sup>rd</sup> Quarters 2018	CCC, NERC Internal Audit, EROMS
<b>4</b>	<b>Enterprise-wide Risk Committee (EWRC) Work Plan</b>	<ul style="list-style-type: none"> <li>Provide input as requested by the EWRC</li> <li>Fulfill advisory role as requested</li> </ul>	Ongoing	EWRC and ERO Enterprise Management, Director Internal Audit, CCC Leadership
<b>5</b>	<b>ERO Enterprise Risk Input</b>	<ul style="list-style-type: none"> <li>Provide input to existing risks, mitigation strategies, and emerging risk identification</li> <li>Participate and support in RISC activities and discussions</li> </ul>	Ongoing	CCC Leadership, NERC Management
<b>6</b>	<b>Review and Update of CMEP and CCC Programs and Procedures</b>	<ul style="list-style-type: none"> <li>Review and monitor changes to the CMEP and other NERC initiatives that could require updates or changes to CCC programs and procedures</li> </ul>	<u>Q3 2018</u> CCCPP-010  <u>Q4 2018</u> CCCPP-011 Compliance Guidance Policy	CCC, NERC Management, CPPS
<b>7</b>	<b>Stakeholder Collaboration</b>	<ul style="list-style-type: none"> <li>Identify industry stakeholder groups where CCC collaboration will strengthen ERO processes and approach</li> <li>Participate in industry outreach as requested with ERO personnel on designated ERO topics</li> </ul>	Ongoing	CCC, Stakeholder Committees

## Chapter 2: Key Strategic Activities

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### Project 1 – Assist with Review of ORCP Information Cycle

- Test the entity registration tools (-xRM).
- Offer suggestions on the tool.
- Review and provide suggestions for improvement to the 2018 Organization Certification Program activities.

### Project 2 – ERO Program Alignment

- CCC ERO Alignment Working Group (AWG) will execute the CCC's role to address potential reported concerns related to CMEP and ORCP activities:
  - Gather information regarding potential alignment issues,
  - Evaluate nature and extent of the alignment issue,
  - Develop suggested resolution of the issue,
  - Present suggested resolution to the CCC for review and endorsement,
  - Communicate suggested resolutions of alignment issue to the CCC to communicate to NERC, and
  - Provide stakeholder expertise to support the development of the CMEP Technology Tool.

### Project 3 – Program Support Efforts

- Support program efforts related to CMEP and Standards Development in support of ERO Enterprise goals.
- Partner with ERO Enterprise with relation to the review of Reliability Standard Audit Worksheets (RSAWs):
  - CCC comments on RSAWs, as requested.
- Monitor and respond to any stakeholders request to become pre-qualified organizations that can submit proposed Implementation Guidance.
- Hold periodic discussions to identify opportunities for improvement on issues, and serve as a focus group working with ERO Enterprise staff to drive improvements and information sharing.
- Participate with ERO Enterprise Staff's evaluation of ROP changes and recommend changes as program maturation continues.
- Monitor regional activities on ORC functions and changes to registration and certification.

## Chapter 3: Ongoing Responsibilities

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### Project 1 — ERO Enterprise Stakeholder Survey

- Participate on the ERO's Effectiveness Survey Advisory Group.
- Support development efforts of the ERO Effectiveness Survey by contributing input on survey objectives, content, and delivery in preparation for future surveys.

### Project 2 — Regional Entity Compliance Program Audits

- Work with NERC management (Internal Audit and Compliance Assurance) to develop criteria for the 2018 audits of Regional Entity Compliance Programs.
- At the discretion of the CCC, participate as an observer in Regional Entity Compliance Program audits executed by NERC's Internal Audit and Corporate Risk Management process, consistent with Appendix 4A of the ROP.

### Project 3 — NERC Self-Certifications

- Develop and update self-certification forms and request NERC self-certify adherence to the ROP on a rotational basis dependent on cycle for independent audits for the following items:
  - CMEP,
  - ORCP,
  - Standards Applicable to NERC (SAN), if applicable, and
  - Standard Processes Manual (SPM).
- Coordinate with NERC to prepare a summary report of the results of NERC's assessment to the EWRC.

### Project 4 — Enterprise-wide Risk Committee Work-Plan

- Work with NERC to provide input on the annual EWRC Work Plan.
- Participate in advisory capacity as requested in planning for EWRC-identified Regional Entity Audits.
- Review the criteria for annual Regional Entity Evaluations as required with suggested modifications per procedure and criteria as appropriate:
  - Items to consider may include working with NERC to address any concerns or input received from the Regional Entities.
- Coordinate with the EWRC to determine the use of Spot Checks of NERC processes annually for those areas for which the CCC is responsible for monitoring in coordination with the EWRC.
- Support EWRC to evaluate the use of third parties to conduct required audits per the NERC ROP

## Project 5 — ERO Enterprise Risk Input

- Perform outreach efforts with stakeholders to gather input for emerging risks.
- Participate in and support Reliability Issues Steering Committee (RISC) updates.
- Participate in evaluation and revisions to the ERO Risk Elements by supporting development of the ERO Enterprise Operating Plan and the ERO Enterprise Long-term Strategy.
- Participate and support Reliability Leadership Summit as opportunity occurs.

## Project 6 — Review and Update of CMEP, CCC Programs and Procedures

- Review CCC programs and procedures in consultation with NERC management to identify necessary changes, procedural review, or approval requirements.
- Update criteria for assessing effectiveness of Regional Entity CMEP activities, taking into account ERO input, in order to appropriately reflect program modification, improvements, and prior years' evaluations.
- Continue to assess how CMEP practices change related to risk-based CMEP implementation in regards to (a) monitoring practices (as embodied in CCCPP-010, NERC Compliance and Certification Committee Criteria for Annual Regional Entity Program Evaluation, and also including assisting CPPS in the annual RE evaluation criteria work); (b) enforcement; and (c) Reliability Standards development. Assist NERC with annual evaluation of goals, tools, and procedures of each Regional Entity CMEP to determine effectiveness using criteria developed by the CCC.
- Per the terms of CCCPP-011, Procedure to Become a Prequalified Organization Eligible to Submit Implementation Guidance to the ERO, conduct annual reviews.
- Review the Compliance Guidance Policy and take associated actions to support.

## Project 7 — Stakeholder Collaboration

- Identify opportunities where the CCC can provide compliance expertise in collaboration with other industry stakeholder committees.
- Participate in industry outreach as requested by NERC management on designated topics with ERO personnel.
- Strengthen committee collaboration and create joint work products, as necessary.

## Chapter 4: Logistics and NERC Budget Requirements for CCC Activities

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### CCC Quarterly Meetings (Cost to be determined by NERC)

Assumptions: Four CCC meetings per year

- NERC staff attendance
- NERC travel expenses
- Hotel (Conference rooms if applicable – normally hosted at stakeholder locations or NERC offices)
- Food

### Hearings and Appeals (Cost to be determined by NERC)

Assumptions: No hearings expected, but noted here as a placeholder

- Administrative Law Judge's fee
- Hearing refresher training (if applicable, administered by NERC Legal Staff)
- Transcription costs
- Travel expenses

Note: The CCC conducted hearing training in 2016. The need to conduct the training again is dependent on CCC membership turnover or those CCC members that have not yet received training. CCC will notify NERC and the Board if additional hearings are expected that would require an increase to the budget.

### Mediation (Cost to be determined by NERC)

Assumptions: No mediations expected, but noted here as a placeholder.

- Mediator fee and travel expenses

### CCC Program Audits/Review

Assumptions: Audit/Review using an Independent Contractor.

- Audit frequency changes dependent on NERC internal monitoring capability as it continues to mature, based upon recommendations of independent reviewer.
- There are scheduled audits in 2018 with planning beginning in Q1 2018.

### WebEx/Conference Calls (Cost to be determined by NERC)

Assumptions: Three CCC/Subcommittees NERC WebEx or conference calls quarterly.

### Stakeholder Perception Survey (Cost to be determined by NERC)

Assumptions: At the request of the NERC Board, the CCC stakeholder survey is combined with the ERO effectiveness survey.

### Training (Cost to be determined by NERC)

Assumptions: Half-day of hearing training appended to regular CCC meeting every even year. CCC members should have the capability to assist with observation and creation of audit criteria in order to fulfill responsibilities under the

CCC charter to conduct audits of NERC's adherence to the ROP. Training is provided, to those new member participants, ahead of the audit activities. This training will be conducted as needed.

## Chapter 5: Revision History

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### Revision History

Date	Version Number	Comments
9/29/2017	1.0	Initial Draft - CCC Executive Committee and NERC review
		Version for CCC Approval
		CCC Approved

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# CCC Participation in NERC's Audits of Regional Entity CMEP Programs in Accordance with Appendix 4A of the NERC Rules of Procedure

CCC Monitoring Program – CCCPP-012

TBD XX, 2017

**RELIABILITY | ACCOUNTABILITY**



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Suite 600, North Tower  
Atlanta, GA 30326  
404-446-2560 | [www.nerc.com](http://www.nerc.com)

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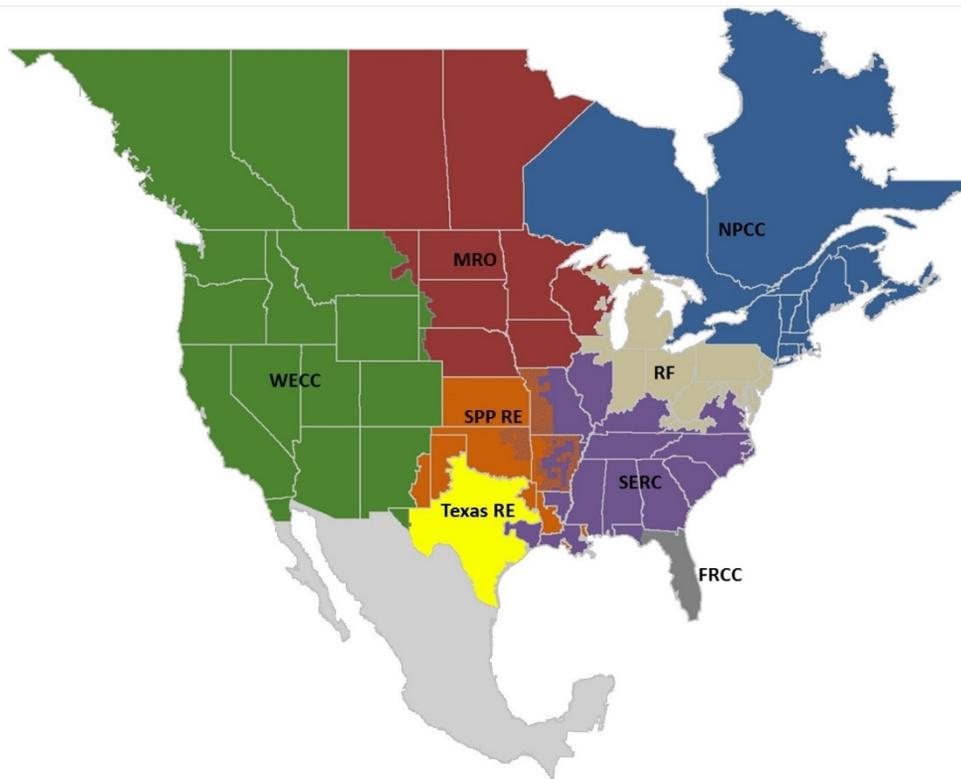
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## Preface

The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to assure the reliability and security of the bulk power system (BPS) in North America. NERC develops and enforces Reliability Standards; annually assesses seasonal and long-term reliability; monitors the BPS through system awareness; and educates, trains, and certifies industry personnel. NERC’s area of responsibility spans the continental United States, Canada, and the northern portion of Baja California, Mexico. NERC is the Electric Reliability Organization (ERO) for North America, subject to oversight by the Federal Energy Regulatory Commission (FERC) and governmental authorities in Canada. NERC’s jurisdiction includes users, owners, and operators of the BPS, which serves more than 334 million people.

The North American BPS is divided into eight Regional Entity (RE) boundaries as shown in the map and corresponding table below.



*The North American BPS is divided into eight RE boundaries. The highlighted areas denote overlap as some load-serving entities participate in one Region while associated transmission owners/operators participate in another.*

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

## Executive Summary

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NERC's Internal Audit and Corporate Risk Management (IACRM) function scopes, coordinates and performs audits of Regional Entities' (REs) execution of delegation-related activities. IACRM's goal is to provide reasonable assurance of RE compliance with the requirements of the Regional Delegation Agreements (RDAs) and NERC's Rules of Procedure (NERC ROP) as the REs conduct their delegation-related activities. NERC is required to perform these audits pursuant to Section 1207 and Appendix 4A of the NERC ROP at least once every five years. The Appendix 4A audits focus on the REs' execution of their respective compliance monitoring and enforcement programs. The Section 1207 audits focus on other areas of risk, outside of compliance monitoring and enforcement, as identified from oversight plan performance reports, annual ERO Enterprise risk assessments, RE self-certifications, and other targeted reviews by IACRM.

This Compliance and Certification Committee (CCC) monitoring program procedure outlines how the CCC may participate in Appendix 4A audits of the REs executed by IACRM. Appendix 4A gives representatives from the CCC the ability to participate in the audit at their discretion. Specifically, this procedure addresses the following:

- CCC input into IACRM's annual audit planning process;
- CCC participation in selected audits as an observer; and,
- Information sharing concerning the status of audits, observations, and management actions to mitigate audit observations and recommendations.

No similar role is contemplated for the CCC in the performance of Section 1207 audits.

# CCC Participation Process

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## Annual Risk Assessment and Audit Plan

NERC's and the ERO Enterprise's risk assessment processes identify and prioritize risk to the ERO Enterprise. These risk assessments are the primary inputs into NERC's annual audit plan. The process seeks to identify risk through written and verbal communication with ERO Enterprise staff, especially executive staff, and other stakeholders such as representatives of NERC's Board of Trustees and the CCC. Areas and business processes identified as the most risky become the subject matter for internal audits to ensure that adequate controls are present, functioning effectively, and the risk is sufficiently mitigated. NERC's IACRM function performs the assessments on an annual basis. These assessments also reflect input from ERO business unit performance reports resulting from oversight of RE delegation-related activities.

The CCC has input into the annual risk assessment process through the CCC Chair and Vice-Chair's participation in the annual risk assessment. The CCC Chair can also include any of the CCC subcommittee chairs in the process, at his or her discretion. In addition, the CCC Chair also sits on the Enterprise-wide Risk Committee (EWRC), which reviews the annual risk assessment results and approves the annual audit plan and any changes to it. The aforementioned examples of CCC participation in the risk assessment and audit planning processes ensure transparency into the process by which the risks that form the basis of NERC's approved annual audit plan are identified as well as the formation of the audit plan itself.

In addition, IACRM will separately notify the CCC of any audits identified in NERC's annual audit plan that relate to subject matter within the purview of Appendix 4A of NERC's ROP. Even though the development of the audit plan is an annual process, it identifies audits over a two year horizon. The CCC will be notified of all Appendix 4A audits over the two year horizon as well as any changes to the audit plan relative to Appendix 4A audits. The audit plan presented to the CCC will also include approximate dates for when the audits will be conducted, in order to facilitate potential participation in the audits by CCC members.

## CCC Member Participation in Audits

IACRM will present the EWRC-approved list of Appendix 4A audits from the annual audit plan to the CCC at their fourth quarter meeting, and changes to the plan, if any, will be presented at subsequent quarterly CCC meetings. Any CCC member can participate in any Appendix 4A audit as an observer provided they have met the following criteria:

- CCC observer(s) must notify the CCC Chair regarding their request to participate in an audit at least 60 days in advance of the audit.
- The Chair of the CCC, or his or her designee, approves the CCC member's participation.
- Each CCC observer(s) must identify any potential conflicts of interest (COI) and will be subject to NERC's COI procedures in place at the time of the audit, which will include coordination with the REs and the ability of NERC to request replacement of an observer who has a COI.
- CCC observer(s) must complete NERC auditor training prior to participation.
- Each CCC observer(s) must execute a confidentiality agreement.

An audit observer's role will include the following activities related to the audit being observed:

- The CCC observer(s) may participate in audit team pre- and post-audit activities and observe actual auditing activities, including meetings with RE personnel in the areas that are subject to audit.
- The CCC observers have the opportunity to provide questions, comments, and advice to the auditor during the course of the audit.

- The CCC observers may have access to audit documents (as determined by NERC) on the secure NERC site.
- The CCC observer may review the audit reports.

Despite IACRM's best efforts to execute audits in accordance with established schedules, CCC members participating in audits should understand that schedules are fluid and can change at any time for a variety of reasons. Furthermore, it is important for IACRM to complete its audit work within certain timeframes in order to meet the needs of its stakeholders. For these reasons, it may not be possible to accommodate every schedule change request made by a CCC observer.

## Post Audit Activities

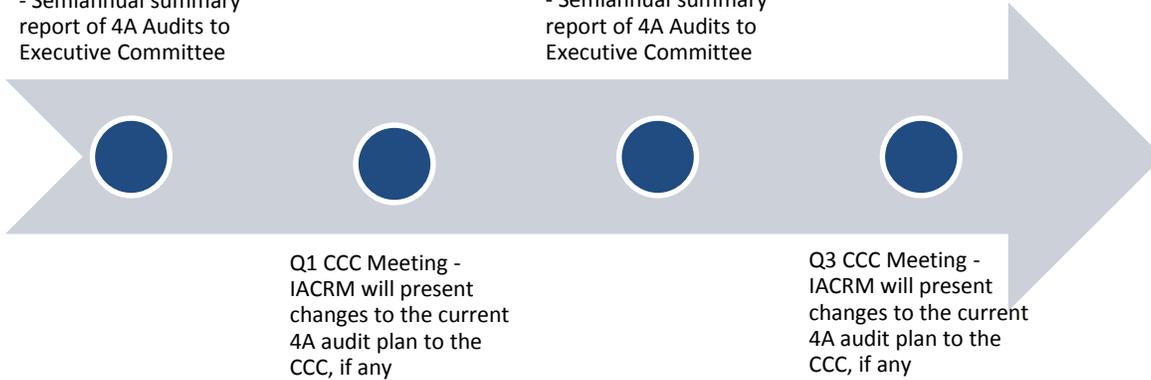
On a semi-annual basis, IACRM will provide the CCC Executive Committee with a report of all Appendix 4A audits conducted since the last report, which will describe: audit scope, observations and recommendations, and management action and mitigation plans. The report will be in summary form and not attribute any observations to any particular RE. The semiannual report will also include a summary of any management action and mitigation plans that are behind schedule for completion.

As part of NERC's five-year performance assessment, NERC will include a final report describing all IACRM's Appendix 4A and Section 1207 audit activities. This report will include RE-specific observations, recommendations and mitigations actions so long as mitigation is complete.

## Timeline of Recurring CCC 4A Audit Participation Touch Points

Q4 CCC Meeting -  
IACRM will present  
new EWRC-approved  
4A audit plan to the  
CCC, and present  
changes to the current  
4A audit plan, if any  
- Semiannual summary  
report of 4A Audits to  
Executive Committee

Q2 CCC Meeting -  
IACRM will present  
changes to the current  
4A audit plan to the  
CCC, if any  
- Semiannual summary  
report of 4A Audits to  
Executive Committee

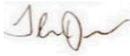


## Confidentiality Management

NERC and the CCC will maintain confidentiality of all Confidential Information in accordance with Section 1500 of the ROP. Information deemed to be critical energy infrastructure information will be redacted and will not be released publicly.

Neither the CCC nor its audit observers will maintain or retain any records associated with the activities outlined in this procedure. Upon completion of each participation, each CCC observer will purge any documents and records associated with the audit.

**TO:** NERC Board of Trustees (BOT)

**FROM:** Thomas J. Galloway, NATF President and CEO 

**SUBJECT:** NATF Periodic Update to the NERC BOT – February 2018

Attachments: 1. NATF External Newsletter – January 2018

The North American Transmission Forum (NATF) mission is to promote excellence in the reliable operation of the electric transmission system, with the vision to see reliability continuously improve. To augment our strategic goals, the NATF has five 2017 operation / technical focus areas as follows:

1. Resiliency / Security (tangible actions to mitigate, respond to and recover from severe casualties)
2. Human Performance / Skilled Workforce (reduced error frequency/consequences)
3. Equipment Performance and Asset Management
4. Operating Experience Exchange – cause analyses, corrective action, and lessons learned
5. Continuous performance improvement / mechanisms / processes / training

### Supply Chain Cyber Controls

The NERC BOT asked the North American Transmission Forum (NATF) and North American Generator Forum to “develop white papers to address best and leading practices in supply chain management, including procurement, specifications, vendor requirements and existing equipment management, that are shared across the membership of each Forum, and to the extent permissible under any applicable confidentiality requirements, distribute such white papers to industry.”

The NATF developed the following two documents to support the NERC request and to serve as guidance for NATF members and the industry.

- NATF Guidance for CIP-005-6 Vendor Remote Access
- NATF Guidance for CIP-010-3 Software Integrity

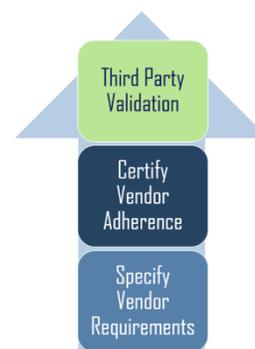
The files are posted on the [documents](#) page of the NATF public website and have been submitted to NERC for consideration as “Implementation Guidance.”

### Other Related Efforts

The NATF has established a project team with diverse member expertise to develop guidance and practices to help members with the various challenges of cyber security supply chain risk management. NATF is composing a supply chain risk management framework for more efficient implementation of CIP-013 compliance by industry and its vendors. Due to the early success of this program, NATF is exploring additional collaboration opportunities with the ISO/RTO Council, NAGF, NRECA, and EEI with a goal of producing value-added, industry-supported supply chain risk management guidance.

One aspect of this business-based approach, as used successfully in other industries where cyber security risk must be managed, utilizes common cyber security controls:

- Specify supply chain cyber security requirements for vendors supplying relevant products and services to the industry;
- Request vendors certify they are compliant with those requirements;
- Specify third party audits to confirm vendor status



# North American Transmission Forum External Newsletter

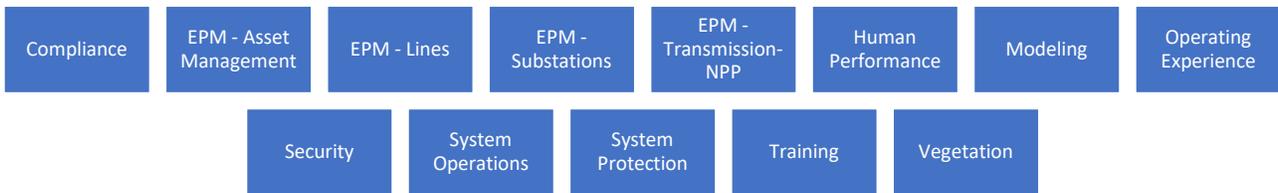
January 2018

## NATF Program Overview: Practices

The NATF Practices Program encourages members to strive for operational excellence by capturing and sharing their own experiences, diverse wisdom, and “ways of doing things” in a set of constantly evolving practices. Our group of subject-matter experts’ collective knowledge includes system operating experiences, lessons learned, and superior practices; risk assessment and internal controls approaches for achieving operational performance levels that exceed compliance requirements; and other real-life experience and data from the members’ own practices, procedures, and programs.

NATF practices groups are comprised of member subject-matter experts who, with ongoing facilitation support from NATF staff, hold monthly web meetings and annual workshops and develop member resources, such as NATF practices, Principles of Operating Excellence (POEs), and reference documents.

### Practices Groups



*EPM = Equipment Performance and Maintenance*

### Resources and Tools

<p><b>Principles of Operating Excellence</b></p> <ul style="list-style-type: none"> <li>• Collection of succinct statements (concepts and approaches) of what NATF members consider to be the attributes that make programs excellent</li> </ul>	<p><b>Practices</b></p> <ul style="list-style-type: none"> <li>• Documents that describe “how” to implement Principles of Operating Excellence attributes to improve reliability, security, or resilience</li> </ul>	<p><b>Reference Documents</b></p> <ul style="list-style-type: none"> <li>• One-pagers, industry topic summaries, technical references, and whitepapers that provide pertinent details for consultation about a topic</li> </ul>
<p><b>Workshops</b></p> <ul style="list-style-type: none"> <li>• Annual face-to-face meetings that provide member subject-matter experts opportunities to share information, work on projects, and enhance peer networks</li> </ul>	<p><b>Tools</b></p> <ul style="list-style-type: none"> <li>• Examples include self assessment maturity model, risk/controls matrix, protection system maintenance program template, HP roadmap</li> </ul>	<p><b>Surveys/Polls</b></p> <ul style="list-style-type: none"> <li>• Web-based surveys or polls are issued to relevant group(s); compiled, searchable results are posted for member use</li> </ul>

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## Resiliency Update

The NATF launched a “Spare Tire” project with a select team of NATF members in mid-2016 to address how we would operate the Bulk Electric System (BES) if both primary and backup control center capabilities were lost.

We are beginning to rebrand the “Spare Tire” work as “Supplemental Operating Strategies (SOS)” to align with the nomenclature being used by the Electricity Subsector Coordinating Council (ESCC), which serves as the principal liaison between leadership in the federal government and in the electric power sector, with the mission of coordinating efforts to prepare for national-level incidents or threats to critical infrastructure. The ESCC has been very interested in the NATF’s work on this subject.

### Documents

The SOS project has resulted in two documents to-date for NATF members, and versions were subsequently shared with the industry:

- “NATF BES Monitoring and Control - An Overview of Backup Capabilities”
- “NATF BES Operations absent EMS and SCADA Capabilities - a Spare Tire Approach”

Both documents have been posted on the NATF public site ([www.natf.net/documents](http://www.natf.net/documents)).

### No-Regrets Actions

A recent output based on the work of the SOS team as well as related projects and activities undertaken by several NATF members is a list of “no regrets” actions that members can take to prepare for a total of loss of both primary and backup control center capabilities:

1. SCADA / Human RTU
  - Create detailed plans for monitoring locations, visit frequency, and protocol for supplying information to all groups
  - Establish a template data sheet for system parameters to be reported for each station
2. Situational Awareness
  - Develop tools and train support staff to turn manually retrieved SCADA / human RTU data into actionable information for meaningful situational awareness and system operator action
3. Communication
  - Test availability and capability of alternative communication capabilities
  - Ensure communication scalability
  - Ensure operating staff are familiar and trained in the use of alternative methods of interpersonal communications
4. Staffing
  - Identify and train required personnel (system operators, field operations, support staff, etc.)
  - Provide logistical support for personnel
  - Draft plans for supplying food, shelter, transportation, etc.
5. Communications, Command, and Control
  - Adapt event management framework
  - Plan and conduct drills

## Next Steps

The SOS work will now focus on addressing the five next-step recommendations identified by the project team, with the NATF taking the lead on some items and EPRI taking the lead on others.

- 
**1. Develop alternative voice and data communications**
- 
**2. Develop additional reliability tools/data availability for situational awareness**
- 
**3. Establish formal strategies and plans for “Spare Tire” operations scenarios**
- 
**4. Formalize data sharing on “Spare Tire” operations strategies**
- 
**5. Harden EMS hardware components and develop streamlined EMS recovery process and capabilities**

## NATF-EPRI Resiliency Summit

In addition to the SOS project, the NATF coordinates resiliency summits with EPRI. The most recent summit took place in October 2017 and included outside guests for a portion of the meeting.

Topics included the following:

- External panel: policy/regulatory resiliency considerations (NERC, FERC, DOE, EEI)
- Structural shielding from multiple threats (blast protection, IEMI, HEMP)
- NATF supplemental operating strategies update
- Summer 2017 resiliency activities survey results
- Cyber resiliency
- Resiliency in control center design and construction
- Resiliency and protection of critical substations
  - Hardening of control houses
  - Protection and control equipment in substations
  - Transmission line hardening

## Resiliency Survey

In conjunction with EPRI, in summer 2017 the NATF completed a survey on the transmission-resiliency practices of NATF members and select EPRI members. The purpose of the survey was:

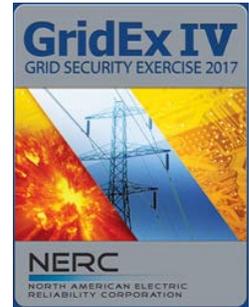
- To capture a snapshot of activities and business practices individual member companies were implementing to assess and manage specific transmission resiliency-related threats (e.g., GMD and IEMI)
- To help members compare themselves against other members regarding transmission resiliency actions
- Serve as a valuable baseline assessment of NATF- and EPRI-member approaches to resiliency

Results were presented at the resiliency summit mentioned above and were shared with members as input for their resiliency efforts.

## NATF Members and Staff Participation in GridEx IV

NATF members and staff participated in NERC's November GridEx IV exercise, which featured a number of aspects contemplated in the Supplemental Operating Strategies (Spare Tire) effort mentioned earlier.

NATF staff observed the exercise at three member locations to help identify opportunities for additional NATF work on practices and guidance for operating and restoration in extreme circumstances. The NATF System Operations Practices Group plans to include an after-action discussion of the drill during its January 2018 meeting.



## Cybersecurity Supply Chain Risk Management

Federal Energy Regulatory Commission (FERC) Order 829 directed the North American Electric Reliability Corporation (NERC) to develop “a forward-looking, objective-based Critical Infrastructure Protection (CIP) Reliability Standard that requires each affected entity to develop and implement a plan that includes security controls for supply chain management for industrial control system hardware, software, and services associated with bulk electric system operations.” FERC noted the standard should address software integrity and authenticity, vendor remote access, information system planning, and vendor risk management and procurement controls.

Subsequently, the NERC board asked the North American Transmission Forum (NATF) and North American Generator Forum to “develop white papers to address best and leading practices in supply chain management, including procurement, specifications, vendor requirements and existing equipment management, that are shared across the membership of each Forum, and to the extent permissible under any applicable confidentiality requirements, distribute such white papers to industry.”

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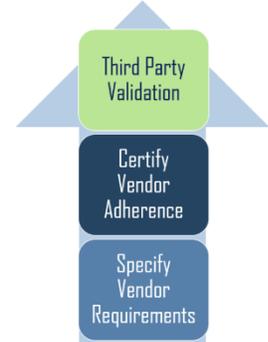
## Other Efforts

The NATF has established a project team with diverse member expertise to develop guidance and practices to help members with the various challenges of cyber security supply chain risk management.

This NATF team is composing a supply chain risk management framework for more efficient implementation of CIP-013 compliance by industry and its vendors. Due to the early success of this program, NATF is exploring additional collaboration opportunities with the ISO/RTO Council, NAGF, NRECA, and EEI with a goal of producing value-added, industry-supported supply chain risk management guidance.

One aspect of this business-based approach, as used successfully in other industries where cyber security risk must be managed, utilizes common cyber security controls:

- Specify supply chain cyber security requirements for vendors supplying relevant products and services to the industry;
- Request vendors certify they are compliant with those requirements;
- Specify third party audits to confirm vendor status.



## New MOU with IEEE PES

An important aspect of the NATF value proposition is to foster efficient use of industry resources. To that end, the NATF interfaces with industry partners and regulatory agencies through meetings and conferences; shares documents with the industry via its public website; conducts joint workshops with select organizations; and coordinates or supports industry initiatives on key reliability and resiliency topics.

In December, the NATF executed a memorandum of understanding (MOU) with the IEEE Power & Energy Society (IEEE PES). The NATF and IEEE PES agreed to work together and facilitate interactions on matters of mutual interest pertaining to the electric transmission system. Both groups seek to more effectively align efforts to address reliability and resiliency challenges due to significant changes in energy supply, demand, and technology. Cooperation includes but isn't limited to (1) sharing technical needs and addressing challenges for infrastructure planning, modeling, system operations, and cyber/physical security; (2) identifying existing and emerging technological requirements and needs and approaches for addressing them; and (3) developing, disseminating, and sharing information related to the planning, operations, and maintenance of electric transmission systems and their component parts.



## Workshops

In addition to regular web meetings, NATF working groups hold annual workshops and in-person meetings. Recent and upcoming activities include:

- Security Workshop (November)
- System Operations Workshop (November)
- Transmission-Nuclear Power Plant Interface Workshop (November)
- Joint NERC/NATF Human Performance Conference and Workshops (March)



## North American Generator Forum

TO: NERC Board of Trustees  
Charles Berardesco, NERC Interim President and CEO

FROM: Allen D. Schriver  
Chief Operating Officer, North American Generator Forum (NAGF)

DATE: January 24, 2018

SUBJECT: NAGF 2018 Winter Report

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The NAGF achieved a major milestone with the hiring of its first part-time employee, thus beginning the transition from an all-volunteer organization to one that will have staff dedicated to achieving the NAGF strategic goals and improving the services offered to our members. The new Executive Coordinator will focus on supporting the day-to-day activities of the organization thus allowing the NAGF to have representation at more reliability discussions and to further engage generation owners and operators. This achievement is an example of the continuing growth and evolution of the NAGF as the entity to provide generator owners and operators a cost effective method to collaborate on reliability, resiliency and security issues. As such, the North American Generator Forum Board of Directors is pleased to announce that Wayne Sipperly has joined our team as the organization's first Executive Coordinator. Wayne brings 32 years of electric utility experience to the position. He previously worked for the New York Power Authority and held leadership roles involving NPCC Compliance Monitoring and Enforcement programs, NERC Reliability Standards, Enterprise Risk Management, Energy Marketing, Generator Control Systems and Marketing. Mr. Sipperly has a Bachelor's degree in Electrical Engineering from Northeastern University and a Masters of Business Administration from Long Island University. The NAGF Executive Coordinator contact information is as follows:

Wayne Sipperly Jr. Executive Coordinator  
North American Generator Forum  
[wsipperly@generatorforum.org](mailto:wsipperly@generatorforum.org)

In addition to the Standards Review Team and the Security Practices Working Group, the NAGF has the following new working groups:

Lessons Learned Jacklyn Massey, Entergy [jramsie@entergy.com](mailto:jramsie@entergy.com)

The Lessons Learned Working Group is a new working group charged with reviewing and communicating Lessons Learned that are submitted by members, both in an archive library on the Groupsite and in a webinar series. The Lessons Learned procedure is in final preparations and approval, and members can begin submitting Lessons Learned (LLs) in January 2018. Look for a communication late this year or early January with specific instructions and that procedure. We look forward to building the technical resources provided by NAGF to members going forward.

Peer Review Bradley Collard, Sunpower [bradly.collard@sunpowercorp.com](mailto:bradly.collard@sunpowercorp.com)

The Peer Review Working Group is a new working group focused on developing the NAGF Peer Review Program. This working group is currently by invitation only. It is anticipated that this group will eventually be opened to all members to discuss Peer Review team opportunities, planning peer reviews, and post exit presentations once approved by host companies. The first meeting of the Peer Review Working Group occurred on December 7, 2017.

Training Bradley Collard, Sunpower [bradly.collard@sunpowercorp.com](mailto:bradly.collard@sunpowercorp.com)

The Training Working Group is a new working group focused on advancing training for NAGF members, including sharing best training practices, training approaches, and other activities that may encourage sharing of training presentations and slides that may help NAGF members. PER-006-1 and related protection system training materials have been posted for sharing with working group members. The first meeting of the Training Working Group is scheduled for January 2018 and is open to all NAGF members.

Variable Resources Blake Huddleston, ENGIE North America, [blake.huddleston@na.engie.com](mailto:blake.huddleston@na.engie.com)

Formerly called the “Dispersed Generation Resources Working Group”, this working group’s focus is on NERC Reliability Standards implementation and best practice sharing for utility scale Variable Resources (usually for wind & solar) connected at transmission voltages of 100 kV or greater. Topics discussed include: 1,200 MW Fault Induced Solar Photovoltaic Resource Interruption Disturbance Report Review; presentations on PRC-019, MOD-026, MOD-027; presentation on CIP-003-6 for Low Impact Cyber Systems; and a discussion of the WECC application of the BES that affects Dispersed Generation Resources. 2018 topics for discussion will include further discussion of PRC-019, MOD-026, MOD-027, PRC-025 and PRC-025. This group is open to all NAGF members.