

Agenda

Board of Trustees

February 7, 2019 | 8:30 a.m.–12:00 p.m., Pacific

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

westdrift Manhattan Beach, Autograph Collection
1400 Park View Avenue
Manhattan Beach, California 90266

Conference Room: Loftlight – Lobby

Call to Order

NERC Antitrust Compliance Guidelines

Introductions and Chair's Remarks

Consent Agenda – Approve

1. Minutes*

- a. December 13, 2018 Conference Call
- b. November 7, 2018 Meeting

2. Committee Membership and Charter Amendments*

- a. Compliance and Certification Committee Membership
- b. Reliability Issues Steering Committee Membership
- c. Operating Committee Charter Amendments

Regular Agenda

3. Remarks and Reports

- a. Welcome Remarks – Kevin Payne, CEO, Southern California Edison
- b. Remarks by Katie Jereza, Deputy Assistant Secretary, DOE
- c. Remarks by David Morton, CAMPUT Representative to NERC
- d. President's Report
- e. Report on Board of Trustees February 5, 2019 Closed Session
- f. Board of Trustees Self-Assessment Results

4. Election and Appointment of Board Chair and Vice Chair, Board of Trustees Committee Assignments and NERC Officers – Approve

5. Board Committee Reports

- a. Corporate Governance and Human Resources
 - i. 2019 ERO Enterprise Dashboard and ERO Performance Objectives – **Approve**
- b. Compliance
- c. Finance and Audit
 - i. 2018 Year-End Unaudited Results of Operations – **Accept**
- d. Enterprise-wide Risk
- e. Technology and Security
- f. Nominating
- g. Report by Vice Chair on Standards Quarterly Activities

6. Standards Quarterly Report and Actions*

- a. Standards Efficiency Review – **Update**
- b. TPL-007-3 Canadian-specific Revisions to TPL-007-2 – **Adopt**
- c. CIP-008-6 Modifications to CIP-008 Cyber Security Incident Reporting – **Adopt**
- d. IRO-006-WECC-3 Qualified Path Unscheduled Flow (USF) Relief – **Adopt**
- e. Revised Retirement Date for PRC-004-WECC-2 – **Approve**

7. Other Matters and Reports*

- a. Policy Input and Member Representatives Committee Meeting – **Discussion**
- b. Approvals in Connection with the Termination of the Regional Delegation Agreement with Florida Reliability Coordinating Council, Inc.* – **Approve**
- c. Texas Reliability Entity Bylaws Amendments* – **Approve**
- d. Reliability Coordinator Function in the Western Interconnection* – **Update**

8. Committee Reports*

- a. Operating Committee
- b. Planning Committee
- c. Critical Infrastructure Protection Committee
- d. Member Representatives Committee
- e. Personnel Certification Governance Committee
- f. Standards Committee
 - i. Standards Committee Work Plan – **Approve**
- g. Reliability Issues Steering Committee
- h. Compliance and Certification Committee

i. Compliance and Certification Committee Work Plan – **Approve**

i. Electricity Subsector Coordinating Council

9. Forum and Group Reports*

a. North American Energy Standards Board

b. North American Transmission Forum

c. North American Generator Forum

10. 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 13, 2018 | 2:00 – 3:00 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 13, 2018, at 2:00 p.m. Eastern, 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
Frederick W. Gorbet
David Goulding
George S. Hawkins
Suzanne Keenan
Robin E. Manning
James B. Robb, President and Chief Executive Officer
Jan Schori

Board of Trustees Members Not Present

Robert G. Clarke
Janice B. Case

NERC Staff

Charles A. Berardesco, Senior Vice President, General Counsel, and Corporate Secretary
Tina Buzzard, Associate Director
Scott Jones, Senior Vice President, Chief Financial and Administrative Officer, and Treasurer
Mark G. Lauby, Senior Vice President and Chief Reliability Officer
John Moura, Director of Reliability Assessment and Technical Committees
Janet Sena, Senior Vice President and Director of Policy and External Affairs
Michael Walker, Senior Vice President and E-ISAC Chief of Staff

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 Mr. Berardesco.

2018 Long-Term Reliability Assessment

Mr. Robb noted that the purpose of the call was to accept the 2018 Long-Term Reliability Assessment Report (LTRA) and Special Reliability Assessment: Accelerated Generation Retirement Scenario (SRA). He thanked stakeholders and the Board for their comments on the draft reports.

Mr. Moura introduced the LTRA and provided an overview of the report and key issues. Mr. Moura 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.

Special Reliability Assessment: Accelerated Generation Retirement Scenario

Mr. Moura introduced the SRA. He explained that the purpose of the SRA is to provide an extreme, “stress test” scenario to examine the potential impacts on reliability in the event generation retirements are accelerated in the coming years. He provided an overview of the report and highlighted the key issues and findings.

Mr. Thilly noted the importance of NERC’s role to provide independent and apolitical analysis. He thanked stakeholders for their comments and participation. He emphasized that the SRA is not intended to be a forecast or prediction of future retirements, but to highlight the risks if retirements occur much more quickly than expected and the tools that may be available to address those risks.

The Board discussed the SRA, including the executive summary, methodology, recommendations, and overall body of the report. Mr. Robb emphasized that the materials will be reviewed prior to release to address comments that have been received.

After discussion, and upon motion duly made and seconded, the Board accepted the SRA, endorsed the recommendations contained therein, and authorized its publication. Mr. Thilly advised meeting attendees to read the final report carefully and to take care to avoid mischaracterizing the analysis and findings therein.

Adjournment

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

Submitted by,



Charles A. Berardesco
Corporate Secretary

DRAFT Minutes

Board of Trustees

November 7, 2018 | 8:30 a.m.–12:00 p.m. Mountain

Grand Hyatt Atlanta in Buckhead
3300 Peachtree Road NE
Atlanta, GA 30305

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 Atlanta, Georgia on November 7, 2018, at 8:30 a.m. Eastern, and a quorum was declared present. The agenda is attached as **Exhibit A**.

Present at the meeting were:

Board Members

Roy Thilly, Chair
Kenneth W. DeFontes, Jr., Vice Chair
Janice B. Case
Robert G. Clarke
Frederick W. Gorbet
David Goulding
George S. Hawkins
Suzanne Keenan
Robin E. Manning
James B. Robb, President and Chief Executive Officer
Jan Schori

NERC Staff

Charles A. Berardesco, Senior Vice President, General Counsel, and Corporate Secretary
Tina Buzzard, Associate Director
Howard Gugel, Senior Director of Engineering and Standards
Scott Jones, Senior Vice President, Chief Financial and Administrative Officer, and Treasurer
Mark G. Lauby, Senior Vice President and Chief Reliability Officer
Ken McIntyre, Vice President and Director of Regulatory Programs
Lauren Perotti, Counsel
Tim Roxey, Vice President and Chief E-ISAC Operations Officer
Janet Sena, Senior Vice President and Director of Policy and External Affairs
Michael Walker, Senior Vice President and E-ISAC Chief of Staff

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. He stated that any additional questions regarding these guidelines should be directed to Mr. Berardesco.

Welcoming Remarks

Mr. Thilly welcomed all of the attendees and thanked all for their participation. He remarked upon the vibrant discussion the previous day at the Member Representatives Committee ("MRC") and noted its role to provide policy input.

Consent Agenda

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

Minutes

The draft minutes for the August 16, 2018 meeting were approved as presented to the Board at this meeting.

Committee Membership and Charter Amendments

Compliance and Certification Committee

RESOLVED, that the Board hereby approves the amended Compliance and Certification Committee Charter ("CCC") charter, substantially in the form presented to the Board at this meeting, to replace the CCC charter approved by the Board on February 8, 2018.

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.

Personnel Certification Governance Committee

RESOLVED, that the Board hereby approves the appointments of the following individuals to the Personnel Certification Governance Committee ("PCGC"), each for a two-year term ending December 31, 2020:

- Martin Sas, Sr. Manager, South Reliability Coordination and Engineering, MISO.
- Margaret Adams, Lead Functional Coordinator, Southwest Power Pool.
- Cory Danson, Operations Compliance & Technical Writer, Western Area Power Administration.
- Mark Thomas, Manager, NERC Compliance – Standards & Implementation, Entergy.
- Don Urban, Principal Analyst, ReliabilityFirst.

FURTHER RESOLVED, that the Board hereby approves the appointment of the following officers to the PCGC:

- Michael Anderson to serve as Chair.
- Margaret Adams to serve as Vice Chair.

Critical Infrastructure Protection Committee

RESOLVED, that the Board hereby approves the amended Critical Infrastructure Protection Committee (“CIPC”) charter, substantially in the form presented to the Board at this meeting, to replace the CIPC charter approved by the Board on February 8, 2018.

FURTHER RESOLVED, that the Board hereby approves the appointments of the following individuals to the CIPC, as follows:

- Dawn Hamdorf (Seminole) to replace Joe Garmon (Seminole), representing the Florida Reliability Coordinating Council region.
- Brian Irish (Salt River Project) to replace Mike Mertz (PNM Resources), representing the Western Electricity Coordinating Council (“WECC”) region.
- Jodi Jensen (WAPA) to replace Lisa Carrington (APS), representing the WECC region.
- Pierre Janse van Rensburg (ENMAX) to replace David Dunn (IESO), representing the Canadian Electricity Association.

Regular Agenda

Remarks by Cheryl LaFleur, Commissioner, Federal Energy Regulatory Commission (“FERC”)

Mr. Thilly introduced Commissioner LaFleur of NERC. Commissioner LaFleur congratulated John Hughes of ELCON on his retirement and reported that Andy Dodge has been appointed director of the FERC Office of Electric Reliability.

Commissioner LaFleur reported that FERC has been following the SPP RE transition and acknowledged the work of NERC and the Regional Entities to make the transition a smooth one. She remarked on several ongoing NERC initiatives, including efforts to enhance ERO effectiveness and efficiency, the Standards Efficiency Review, and NERC’s analysis on accelerated generator retirements. Commissioner LaFleur commented on the western Reliability Coordinator issues and the need for coherent boundaries. She also noted the need for NERC and the industry to address inverter based resource issues.

Remarks by Catherine Jereza, Deputy Assistant Secretary, U.S. Department of Energy (“DOE”)

Mr. Thilly introduced Ms. Jereza of DOE. Ms. Jereza remarked upon the long-term partnership between NERC, FERC and DOE in ensuring resilience and reliability. She also highlighted several DOE initiatives, including: (i) a Notice of Proposed Rulemaking for designation of Critical Electric Infrastructure Information; (ii) the “Liberty Eclipse” grid exercise; (iii) the electric transmission issues workshop scheduled for November 15, 2018; and (iv) a new program for sensor technology & data analytics. Ms.

Jereza also noted DOE's efforts to provide advice to state officials on how to integrate inverter based resources under its technical assistance program and the importance of NERC's work in this area.

Remarks by David Morton, CAMPUT Representative to NERC

Mr. Thilly introduced Mr. Morton. Mr. Morton remarked on the discussions that took place at the previous day's MRC meeting, highlighting NERC's work to engage Canadian participation in E-ISAC. He underlined the importance of the reliability of energy infrastructure, particularly natural gas. Mr. Morton also noted the importance of working together to ensure infrastructure remains resilient and reliable.

President's Report

Mr. Robb delivered the president's report. He began by noting that committee work is an important part of what NERC does and that NERC reaches many stakeholders in the course of its day-to-day operations. Mr. Robb referenced his time visiting with stakeholders and the importance of outreach. He then provided an update on his four areas of focus: (1) security, including the E-ISAC; (2) Reliability Coordinator issues in the West; (3) integration of new technologies; and (4) the changing resource mix.

With respect to security, Mr. Robb referred to Mr. Lawrence's update at the November 6, 2018 MRC meeting describing the progress made by the E-ISAC in executing its strategic plan. He noted the success of the recent Grid Security Conference and reported on NERC's continuing efforts to better support Canada, including enhancing Canadian participation in the E-ISAC.

With respect to the western Reliability Coordinator issues, Mr. Robb reported that NERC and WECC will be working together prior to the scheduled close of Peak Reliability at the end of 2019 to help ensure a seamless transition, including working together to register and certify the new Reliability Coordinators and study the new Reliability Coordinator maps for any issues.

With respect to the integration of new technology, Mr. Robb noted that NERC continues to collaborate with manufacturers and utilities. He reported that the NERC Inverter-Based Resource Performance Task Force is studying Reliability Standard PRC-024-2 and is preparing a white paper and Standard Authorization Request to address any changes needed for inverter-based resource performance. Mr. Robb mentioned his disappointment that a prior Standard Authorization Request to address inverter based resources failed. He noted the need to look at Reliability Standards as providing certainty in such cases, rather than peril.

With respect to the changing resource mix, Mr. Robb referred to the challenges that are posed by the pace of the change and the need to manage the transition properly. He explained that NERC's forthcoming analysis of accelerated generator retirements is intended to provide a stress test of an unmanaged transition, not to make a prediction of future outcomes. Mr. Robb noted that many tools are available to manage the pace of the resource mix transition, and that policy makers and market operators need to feel empowered to use them. He also noted the need to stay aware of the changing risks.

Additionally, Mr. Robb reported that NERC and FERC initiated a joint inquiry into the January 2018 Cold Weather Event and that a letter was sent out on this issue.

Ed Schwerdt, chief executive officer of NPCC and vice chair of the ERO Executive Management Group, congratulated Gary Taylor on his retirement and welcomed Jason Blake in his new role as chief executive officer of SERC. He referred to discussions at the previous days' meetings regarding: (i) efforts to achieve alignment in Compliance Monitoring and Enforcement Program ("CMEP") processes; (ii) metrics; and (iii) the increasing complexity of reliability assessments.

Mr. Robb thanked Mr. Taylor for his service and welcomed Mr. Blake in his new role.

Resolution Honoring Tim Roxey, upon His Retirement

Messrs. Thilly and Robb noted the pending retirement of Mr. Roxey, and reported that the Board had adopted the following resolution in connection with Mr. Roxey's retirement:

WHEREAS, Tim Roxey joined the North American Electric Reliability Corporation ("NERC") in 2009, after a 30 year career in the nuclear utility industry; and

WHEREAS, Mr. Roxey was integral in the formation and development of NERC's Electricity Information Sharing and Analysis Center, providing a critical link between governmental authorities and the power industry; and

WHEREAS, Mr. Roxey is a recognized leader in the fields of security and infrastructure protection, having served in numerous leadership roles across the power industry and helping to build strong ties between governmental authorities and the power industry; and

WHEREAS, Mr. Roxey served as NERC's interim Chief Security Officer; and

WHEREAS, Mr. Roxey has been a valued colleague and friend to NERC's Board of Trustees and management;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Trustees of the North American Electric Reliability Corporation does hereby convey its deepest gratitude to Tim Roxey for his years of commitment and exemplary service and honors him on the occasion of his retirement as Vice President.

Mr. Roxey thanked the Board and reflected upon his career. He noted the continued need to be proactive to address risks to reliability. Mr. Thilly wished Mr. Roxey all the best in his future endeavors.

Report on Semiannual Meeting of NERC Trustees and Regional Entity Boards

Mr. Thilly reported that the NERC Board of Trustees met with Regional Entity board officers and executives on November 5, 2018. He noted that the participants discussed a proposal, also discussed at the November 6, 2018 MRC meeting, to enhance ERO effectiveness and efficiency. Mr. Thilly reported that the participants also discussed independence issues; in particular, how Regional Entity boards maintain independence in CMEP functions and the functions and responsibilities of independent directors on hybrid boards.

Report on Board of Trustees November 5, 2018/November 7, 2018 Closed Sessions

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. In these sessions, the Board discussed confidential matters, including contract, personnel and security issues. The Board also discussed legal issues.

Board Committee Reports

Corporate Governance and Human Resources Committee

Mr. Clarke, Committee Chair, reported on the Committee's open meeting on November 1, 2018 to discuss actions taken by the Board to respond to the 2017 effectiveness survey. He reported that the Committee approved a revised draft of the effectiveness survey to use in 2019. Mr. Clarke reported that, based on feedback, the Committee will develop a work plan to increase transparency in how the Committee will address action areas from the 2019 survey.

He also reported that the Committee met on October 11, 2018 in closed session to review draft metrics, which were since put out for policy input. Mr. Clarke noted his appreciation for the feedback received on the draft metrics.

Compliance Committee

Ms. Case, Committee Chair, reported on executive and open meetings of the Committee held on November 5, 2018 and November 6, 2018, respectively.

She reported that the Committee approved two full Notices of Penalty at the executive session. At the open meeting, the Committee discussed progress on alignment efforts over the previous two years, including the support for the program and the assistance provided by the CCC alignment working group. Ms. Case also highlighted matters to be addressed by the Committee at its February 2019 meeting, including: (1) a review of violation trends; and (2) whether there are ways to improve processes for the lower risk noncompliance that makes up the majority of the caseload.

Finance and Audit Committee

Ms. Schori, Committee Chair, reported on the closed and open meetings of the Committee held on November 6, 2018. She reported that in the closed session, the Committee met with representatives from Grant Thornton to discuss the audit plan. Ms. Schori also reported that the Committee reviewed and approved the internal audit plan for upcoming year.

She presented the third quarter financial results for the Board's acceptance. Upon motion duly made and seconded, the Board approved the following resolution:

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

Ms. Schori reported that, during its open session, the Committee received a presentation on NERC's internal controls and requested an annual report on controls going forward.

Enterprise-wide Risk Committee

Mr. Goulding, Committee Chair, reported the Committee met in closed session on November 5, 2018. At its meeting, the Committee reviewed: (i) the 2018 audit plan, which is proceeding according to schedule; (ii) the risk register and heat map, which focuses on risks to NERC and the ERO Enterprise; (iii) how NERC maintains Bulk Power System situation awareness; and (iv) CCC activities. He also reported that Ernst & Young issued a favorable report on the Cybersecurity Risk Information Sharing Program (“CRISP”) data handling audit and provided suggestions for enhancements.

Technology and Security Committee

Mr. Hawkins, Committee Chair, reported that the Committee met in open session on November 6, 2018 to discuss items including: (i) the success of the 2018 Grid Security Conference; (ii) an update on ERO technology efforts, including the CMEP technology project, the entity registration tool, and the situational awareness tool (“SAFNR”); and (iii) the Committee’s work with the E-ISAC Member Executive Committee on the E-ISAC strategic plan.

Nominating Committee

Mr. Gorbet, Committee Chair, discussed the Committee’s work selecting a Canadian trustee. He reported that the Committee interviewed five candidates on October 30, 2018, and that the Committee will meet on December 10, 2018 to discuss recommendations. Mr. Gorbet explained that the Committee intends to recommend a candidate to the MRC in December 2018 for a vote in February 2019.

Report by Vice Chair on Standards Quarterly Activities

Mr. DeFontes reported on the recent Standards Committee conference calls and meetings, including actions on Standard Authorization Requests, standard drafting team appointments, and the 2019-2021 Reliability Standards Development Plan. He reported that the Committee rejected two Standard Authorization Requests related to the performance of inverter-based resources. Mr. DeFontes noted that this issue was referred to the Planning Committee Inverter Based Resources Task Force for additional work.

Standards

Mr. Gugel provided an update on activities related to supply chain management and the August 2017 Board resolutions. He noted that NERC will present the final supply chain report to the Board at its February 2019 meeting, pulling together all the work completed by stakeholders. Mr. Gugel reported that FERC issued Order No. 850 on October 18, 2018. In this Order, FERC approved the supply chain risk management standards, directed future modifications, and directed NERC to file the final supply chain report with FERC.

Mr. Gugel also provided an update regarding the Standards Efficiency Review, noting that work is formally underway on the first phase of the project to retire standard requirements. He reported that the second phase of the project will consider the CIP standards, alternatives to retirement, and recommendations for other changes to avoid the need for future reviews.

Mr. Gugel then presented on several Reliability Standards-related projects. Mr. DeFontes asked Mr. Gugel why proposed Reliability Standard TPL-001-5 would not require an entity to develop a corrective action

plan where studies indicate that a protection system single point of failure with a three-phase fault would result in system performance issues, but such a plan would be required where studies indicate issues stemming from a single point of failure with a single line-to-ground fault. Mr. Gugel clarified that the approach in proposed TPL-001-5 is consistent with how “relay failure” is treated in currently effective TPL-001-4. He also clarified that the standard would require entities to be aware of the impacts on their system and to identify ways to mitigate the risk. Mr. Gugel stated that this approach is cost-effective; it does not require entities to eliminate all protection system single points of failure in their system, but it does require entities to understand the risks and how they can be mitigated. Mr. Thilly expressed appreciation for consideration of costs and benefits in this context.

Mr. Gugel also stated that the TPL-001-5 approach is appropriate in light of the risk and impact of such events, based on an analysis of NERC’s protection system misoperation and Events Analysis data. He reported that only a very small number of the total misoperations reported since 2011 involved a three-phase fault and breaker failure to operate, and none of those instances reached the Event Analysis reporting threshold.

After discussion, and upon motions duly made and seconded, the Board approved the following resolutions:

Reliability Standard TPL-001-5 – Transmission System Planning Performance Requirements

RESOLVED, that the Board hereby adopts the proposed Reliability Standard TPL-001-5, as presented to the Board at this meeting.

FURTHER RESOLVED, that the Board hereby approves the associated implementation plan, as 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, as presented to the Board at this meeting.

FURTHER RESOLVED, that the Board hereby approves the proposed retirement of Reliability Standard TPL-001-4, 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.

Reliability Standard IRO-006-TRE-1 – IROL and SOL Mitigation in the ERCOT Region

RESOLVED, that the Board hereby approves the proposed retirement of regional Reliability Standard IRO-006-TRE-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 resolution.

2019-2021 Reliability Standards Development Plan

RESOLVED, that the Board hereby approves the proposed 2019-2021 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 resolution.

Other Matters and Reports

Policy Input and Member Representatives Committee Meeting

Mr. Thilly noted the discussion of policy input items discussed at the MRC meeting the prior day. Mr. Gorbet stated his appreciation for the MRC's thoughtful policy input on ERO metrics and advised management to consider this input. Mr. Thilly reported that stakeholders will have another opportunity to comment on the revised metrics before they are presented to the Board in February.

Revisions to the NERC Rules of Procedure (Sections 600, 900, and Appendix 3A)

Mr. Gugel and Ms. Perotti presented on proposed revisions to the NERC Rules of Procedure in Section 600 (Personnel Certification Program), Section 900 (Training and Education), and Appendix 3A (Standard Processes Manual). Upon motion duly made and second, the Board approved the following resolutions:

WHEREAS, the proposed revisions to Sections 600 and 900 address certain directives from the Federal Energy Regulatory Commission ("FERC") contained in its July 19, 2018 *Order Approving in Part and Denying in Part Revisions to North American Electric Reliability Corporation Rules of Procedure and Requiring Compliance Filing*, 164 FERC ¶ 61,023 (2018).

WHEREAS, the proposed revisions to Appendix 3A clarify and improve upon the processes for the development of Reliability Standards.

NOW, THEREFORE, BE IT RESOLVED, that the Board hereby approves the proposed amendments to Sections 600, 900, and Appendix 3A (Standard Processes Manual) to the NERC Rules of Procedure, as presented to the Board at this meeting.

BE IT 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.

Reliability Issues Steering Committee Report on Resilience

Peter Brandien, Reliability Issues Steering Committee ("RISC") Chair, presented the RISC Report on Resilience. Mr. Thilly noted the importance of this work. Ms. Schori thanked the RISC and the

stakeholders that submitted comments on the report. She also asked whether the word “resilience” should be added to NERC’s mission; Mr. Robb suggested that the issue be explored. After discussion, and upon motion duly made and seconded, the Board approved the following resolution:

RESOLVED, that the Board hereby accepts the Reliability Issues Steering Committee Report on Resilience, as presented to the Board at this meeting, and thanks the RISC for its work on the issue.

Manitoba Memorandum of Understanding

Ms. Patrick presented on a memorandum of understanding between NERC, MRO, and Manitoba Hydro. This document is intended to address compliance monitoring and enforcement of standards developed under the Manitoba Hydro Act. After discussion, and upon motion duly made and seconded, the Board approved the following resolutions:

RESOLVED, that the Board hereby authorizes the execution of the Memorandum of Understanding (“MOU”) between Manitoba Hydro, NERC, and MRO, on substantially the terms and conditions presented to the Board at this meeting.

FURTHER RESOLVED, that each of NERC’s Chief Executive Officer and General Counsel, are hereby authorized to execute and deliver, on behalf of NERC, the MOU.

Reliability Coordinator Function in the Western Interconnection

Melanie Frye, president and chief executive officer of WECC, provided an update on recent developments regarding the Reliability Coordinator function in the Western Interconnection. She presented the non-binding Reliability Coordinator footprints as of October 2018 and provided an update on WECC’s efforts to develop a regional variance to Reliability Standard IRO-002-5 before the new Reliability Coordinator providers begin operations. Ms. Frye reported on NERC and WECC efforts to address certification issues and analyze potential seams issues between Reliability Coordinator footprints. She also provided an update on Reliability Coordinator initiatives.

Ms. Frye stated that WECC is working with the British Columbia Utilities Commission to perform a “readiness review” before BC Hydro begins Reliability Coordinator operations.

Addressing Recommendations from Recent Reliability Assessments

Brian Evans-Mongeon, Planning Committee Chair, provided an update on the Planning Committee’s efforts to address the recommendations of the 2017 Long Term Reliability Assessment and the 2017 Special Reliability Assessment on natural gas system disruptions.

Mr. Thilly noted the need to look at all tools available to address potential risks, including Reliability Standards. Mr. Robb advised that the Planning Committee consider “fuel assurance” versus “energy assurance” concepts during its work.

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 and highlighted certain items, including: (i) the Committee's approval of Reliability Guidelines for establishing Interconnection Reliability Operating Limits ("IROLs") and BPS-connected inverter-based performance reliability; (ii) the disbandment of the Establishing IROLs Task Force; and (iii) the work of the Inverter-Based Resources Task Force to recommend Reliability Standard changes to address inverter-based resource performance issues. He also reported that the Committee is following western Reliability Coordinator issues closely.

Planning Committee

Mr. Evans-Mongeon, Committee Chair, referenced the written report and his previous presentation.

Critical Infrastructure Protection Committee

Marc Child, Committee Chair, referenced the written report. He highlighted the Committee's work on supply chain security issues (including developing vendor security guidance), cloud technology issues, finishing ongoing security guidance, and looking at emerging technologies for guidance.

Member Representatives Committee

Jason Marshall, Committee Chair, reported that the Committee elected Gregory Ford as chair and Jennifer Sterling as vice chair of the Committee for 2019. He summarized the topics that had been discussed at the November 6, 2018 MRC meeting, including the ERO effectiveness and efficiency initiative and the special reliability assessment on accelerated generation retirements. Mr. Marshall reported that the Committee and NERC staff will form a team to review stakeholder engagement proposals, and that the Committee looks forward to providing input on the special reliability assessment.

Personnel Certification Governance Committee

Michael Anderson, Committee Chair, provided an update on the activities of the Committee, referencing the materials provided in the advance agenda package. He highlighted that: (i) the Committee is exploring publishing a white paper on certification requirements; and (ii) fees for new and renewed credentials will increase effective January 1, 2019.

Standards Committee

Amy Casuscelli, Committee Vice Chair, referenced the written report and summarized recent Committee activities, including action on Standard Authorization Requests, creation of standard drafting teams, waiver authorizations for Project 2018-02 Modifications to CIP-008 Cyber Security Incident Reporting, and revisions to the Standard Processes Manual. She remarked that having Mr. DeFontes as liaison has provided positive benefits to the Committee.

Reliability Issues Steering Committee

Mr. Brandien, Committee Chair, provided an update on the activities of the Committee, highlighting the upcoming election and the Committee's work on the RISC Resilience Report and the 2019 Reliability Leadership Summit.

Compliance and Certification Committee

Jennifer Flandermeyer, Committee Chair, referred to the written report included in the advance agenda package. She reported that the EWRC approved revisions to the annual Regional Entity Program Evaluation procedure at its November 5, 2018 closed meeting. Ms. Flandermeyer also reported that Committee members have participated as observers in NERC internal audits.

Electricity Subsector Coordinating Council

Mr. Robb reported that the ESCC met in October 2018 to discuss topics including the White House cyber security strategy and preparedness and resilience, including space weather. He stated that the ESCC's preparation for and restoration following Hurricanes Florence and Michael was extraordinarily well-orchestrated.

Mr. Robb also reported on matters related to Canadian engagement, including ongoing work to secure access for Canadian partners in classified briefings and a recent amendment to the E-ISAC Members Executive Committee charter to provide for an additional Canadian voting member.

Forum and Group Reports

North American Energy Standards Board (NAESB)

Michael Desselle, NAESB Chair, referenced the written report and noted that NERC and NAESB continue to collaborate on items of mutual interest, including the parallel flow visualization field test, standards efficiency review, and manual time error correction requirements.

North American Transmission Forum

Tom Galloway, Forum chief executive officer, referenced the written report and highlighted certain items, including recent events hosted with NERC and the Electric Power Research Institute and the Forum's work with the DOE on developing recommendations for grid security emergencies.

North American Generator Forum

Allen Shriver, Forum chief operating officer, referenced the written report and highlighted that the Forum will co-host, with the NERC Resources Subcommittee, two webinars on primary frequency response on November 13, 2018.

Adjournment

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

Submitted by,



Charles A. Berardesco
Corporate Secretary

Compliance and Certification Committee (CCC) Membership

Action

Approve

Background

The Compliance and Certification Committee (CCC) is recommending that the Board of Trustees (Board) approve the re-appointments of two CCC members. The re-appointments are for a three-year term effective upon the date of Board approval.

Summary

The CCC respectfully requests the Board approve the following membership re-appointments:

- Martha Henson – Oncor, representing RE-Texas RE
- Thomas McDonald – Bonneville Power Administration, representing Federal/ Provincial Utility/Power Authority

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
Nelson Peeler , Chair	Chief Transmission Officer, Duke Energy	January 31, 2021
Brian Slocum , Vice Chair	Vice President of Operations and NERC Compliance Officer, ITC Holdings	January 31, 2020
Peter Brandien , At-Large Member	Vice President of System Operations, ISO New England	January 31, 2021
Teresa Mogensen , At-Large Member	SVP Energy Supply (Generation), Xcel Energy	January 31, 2021
JoAnn M Thompson , At-Large Member	Vice President, Asset Management, Otter Tail Power Company	January 31, 2021
Tom Galloway , At-Large Member	CEO, North American Transmission Forum	January 31, 2021
David Robitaille , At-Large Member	Director of Market Operations, IESO	January 31, 2021
Erik Takayesu , At-Large Member	Vice President of Transmission, Substations and Operations, Southern California Edison	January 31, 2021
John Stephens , MRC Member	Director of Power System Control, City Utilities of Springfield	January 31, 2021
Carol Chinn , MRC Member	Regulatory Compliance Officer, Florida Municipal Power Agency	January 31, 2021
Brian Evans-Mongeon , Planning Committee Chair	President and Chief Executive Officer, Utility Services	January 31, 2020
Andrew Gallo , Standards Committee Chair	Director, Reliability Compliance, Austin Energy	January 31, 2020
Patti Metro , Compliance & Certification Committee Member	Manager, Transmission & Reliability Standards, National Rural Electric Cooperative Association	January 31, 2020
David Zwergel , Operating Committee Vice Chair	Senior Director, Regional Operations, Midcontinent ISO	January 31, 2020
Chuck Abell , Critical Infrastructure Protection Committee Member	Supervising Engineer, Transmission Technical Support, Ameren	January 31, 2020

Operating Committee (OC) Charter

Action

Approve

Background

At the December 11-12, 2018 OC meeting, the OC approved revisions to the OC Charter. The revisions include references in Appendix 3 to the new OC *Reliability Guideline and Reference Document Communication Process* and also removes references to the SPP Regional Entity. The *OC Reliability Guideline and Reference Document Communication Process* was developed to address communicating new or revised Reference Documents and Reliability Guidelines to industry to promote broader awareness. This process document was approved by the OC at the September 11-12, 2018 meeting.

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Operating Committee Charter

~~September-December~~ 20187

RELIABILITY | ACCOUNTABILITY



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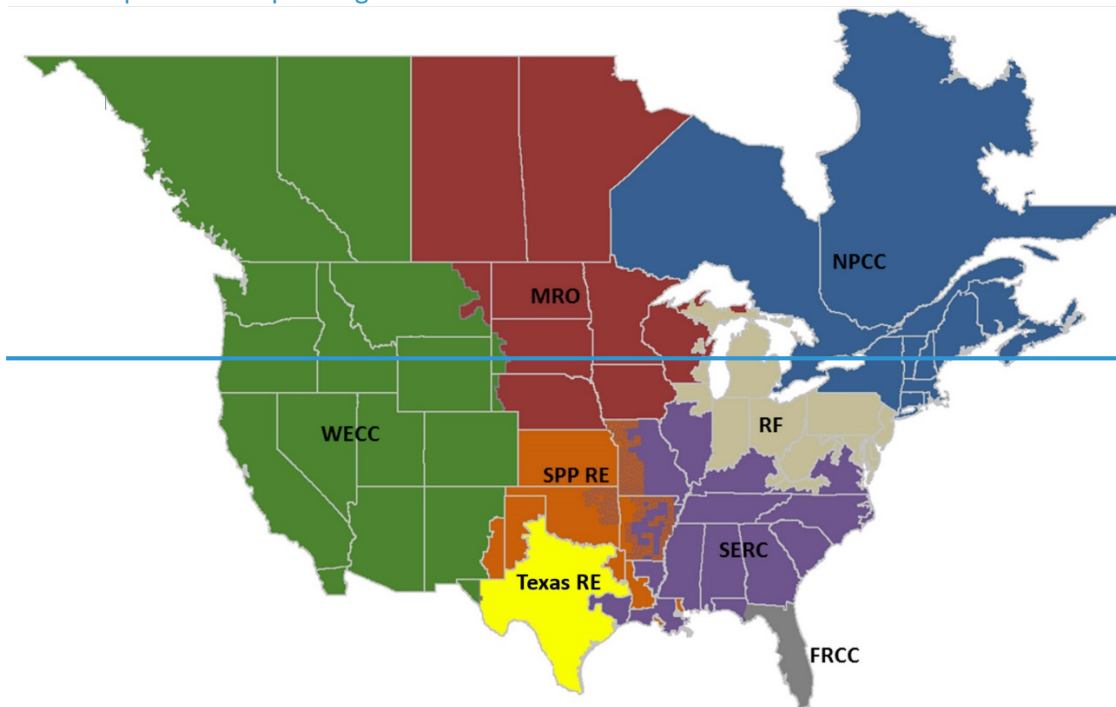
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Preface

The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to assure the reliability 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 several assessment areas within the [eight](#) Regional Entity (RE) boundaries, as shown in the map and corresponding table below.



The Regional boundaries in this map are approximate. The highlighted area between SPP and SERC denotes overlap as some load-serving entities participate in one Region while associated transmission owners/operators participate in another.

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

Section 1 – Purpose

The purpose of the Operating Committee (OC) is to promote North American Bulk-Power System operational reliability excellence.

Section 2 – General Overview and Functions

1. General forum

The OC provides a general forum for aggregating ideas and interests regarding the operations of the interconnected Bulk-Power Systems in North America.

2. Advice and recommendations

The OC provides the Electric Reliability Organization (ERO) (stakeholders, Board of Trustees (Board), and staff) with advice, recommendations, and the collective and diverse opinions on matters related to interconnected operations to help the industry arrive at informed decisions.

3. Support for other NERC programs

The OC provides technical advice and subject matter expert support to each of the NERC program areas, and serves as a forum to integrate the outputs of each ERO program area, including:

- a. Reliability Assessments – Review reliability assessments, assure technical accuracy and completeness of results, and endorse approval of assessments to NERC’s Board.
- b. Emerging Issues and Reliability Concerns – Identify emerging issues within the electric industry, address issues in reliability assessments, and address other issues as assigned by the Board.
- c. Operational Analyses – Develop operational analyses, model validation, and key reliability areas, resulting in technically accurate and comprehensive reports addressing these areas (i.e., frequency response, intermittent generation, distributed energy resources (DER), etc.). Provide recommendations that facilitate addressing the reliability risks identified. Provide oversight, guidance, and direction to address key planning related issues.
- d. Standards Input – Provide technical expertise and feedback to Standard Authorization Requests (SARs) that have reliability-related impacts, provide foundational technical efforts that support the key reliability operational related standards development, coordinate effectively with the Standards Committee to maintain alignment on priorities of related OC efforts, develop and vet operational guidelines that align with approved standards with industry stakeholders, and provide reliability risk information for prioritization of SARs and new Reliability Standards.
- e. Metrics – Provide direction, technical oversight, and feedback on the NERC Adequate Level of Reliability (ALR) metrics.
- f. Event Analysis – Review all event reports to determine lessons learned and good industry practices and promote the dissemination of information to the industry to enhance reliability.
- g. NERC Alerts – Participate in the review and development of requests for industry actions and informational responses.
- h. Reliability Guidelines and Technical Reports – Develop reliability guidelines, white papers, technical reports and reference documents to address emerging issues and industry concerns related to system operations.
- i. System Operator Training – Provide necessary support and guidance to facilitate System Operator training.

4. Review and approval of the Operating Committee Strategic Plan and Work Plan

The OC will develop, maintain and approve a strategic plan and associated work plan to address the functions of the OC. The strategic plan will be revisited as needed to maintain alignment with the NERC ERO enterprise. The work plan will be updated as needed to track the progress of the OC and subcommittees.

5. Review of foundational changes to interconnected operations

The OC will review and provide constructive feedback regarding foundational changes to interconnected operations, such as changes to the footprints of reliability coordinators, balancing authorities, transmission operators, Interconnections, field tests and HVDC ties, etc.

6. Manage and coordinate documents such as:

- a. State of Reliability Report
- b. Technical content of the NERC Reliability Functional Model
- c. Reliability Guidelines (See Appendix 3)
- d. Reference Documents (See Appendix 3)
- e. Other documents under the purview of the Operating Committee.

7. Opinions and interpretations

The OC provides technical opinions at the industry stakeholders' request on operating reliability concepts, philosophies, and standards.

Section 3 – Membership

1. Goals

The OC provides for balanced decision making by bringing together a wide diversity of opinions from industry experts with outstanding technical knowledge and experience in the area of interconnected systems operation reliability.

2. Expectations

OC voting members are expected to:

- a. Bring subject matter expertise to the OC;
- b. Be knowledgeable in reliable operations within their organization;
- c. Attend and participate in all OC meetings;
- d. Express their own opinions, as well as the opinions of the sector they represent, at committee meetings;
- e. Complete committee assignments; and,
- f. Inform the secretary of any changes in their status that may affect their eligibility for committee membership. Failure to do so in a timely manner may result in the member's dismissal by the chair.

3. Representation.

See Appendix 1, "Committee Members"

- a. Committee members may, but need not, be NERC members. A non-voting representative must meet the requirements defined in Appendix 1. Voting members, with the exception of sector 11 that appoints its members, may hold a position in any sector in which they would be eligible for NERC membership, even if they are a NERC member in another sector. Questions regarding eligibility for committee membership will be referred to the NERC general counsel for final determination of status.
- b. To ensure adequate Canadian representation, the membership to the committee may be increased so that the number of Canadian voting members is 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 committee, rounded to the next whole number.

4. Selection

With the exception of sector 11, NERC sector members will annually elect voting committee members to committee sectors corresponding to their NERC sector under an election process that is open, inclusive, and fair. The selection process will be completed in time for the secretary to send the committee membership list to the Board for its approval at the Board's August meeting so that new committee members may be seated at the September meeting.

- a. Un-nominated voting member positions will remain vacant until the next annual or special election. If a vacancy in an elected sector is created by a resignation or other cause, a special election will be held unless it would coincide with the annual election process. Special elections shall follow the same procedure as the annual election.
- b. Members may not represent more than one committee sector at any one time.
- c. A particular organization, including its affiliates, may not have more than one member on the committee.
- d. If additional Canadian members are added, no more than one additional Canadian voting member shall be selected from a sector unless this limitation precludes the addition of the number of additional

Canadian voting representatives required by Section 3.3.b. In this case, no more than two additional Canadian voting members may be selected from the same sector.

- e. The secretary will monitor the committee selection process to ensure that membership specifications are met.
- f. After the secretary announces the election results, the newly elected members will serve on the committee pending approval by the Board. The secretary will submit the newly elected members' names to the Board for approval at the Board's next regular meeting.

5. Terms

Members' terms are staggered, with one-half of the members' terms expiring each year. Except for the cases described below, a member's term is two years. Members may be re-elected for subsequent terms. Shorter terms may be required for several reasons:

- a. If two members are simultaneously selected to a sector that did not have any existing members, in order to stagger their terms, one member will be assigned a one-year term and the second member will be assigned a two-year term using a fair and unbiased method.
- b. If a member replaces a departed member between elections, the new member will assume the remaining term of the departed member.
- c. If a member fills a vacant member position between elections, his/her term will end when the term for that vacant position ends.

6. Resignations, Vacancies, and Nonparticipation

- a. Members who resign will be replaced for the time remaining in the member's term. Members will be replaced pursuant to Section 3.4, officers will be replaced pursuant to Section 5, and executive committee members will be replaced pursuant to Section 7.
- b. Newly elected or appointed members will serve on the committee pending approval by the Board. The secretary will submit new members' names to the Board for approval at the Board's next regular meeting.
- c. The committee chair will contact any member who has missed two consecutive meetings (even if the member has sent a proxy) to 1) seek a commitment to actively participate or 2) ask the member to resign from the committee.
- d. The chair may remove any member who has missed two consecutive meetings (even with a proxy).

7. Proxies

A member of the committee may give a proxy only to a person who:

- a. Meets the member's eligibility requirements (see Section 3.3a) and is not affiliated with the same organization as another committee member (see Section 3.4c), or
- b. Is not another committee member, unless that committee member would represent the proxy's sector instead of his/her own sector at the meeting.

To permit time to determine a proxy's eligibility, proxies must be submitted to the secretary in writing at least one week prior to the meeting (electronic transmittal is acceptable). Any proxy submitted after that time will be accepted at the chair's discretion, provided that the chair believes the proxy meets the eligibility requirements.

Section 4 – Meetings

See Appendix 2, “Meeting Procedures.” In the absence of specific provisions in the Charter document, the OC will follow Roberts Rules of Order, Newly Revised.

1. Quorum

A quorum requires two-thirds of the voting members.

2. Voting

Except for sector 11, each voting member of the committee shall have one vote on any matter coming before the committee that requires a vote. Sector 11 voting is specified in Appendix 1. Actions by members of the committee shall be approved upon receipt of the affirmative vote of two-thirds of the voting members of the committee present and voting, in person or by proxy, at any meeting at which a quorum is present. The chair and vice chair may vote. Additional voting guidelines are in Appendix 2.

Voting may take place during regularly scheduled in-person meetings or may take place via electronic mail, facsimile or conference call.

3. 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 Compliance Guidelines statement shall be included with each meeting agenda.

4. Open Meetings

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

5. 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.

Section 5 – Officers

1. Terms and conditions

At its June meeting and every two years thereafter, the committee shall select a chair and vice chair from among its voting members by majority vote of the members of the committee to serve as chair and vice chair of the committee from the end of that June meeting until the end of the June meeting two years later. The newly selected chair and vice chair shall not be representatives of the same sector.

- a. Pending approval by the Board, the newly elected officers will assume their duties as stated above. The secretary will submit the names of the elected officers to the chair of the Board for approval at the Board's next regular meeting.
- b. The chair and vice chair, upon assuming such positions, shall cease to act as representatives of the sectors that elected them as representatives to the committee and shall thereafter be responsible for acting in the best interests of the members as a whole.

2. Selection

The committee selects officers using the following process. The chair is selected first, followed by the vice chair.

- a. The nominating subcommittee will present its recommended candidate.
- b. The chair opens the floor for nominations.
- c. After receiving, or hearing no further nominations, the chair closes the nominating process.
- d. The committee will then vote on the candidate recommended by the nominating subcommittee, followed by the candidates nominated from the floor in the order in which they were nominated. The first candidate to garner the majority of the committee's votes will be selected.
- e. If the committee nominates one person, that person is automatically selected as the next chair.
- f. If the committee nominates two or more persons, and none receive a majority of the committee's votes, then the secretary will distribute paper ballots for the members to mark their preference.
- g. The secretary will collect the ballots. If the committee nominates three or more candidates, then the winner will be selected using the Instant Runoff Process. (Explained in Roberts Rules of Order).

Section 6 – Subcommittees

1. Appointing subgroups

The OC may appoint technical subcommittees, task forces, and working groups as needed. Once these subgroups have been appointed, a scope document will be developed to ensure alignment with the Operating Committee Charter and strategic plan. The OC will annually review the appropriateness of ongoing subcommittees, task forces, and working groups.

2. Nominating subcommittee

At the first regular meeting following the selection of a new committee chair, the chair will nominate, for the committee's approval, a slate of five committee members from different sectors to serve as a nominating subcommittee. The subcommittee will:

- a. Recommend candidates for the committee's chair and vice chair, and
- b. Recommend candidates for the executive committee's four "at large" members.

Section 7 – Executive Committee

1. Authorization

The executive committee of the OC is authorized by the OC to act on its behalf between regular meetings on matters where urgent actions are crucial and full committee discussions are not practical. Ultimate OC responsibility resides with its full membership whose decisions cannot be overturned by the executive committee, and which retains the authority to ratify, modify, or annul executive committee actions.

2. Membership

The committee will elect an executive committee of six members, all from different sectors, as follows:

- a. Chair
- b. Vice-chair
- c. Four at-large members from different sectors nominated by the nominating subcommittee

3. Election Process

The nominating subcommittee will present its slate of candidates for the four “at large” members.

- a. The chair opens the floor for additional nominations.
- b. If the Committee members nominate additional candidates, then the secretary will distribute paper ballots for the members to list their top four candidates.
- c. The four candidates who receive the most votes will be elected, provided that no two candidates may be from the same sector.

4. Terms

The executive committee will be replaced every two years, with the chair and vice chair replaced at a June meeting and the at-large members replaced at a September meeting.

Section 8 – Action Without A Meeting

The OC may act by mail or electronic (facsimile or e-mail) 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 OC members. The OC chair or four members (each from different industry segments) may initiate the request for such action without a meeting. The secretary shall post a notice on the NERC website and shall provide OC members with a written notice (letter, facsimile, or e-mail) of the subject matter for action not less than five business days prior to the date on which the action is to be voted. The secretary shall distribute a written notice to the OC (letter, facsimile, or e-mail) 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 (e-mail, facsimiles, etc.) from the OC members with the OC minutes.

Appendix 1 – Committee Members

Committee Members		
Name	Definition	Members
Voting Members		
1. Investor-owned utility	This sector includes any investor-owned entity with substantial business interest in ownership and/or operation in any of the asset categories of generation, transmission, or distribution. This sector also includes organizations that represent the interests of such entities.	2
2. State/municipal utility	This sector includes any entity owned by or subject to the governmental authority of a state or municipality, that is engaged in the generation, delivery, and/or sale of electric power to end-use customers primarily within the political boundaries of the state or municipality; and any entity, whose members are municipalities, formed under state law for the purpose of generating, transmitting, or purchasing electricity for sale at wholesale to their members. This sector also includes organizations that represent the interests of such entities.	2
3. Cooperative utility	This sector includes any non-governmental entity that is incorporated under the laws of the state in which it operates, is owned by and provides electric service to end-use customers at cost, and is governed by a board of directors that is elected by the membership of the entity; and any non-governmental entity owned by and which provides generation and/or transmission service to such entities. This sector also includes organizations that represent the interests of such entities.	2
4. Federal or provincial utility/Federal Power Marketing Administration	This sector includes any U.S. federal, Canadian provincial, or Mexican entity that owns and/or operates electric facilities in any of the asset categories of generation, transmission, or distribution; or that functions as a power marketer or power marketing administrator. This sector also includes organizations that represent the interests of such entities. One member will be a U.S. federal entity and one will be a Canadian provincial entity.	2
5. Transmission dependent utility	This sector includes any entity with a regulatory, contractual, or other legal obligation to serve wholesale aggregators or customers or end-use customers and that depends primarily on the transmission systems of third parties to provide this service. This sector also includes organizations that represent the interests of such entities.	2
6. Merchant electricity generator	This sector includes any entity that owns or operates an electricity generating facility that is not included in an investor-owned utility's rate base and that does not otherwise fall within any of sectors (i) through (v). This sector includes but is not limited to cogenerators, small power producers, and all other non-utility electricity producers such as exempt wholesale generators who sell electricity at wholesale. This sector also	2

Appendix 1 – Committee Members

Committee Members		
Name	Definition	Members
	includes organizations that represent the interests of such entities.	
7. Electricity marketer	This sector includes any entity that is engaged in the activity of buying and selling of wholesale electric power in North America on a physical or financial basis. This sector also includes organizations that represent the interests of such entities.	2
8. Large end-use electricity customer	This sector includes any entity in North America with at least one service delivery taken at 50 kV or higher (radial supply or facilities dedicated to serve customers) that is not purchased for resale; and any single end-use customer with an average aggregated service load (not purchased for resale) of at least 50,000 MWh annually, excluding cogeneration or other back feed to the serving utility. This sector also includes organizations that represent the interests of such entities.	2
9. Small end-use electricity customer	This sector includes any person or entity within North America that takes service below 50 kV; and any single end-use customer with an average aggregated service load (not purchased for resale) of less than 50,000 MWh annually, excluding cogeneration or other back feed to the serving utility. This sector also includes organizations (including state consumer advocates) that represent the interests of such entities.	2
10. Independent system operator/Regional transmission organization	This sector includes any entity authorized by the Commission to function as an independent transmission system operator, a Regional transmission organization, or a similar organization; comparable entities in Canada and Mexico; and the Electric Reliability Council of Texas or its successor. This sector also includes organizations that represent the interests of such entities.	2
11. Regional Entity	This sector includes any Regional Entity as defined in Article I, Section 1, of the Bylaws of the corporation. In aggregate, this 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 Entity members' votes is two votes.	2
12. State government	This sector includes any state government department or agency in the United States having a regulatory and/or policy interest in the Bulk Electric System (BES).	2
Officers	Chair and Vice Chair	2
Non-Voting Members		
Government Representatives	This sector includes any federal, state, or provincial government department or agency in North America having a regulatory and/or policy interest in wholesale electricity. Entities with regulatory oversight over the Corporation or any Regional Entity, including U.S., Canadian, and Mexican federal agencies and any provincial entity in Canada having statutory oversight over the Corporation or a Regional Entity with respect to the approval and/or	

Appendix 1 – Committee Members

Committee Members		
Name	Definition	Members
	enforcement of Reliability Standards, may be non-voting members of this sector.	
	United States federal government	2
	Canadian federal government	1
	Provincial government	1
Secretary	The committee secretary will be seated at the committee table	1
Subcommittee Chairs	The chairs of the subcommittees will be seated at the committee table.	

Appendix 2 – Meeting Procedures

1. Voting Procedures for Motions

- a. The default procedure is a voice vote.
- b. If the chair believes the voice vote is not conclusive, the chair may call for a show of hands.
- c. The chair will not specifically ask those who are abstaining to identify themselves when voting by voice or a show of hands.
- d. The committee may conduct a roll-call vote in those situations that need a record of each member's vote.
 - i. The committee must approve conducting a roll call vote for the motion.
 - ii. The secretary will call each member's name.
 - iii. Members answer "yes," or "no," but may answer "present" if they wish to abstain from voting.

2. Minutes

- a. Meeting minutes are a record of what the committee did, not what its members said.
- b. Minutes should list discussion points where appropriate, but should usually not attribute comments to individuals. It is acceptable to cite the chair's directions, summaries, and assignments.
- c. Do not list the person who seconds a motion.
- d. Do not record (or even ask for) abstentions.

3. Minority Opinions

All Committee members are afforded the opportunity to provide alternative views on an issue. The meeting minutes will provide an exhibit to record minority opinions. The chair shall report both the majority and any minority views in presenting results to the Board.

4. Personal Statements

The minutes will also provide an exhibit to record personal statements.

Appendix 3 –Approval Process for Deliverables

1. Reliability Guidelines.

Reliability guidelines are documents that suggest approaches or behavior in a given technical area for the purpose of improving reliability. Reliability guidelines are not binding norms or mandatory requirements. Reliability guidelines may be adopted by a responsible entity in accordance with its own facts and circumstances.¹

a. Approval of Reliability Guidelines

Because reliability 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 the OC. The process described below will be followed by the OC:

- i. New/updated draft guideline approved for industry posting. The OC approves for posting for industry comment the release of a new or updated draft guideline developed by one of its subgroups or the committee as a whole.
- ii. Post draft guideline for industry comment. The draft guideline is posted as “for industry-wide comment” for forty-five (45) days. If the draft guideline is an update, a redline version against the previous version must also be posted.
- iii. Post industry comments and responses. After the public comment period, the OC 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.
- iv. New/updated guideline approval and posting. A new or updated guideline which considers the comments received, is approved by the OC and posted as “Approved” on the NERC website. Updates must include a revision history and a redline version against the previous version.
- v. Guideline updates. After posting a new or updated guideline, the OC will continue to accept comments from the industry via a web-based forum where commenters may post their comments.
 - (1) Each quarter, the OC will review the comments received. At any time, the OC may decide to update the guideline based on the comments received or on changes in the industry that necessitate an update.
 - (2) Updating an existing guideline will require that a draft updated guideline be approved by the OC in the above steps.

b. Review of Approved Reliability Guidelines

Approved reliability guidelines shall be reviewed for continued applicability by the OC at a minimum of every third year since the last revision.

c. Communications of New or Revised Reliability Guidelines

In an effort to ensure that industry remains informed of revisions to a Reliability Guideline or the creation of a new Reliability Guideline, the OC subcommittee responsible for the Reliability Guideline will follow the “Operating Committee Reliability Guideline and Reference Document Communication Process”

¹ Standards Committee authorization is required for a reliability 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 Documents.”

2. Reference Documents

Reference documents provide information in a given technical area for the purpose of improving reliability. Reference documents are not binding norms or mandatory requirements.

Approval of reference documents.

Because reference documents contain suggestions that may result in actions by responsible entities, those suggestions must be thoroughly vetted by the committee before a new or updated reference document receives approval by the OC.

Approved reference documents shall be reviewed for continued applicability by the OC at a minimum of every third year since the last revision. Any comments received from industry since the last revision will be considered during the review.

[In an effort to ensure that industry remains informed of revisions to a Reference Document or the creation of a new Reference Document, the OC subcommittee responsible for the Reference Document will follow the “Operating Committee Reliability Guideline and Reference Document Communication Process”](#)

3. Policy Outreach

The OC will continue to coordinate with the forums, policymakers, and other entities to assure the reliability guidelines, reference documents and lessons learned are beneficially used throughout the industry. The OC Strategic Plan will contain details on the implementation of policy outreach.

Standards Efficiency Review

Action

Update

Background

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, in consultation with stakeholders, developed 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. This effort is referred to as the Standards Efficiency Review (SER).

In Phase 1 of the SER project, teams of industry participants compiled a list of approximately 113 requirements that are candidates for retirement, along with a justification for retirement of each candidate. A draft Standard Authorization Request (SAR) was posted for informal comment from June 7 to July 10, 2018. After reviewing and incorporating industry comments into the SAR, the SER team will present the SAR to the Standards Committee (SC). At this point, the SC may accept the SAR and authorize the solicitation of SAR drafting team members.

In Phase 2 of the SER project, SER teams will transition their efforts to address requirements that were not initially flagged for retirement, but were identified for an alternative to retirement, such as consolidation with other requirements or a modification. Some concepts under consideration include consolidating and simplifying training and data requirements, transferring competency-based requirements to the certification program and/or the Compliance Monitoring Enforcement Program controls review process, and transferring market-related requirements to the North American Energy Standards Board. The SER Advisory Group is currently considering the timing and scope of including the CIP Reliability Standards in Phase 2 of the SER.

Key Deliverables and Timeline

- Biweekly meetings conducted for SER working teams (2018 Q1)
- Review teams compiled candidate list of requirements recommended for retirement (2018 Q2)
- Review teams posted draft SAR to industry for comment (2018 Q2)
- Review teams submit revised SAR to SC (2018 Q3)
- SC solicited for standard drafting team(s) for SARs (2018 Q3)
- Phase 2 team assembled to investigate issues and potential solutions (2018 Q3)
- Phase 1 industry ballots on proposed retirements/modifications to standards (2019 Q1)
- Phase 1 proposed balloted standards to NERC Board of Trustees (2019 Q2 – Q3)
- Phase 2 team to conduct industry webinar and solicit industry input on efficiency concepts (2109 Q1)
- Phase 2 team to provide draft SARs for additional standard modifications (2019)

Reliability Standard TPL-007-3 – Transmission System Planned Performance for Geomagnetic Disturbance Events

Action

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

- Reliability Standard - TPL-007-3 – Transmission System Planned Performance for Geomagnetic Disturbance Events
[\[Clean\]](#) [\[Redlined to Last Approved\]](#)
- Implementation Plan for TPL-007-3 – Transmission System Planned Performance for Geomagnetic Disturbance Events
[\[Implementation Plan\]](#)
- Retirements
[TPL-007-2 – Transmission System Planned Performance for Geomagnetic Disturbance Events](#)

Background

In February 2018, NERC received a Standard Authorization Request (SAR) submitted by the Independent Electricity System Operator of Ontario and Hydro One. The SAR sought to: (i) create an option in the TPL-007 standard for Canadian entities to leverage operating experience, observed Geomagnetic Disturbance (GMD) effects, and on-going Natural Resources Canada research efforts that will be useful for defining alternative benchmark GMD events or supplemental GMD planning event(s); and (ii) recognize the unique regulatory frameworks specific to Canadian jurisdictions, particularly with respect to provincial processes for approving investments identified in Corrective Action Plans.

In June 2018, the NERC Standards Committee (SC) accepted the revised SAR and appointed a standard drafting team (SDT) consisting of representatives from several Canadian jurisdictions to develop a Variance to Reliability Standard TPL-007-2. The Variance would apply only in Canadian jurisdictions, subject to the usual regulatory approval processes in each province. None of the continent-wide Requirements have been changed.

The Variance was posted for informal comment from August 10, 2018 through September 6, 2018. Comments from participating Canadian entities indicated broad support for the Variance.

NERC posted proposed Reliability Standard TPL-007-3 reflecting the new Variance and the associated implementation plan for a 45-day comment period and initial ballot from October 2, 2018 through November 15, 2018.¹ During the final ballot, held from November 29, 2018 through December 10, 2018, the standard received a 100 percent approval rating with a quorum of 80.43 percent. The associated implementation plan received a 100 percent approval rating with a quorum of 82.09 percent.

¹ The ballots were extended an additional day (to November 16, 2018) to reach quorum.

In January 2019, following the close of the final ballot, the Standards Committee approved errata changes to TPL-007-3. The minor changes further clarify that the Variance, like all Reliability Standards and Variances, shall apply in Canadian jurisdictions only where it has been approved or otherwise become effective pursuant to provincial law or regulation.

Unresolved Minority Issues

There were no unresolved minority issues.

Additional Information

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

[\[Project 2018-01 Canadian-specific Revisions to TPL-007-2\]](#)

CIP-008-6 – Cyber Security – Incident Reporting and Response Planning

Action

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

- Reliability Standard – CIP-008-6 – Cyber Security – Incident Reporting and Response Planning
[\[CIP-008-6 Standard\]](#) [\[Redline to last approved\]](#)
- Implementation Plan for CIP-008-6 - Cyber Security – Incident Reporting and Response Planning
[\[Implementation Plan\]](#)
- Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs)
[\[VRF/VSL Justification\]](#)
- Retirements
[\[CIP-008-5\]](#)

Background

On July 19, 2018, the Federal Energy Regulatory Commission (FERC) issued Order No. 848 directing NERC to develop and submit to FERC, within 6 months of the effective date of the order, modifications to the Critical Infrastructure Protection Reliability Standards to augment mandatory reporting of Cyber Security Incidents, including incidents that might facilitate subsequent efforts to harm the reliable operation of the nation's Bulk Electric System (BES). FERC directed NERC to develop and submit modifications to the Reliability Standards to require reporting of Cyber Security Incidents that compromise, or attempt to compromise, a responsible entity's Electronic Security Perimeter or associated Electronic Access Control or Monitoring Systems that perform certain functions. FERC stated that NERC should include minimum attributes in reports and develop reporting timelines for Cyber Security Incidents based upon the severity of the event and the risk to BES reliability.

Standards Development Process

The Standards Committee (SC) approved the Standard Authorization Request (SAR) in [August 2018](#). The SC also approved a waiver of provisions of the Standard Processes Manual (SPM) for Project 2018-02 Modifications to CIP-008-5 Cyber Security Incident Reporting including:

1. Initial formal comment and ballot period reduced from 45 days to as little as 20 calendar days, with a ballot conducted during the last 5 days of the comment period. Form ballot pool in first 10 days. (SPM Sections 4.7-4.9)
2. Additional formal comment and ballot period (s) reduced from 45 days to as little as 15 days, with ballot conducted during the last 5 days of the comment period. (SPM Sections 4.9 and 4.12)
3. Final ballot reduced from 10 days to 5 calendar days. (SPM Section 4.9)

The CIP-008-6 standard was posted for two comment and ballot periods. The first was a 20-day comment period in October 2018. The second was a 15-day comment period in November 2018. The standard passed the additional ballot with 75.54 percent affirmative votes and moved to a 5-day final ballot conducted in January 2019. The results of the final ballot will be presented to the Board at the meeting.

Minority Issues

No minority issues at this time.

Pertinent FERC Directives

The commission directed NERC in FERC Order No. 848 to augment mandatory reporting of Cyber Security Incidents, including incidents that might facilitate subsequent efforts to harm the reliable operation of the nation's Bulk Electric System.

Additional Information

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

[\[Project 2018-02 Modifications to CIP-008 Cyber Security Incident Reporting\]](#)

IRO-006-WECC-3 Qualified Path Unscheduled Flow (USF) Relief

Action

Adopt the following Regional Reliability Standard IRO-006-WECC-3 – Qualified Path Unscheduled Flow (USF) Relief standard documents and authorize NERC staff to file with applicable regulatory authorities:

- **Regional Reliability Standard IRO-006-WECC-3**
[\[IRO-006-WECC-3 - Clean\]](#)
[\[IRO-006-WECC-3 – Redline\]](#)
- **Implementation Plan**
[\[IRO-006-WECC-3 Implementation Plan\]](#)
- **Retirement**
[\[IRO-006-WECC-2 – Qualified Transfer Path Unscheduled Flow \(USF\) Relief\]](#)

Background

In January 2018, the Western Electricity Coordinating Council (WECC) initiated a project to perform a five-year review of Regional Reliability Standard IRO-006-WECC-2 under the WECC Reliability Standards Development Procedures.

The drafting team reviewed the regional standard and proposed a series of revisions, discussed below. The WECC Board of Trustees approved Regional Reliability Standard IRO-006-WECC-3 on December 5, 2018.

Summary

The WECC drafting team reviewed Regional Reliability Standard IRO-006-WECC-2 and made the following changes:

- Clarified the purpose statement;
- Replaced defined term “Qualified Transfer Path” with “Qualified Path,” as included in the Western Interconnection Unscheduled Flow Mitigation Plan, approved by the Federal Energy Regulatory Commission;
- Conformed the standard to current drafting conventions and template;
- Retired the following terms from the NERC Glossary of Terms Used in Reliability Standards because they are either no longer accurate or are no longer used in any standards:
 - Qualified Transfer Path;
 - Contributing Schedule;
 - Qualified Controllable Device;
 - Relief Requirement;
 - Transfer Distribution Factor; and

- Qualified Transfer Path Curtailment Event.

NERC staff supports the Regional Reliability Standard. The Regional Reliability Standard was posted for a NERC 45-day public comment period from December 14, 2018 through January 28, 2019. 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:

[\[IRO-006-WECC-3\]](#)

Revised Effective Date for Retirement of Regional Reliability Standard PRC-004-WECC-2

Action

Approve the revised January 1, 2021 retirement date for Regional Reliability Standard PRC-004-WECC-2 and authorize NERC staff to make the appropriate filings with the applicable regulatory authorities:

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

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

[\[Revised Retirement Date\]](#)

Background

In February 2018, the Board voted to retire Regional Reliability Standard PRC-004-WECC-2 – Protection System and Remedial Action Scheme Misoperation on the grounds that the reliability-related substance of the regional standard is redundant to continent-wide Reliability Standards and is no longer needed to support reliability in the Western Interconnection. The standard was to be retired immediately upon regulatory approval, which remains pending.

WECC proposes a revised retirement date for the regional standard. Under this proposal, Regional Reliability Standard PRC-004-WECC-2 would be retired effective January 1, 2021. This would coordinate the retirement of the regional standard with the effective date of continent-wide Reliability Standard PRC-012-2 – Remedial Action Schemes. The WECC Board of Directors approved the revised PRC-004-WECC-2 retirement date on December 6, 2018.

Summary

NERC staff supports coordinating the retirement of Regional Reliability Standard PRC-004-WECC-2 with the effective date of continent-wide Reliability Standard PRC-012-2.

NERC posted the revised retirement date for a 45-day public comment period on December 7, 2018. Comments received during this posting period will be reviewed with the Board at the meeting.

Pertinent FERC Directives

None.

Additional Information

Links to the history and files for the related WECC projects are included here for reference:

[\[PRC-004-WECC-2 – Retirement\]](#)

[\[PRC-004-WECC-2 – Revised Retirement Date\]](#)

Approvals in Connection with the Dissolution of the Florida Reliability Coordinating Council, Inc. Regional Entity

Action

- Authorize NERC management to enter into a termination agreement for the Amended and Restated Delegation Agreement (“RDA”) between NERC and Florida Reliability Coordinating Council, Inc. (“FRCC”) in terms substantially similar to those described in this document.
- Approve the proposed transfer of all Registered Entities in the FRCC Regional Entity (“FRCC RE”) footprint to the SERC Reliability Corporation (“SERC”) footprint.
- Approve the proposed amendments to NERC’s RDA with SERC to reflect new geographic boundaries as illustrated in **SERC RDA – Exhibit A**.
- Approve the proposed amendments to SERC’s Bylaws as reflected in **Attachment A** to support integration of former FRCC RE members.
- Authorize NERC to issue a Special Assessment on behalf of FRCC RE to FERC for FRCC RE Load-Serving Entities.

Background

After the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) 2010 Audit of FRCC, FRCC implemented measures enhancing the separation between its Regional Entity division – to which NERC delegates authority pursuant to an RDA -- and its Member Services division -- that serves as a Reliability Coordinator and Planning Authority in Florida. Despite such measures, in November 2017, NERC determined that ERO Enterprise Regional Entities should be separate corporate entities from NERC registered entities.

Following this determination by NERC, FRCC conducted a careful, deliberate review of its governance structure. As part of its review, FRCC examined factors including, but not limited to, maintaining the reliability of the Bulk Power System in Florida, customer costs, and the extent to which stakeholders would be able to participate in governance of the Regional Entity. After this review, FRCC announced its decision to dissolve the FRCC RE division.

Upon approval by the NERC Board of Trustees of the above-listed items, NERC will file a petition seeking Commission approval of termination of the FRCC RE RDA and transfer of FRCC RE’s Delegated Authority to SERC consistent with the termination agreement.

Termination of the NERC-FRCC RDA

In order to memorialize the wind down of FRCC RE, NERC proposes to enter into a termination agreement for the RDA between NERC and FRCC. The obligations of each party under the termination agreement are summarized below.

In the proposed termination agreement, NERC is obliged to perform the following actions:

- identify SERC as the Transferee Regional Entity for each registered entity in the FRCC RE footprint;
- identify the Load-Serving Entities associated with each FRCC RE registered entity for statutory assessment purposes;
- assist in the transition of compliance monitoring and enforcement processes from FRCC RE to SERC;
- seek approval for and issue a supplementary Special Assessment to assist FRCC RE with wind down costs;
- request Commission approval to deviate from any applicable rules and policies, including Section 1107 of the NERC Rules of Procedure (“ROP”), as needed, to permit use of penalty payments for FRCC RE wind down and SERC transition.
- request Commission approval, as necessary, to permit NERC’s transfer of surplus FRCC 2019 statutory assessments and available reserves to SERC to fund the costs of its expanded Delegated Authority over the transferred registered entities;
- coordinate with FRCC to ensure the disconnection of information technology interfaces between NERC and FRCC and its employees and contractors with associated Regional Entity responsibilities; and
- submit applicable agreements, governance materials, and other corporate documents necessary to effectuate the termination of the RDA to the Commission.

In the proposed termination agreement, FRCC is obliged to perform the following actions:

- submit to NERC a detailed description of the allocation of assessments and penalty monies from FRCC RE’s Commission-approved 2018 and 2019 statutory budgets towards the costs for the wind-down and dissolution of the FRCC RE and the transfer of the FRCC RE Delegated Authority to SERC;
- transition relevant files and documents pertaining to FRCC RE’s Delegated Authority to SERC;
- submit to NERC unaudited quarterly financial reports for all 2019 quarters leading up to and including the Termination Effective Date;
- submit to NERC by April 1, 2020, all audited financial statements of FRCC for 2019; and,
- submit to NERC by April 1, 2020, a reconciliation of actual expenses with budgeted expenses for 2019.

RDA provisions regarding limitation of liability, third party beneficiaries, confidentiality, and NERC’s right to review FRCC RE’s financial records survive termination of the RDA. Termination will not become effective until the termination agreement is approved by the Commission.

Transferring Registered Entities from FRCC to SERC

Under the proposed termination agreement, NERC is obligated to identify a transferee Regional Entity for the Registered Entities in the FRCC RE footprint. NERC identified SERC as the transferee Regional Entity for all Registered Entities in the FRCC RE footprint.

Recognizing that the NERC ROP does not contain criteria for the transfer of multiple registered entities in the event of a Regional Entity dissolution, NERC's proposal for SERC to be the Transferee Regional Entity was informed by Section 1208 of the NERC ROP.

Section 1208 contains criteria for considering registered entity requests to transfer to another Regional Entity, each of which is evaluated below:

- FRCC RE has geographic and electrical boundaries with only one existing Regional Entity – SERC.
- Transferring to SERC will have no impact on the operation of transferring registered entities. There will be no change to the alignment of Reliability Coordinators, Balancing Authorities and Transmission Operators. There are 10 Balancing Authorities and 14 Transmission Operators in the FRCC RE footprint. FRCC serves as the Reliability Coordinator and Planning Authority for the entire footprint of FRCC RE. That will continue to be the case. The existing alignment of Transmission Owners, Generator Owners, Generator Operators, Transmission Planners and Distribution Planners with their current Transmission Operators will also be maintained.
- SERC expects an increase in current and future staffing and resources. SERC is evaluating funding options, but the use of 2019 FRCC RE third and fourth quarter assessments, as well as the application of SERC penalties processed and submitted to NERC between July 1, 2018, and December 31, 2019 to transition-related costs, if approved by the Commission in connection with the transaction, is expected to cover the increased costs.
- NERC is confident that there will be no gaps in oversight of compliance monitoring and enforcement activities of the transferring Registered Entities. SERC and FRCC RE use the same Compliance Issues Tracking System data platform. SERC will ensure that any previously scheduled audits are performed for appropriate RCs, BAs and TOPs transferring from the FRCC RE and will review the audit schedule for other FRCC RE registered entities to assess and to identify any areas of risk that would warrant audits in 2019.

Funding FRCC RE Wind-Down and SERC Transition Costs

FRCC owes certain payments to approximately 24 FRCC RE and shared FRCC corporate staff ("Retained Employees") in connection with retention agreements executed as part of the deliberations to wind down FRCC. These payments were authorized by the FRCC board, and allowed FRCC to retain the employees necessary to operate the dissolution of the RE function.

FRCC RE expects that it will need to conduct a special assessment to fund these payments to the Retained Employees, which will be combined with other funds to fully fund such payments, particularly in light of the treatment of third and fourth quarter FRCC assessment funds, discussed below.

Special Assessment

Under Section 1108 of the NERC ROP and Exhibit E of the RDA between NERC and FRCC, NERC proposes to issue a Special Assessment on behalf of FRCC to FRCC's Load Serving Entities to partly fund these payments. Issuance of a Special Assessment requires "a demonstration of unforeseen and extraordinary circumstances requiring additional funds prior to the next funding cycle."

The “unforeseen and extraordinary circumstance” warranting the Special Assessment in 2019 was the October 30, 2018, FRCC Board of Trustee vote to wind down FRCC RE effective July 1, 2019. This vote accelerated the maturation of FRCC’s obligation to make payments to Retained Employees to August 31, 2019, which, combined with the transfer of the third and fourth quarter assessment funds to SERC, more fully discussed below, will require some advance funding. The amount of the Special Assessment will be calculated after taking into account available working capital and penalty funds. It is currently estimated to be approximately \$2 million.

Treatment of Assessment Funds

FRCC RE will fund wind down costs using its first and second quarter 2019 assessments.

Contingent upon Commission approval of the Special Assessment, NERC will directly transfer FRCC RE third and fourth quarter assessments to SERC by July 31, 2019 and October 31, 2019 (respectively) to help fund SERC’s transition costs.

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 FRCC RE and SERC.

Treatment of Penalties

NERC will request Commission approval to deviate from any applicable rules and policies, including Section 1107 of the NERC ROP, as needed, to permit use of penalty payments for FRCC RE wind down and SERC transition.

FRCC expects to use penalties “processed and submitted”¹ to NERC between July 1, 2018 and July 1, 2019.

Any FRCC penalties “processed and submitted” to NERC between July 1, 2019 and December 31, 2019 shall be reimbursed to those entities who paid the Special Assessment on a pro-rata basis.

SERC will also apply available penalties, if necessary, to fund its transition costs.

Other Transition-Related Activities

Automatic Termination of the SERC and FRCC Compliance Enforcement Authority Agreement

Pursuant to its terms, the SERC and FRCC Compliance Enforcement Authority Agreement will automatically terminate at the end of the calendar year that FRCC ceases to be a Regional Entity - December 31, 2019. This agreement becomes moot effective July 1, 2019, the proposed date that the entities in FRCC RE’s footprint move to SERC. NERC proposes that FRCC’s registration as an RC and PA be transferred to SERC along with the remaining entities in the FRCC RE footprint.

¹ “Processed and submitted” shall mean penalties for FRCC entities billed but not yet collected, penalties for FRCC entities pending Commission approval, and penalties for FRCC entities submitted to NERC and pending NERC Board of Trustees Compliance Committee approval.

Amendments to the NERC-SERC RDA and to the SERC Bylaws

NERC and SERC propose to amend the NERC-SERC RDA to reflect the new regional boundaries resulting from the transferring Registered Entities. See **SERC RDA – Exhibit A**. The term of the revised Regional Delegation Agreement will not change.

SERC proposes to amend its Bylaws to accommodate integration of FRCC into the SERC Region. The proposed amendments to **Section 4.7 - Election of Board Officers and Executive Committee** introduce staggered terms for Board Executive Committee representatives with two groups serving different initial terms. This staggered approach ensures board continuity.

The proposed amendments to **Section 6.1 - Executive Committee Representatives** to add three seats to SERC's Executive Committee for integration of FRCC entities – one additional representative for the Investor-Owned Utility Sector, one additional representative to the Cooperative Sector, and one additional representative to the Municipal Sector. This increases the total number of Sector representatives on the Executive Committee from 12 to 15.

The proposed Bylaw amendments were approved by the SERC Board of Directors on October 24, 2018. Clean and redlined version of the proposed amendments to the SERC Bylaws are attached as **Attachment A**.

Exception from SERC Regional Reliability Standard PRC-006-SERC-02

SERC will exclude former FRCC RE Registered Entities from compliance with SERC Regional Reliability Standard PRC-006-SERC-02 in favor of continued compliance and enforcement of NERC Reliability Standard PRC-006-3.

Based on Florida's peninsular nature with limited ties to the rest of the Eastern Interconnection, the FRCC Planning Coordinator has developed an Automatic Underfrequency Load Shedding program that does not precisely align with the current version of SERC's Regional Reliability Standard PRC-006-SERC-02. From a bulk power perspective, the FRCC program requirements are more conservative than the PRC-006-SERC-02 program limits and are based on the technical design criteria of maintaining a radial transmission network intact during large scale electrical system disturbances within peninsular Florida.

SERC will review its regional standard, with a specific consideration of BES performance incorporating the existing or revised FRCC Planning Coordinator Underfrequency Load Shedding program elements no later than January 1, 2023. Former FRCC RE Registered Entities will then have three (3) additional years to implement any changes to their obligations under the Reliability Standard to ensure sufficient lead time to reset relays in the field.

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.

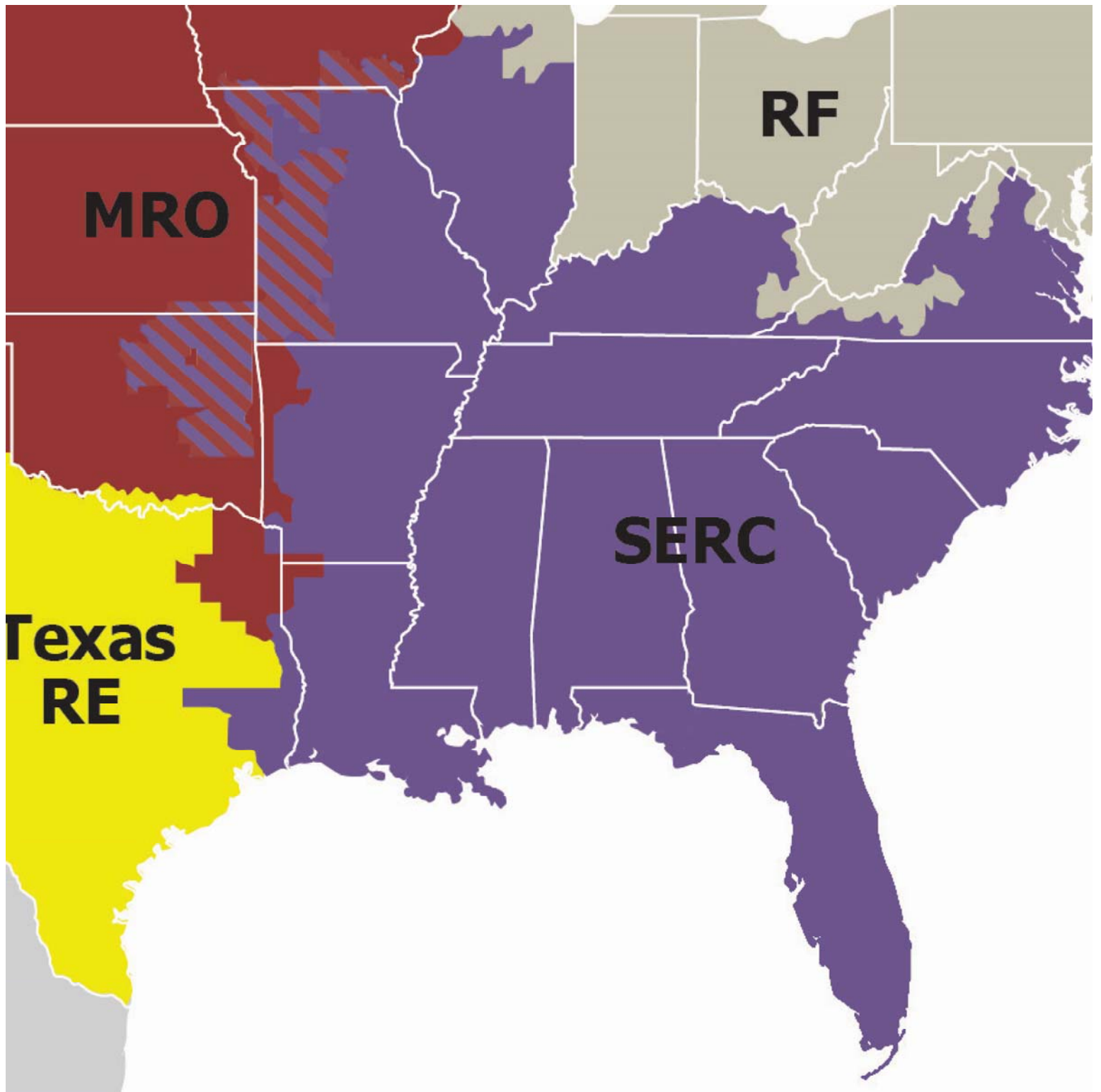
SERC covers an area of approximately ~~574,000~~630,000 square miles in sixteen states: all of Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina; most of Arkansas, Louisiana, Missouri, and Tennessee; and portions of ~~Florida~~, Illinois, Iowa, Kentucky, Oklahoma, Texas, and Virginia.

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 Okefenokee 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.



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AMENDED AND RESTATED

BYLAWS

OF

SERC RELIABILITY CORPORATION

A North Carolina Nonprofit Corporation

Approved by the **SERC** Board of Directors on ~~April 22, 2015~~ October 24, 2018

[PROPOSED BYLAW CHANGES (remove before filing)]

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Approved by the SERC Board of Directors on April 22, 2015 October 24, 2018
Approved the NERC Board of Trustees on
Approved by the Federal Energy Regulatory Commission on

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AMENDED AND RESTATED

BYLAWS

OF

**SERC RELIABILITY CORPORATION
[Hereinafter referred to as the "Corporation"]**

A North Carolina Nonprofit Corporation

ARTICLE I - OFFICES

1.1 **Principal Office.** The principal office of the Corporation shall be located in the City of Charlotte, Mecklenburg County, North Carolina. The Board of Directors may by resolution change the location of this office from time to time.

1.2 **Other Offices.** The Corporation may have other offices at such place or places as the Board of Directors may from time to time appoint or the business of the Corporation may require.

ARTICLE II - MEMBERSHIP

2.1 **General.** The Corporation shall be a membership corporation. Entities that meet the eligibility requirements and apply for membership in the Corporation shall hereinafter be referred to individually as a "Member Company" and collectively as "Member Companies".

2.2 **Eligibility.** Membership in the Corporation is voluntary and is open to any entity in the SERC Region (defined in Section 3.2 below) that is a user, owner or operator of the Bulk Power System, has a material interest in the Bulk Power System in the SERC Region, satisfies the criteria for membership specified in this Section 2.2, qualifies for one or more of the Sectors identified in Section 2.4, and is subject to the jurisdiction of the Federal Energy Regulatory Commission. Membership in the Corporation is predicated on mandatory acceptance of the responsibility to promote, support, and comply with Reliability Standards of the Corporation and the North American Electric Reliability Corporation ("NERC"), and to assist the Corporation in its compliance with the terms and provisions of a Delegation Agreement (a "Delegation Agreement") with NERC, by which NERC delegates authority to propose and enforce Reliability Standards, pursuant to 16 U.S.C. § 824o or the corresponding provisions of any subsequent U.S. Code revisions.

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For purposes of these Bylaws, the terms “Bulk Power System”, “Reliability Standards” and “Regional Entity” shall be as defined in 16 U.S.C. § 824o or the corresponding provisions of any subsequent U.S. Code revisions.

2.3 **Termination.** A Member Company may terminate its membership in the Corporation by giving the Board of Directors at least thirty (30) days written notice of its intent to terminate such membership (such Member Companies shall hereinafter be referred to as "Terminated Member Companies"). Terminated Member Companies shall nevertheless continue to be liable for any and all obligations incurred prior to the end of the calendar year in which such notice is given, including, but not limited to, the obligation to pay a pro rata share of any Corporation expense. In addition to termination of membership by the Member Company, the Board of Directors, following notice to the Member Company, may terminate the membership of a Member Company if in the judgment of the Board of Directors that Member Company has violated its obligations and responsibilities to the Corporation. The termination of the membership of a Member Company by the Board of Directors shall require a Supermajority vote, as defined in these Bylaws.

2.4 **Sectors.** Each Member Company shall be classified by the Executive Committee in one of the following seven (7) Sectors (each a “Sector”, and collectively, the “Sectors”):

- (a) Investor-Owned Utility Sector – This Sector includes any investor-owned entity with substantial business interest in ownership and/or operation in any of the asset categories of generation, transmission or distribution.
- (b) Federal/State Sector – This Sector includes any U.S. federal entity that owns and/or operates electric facilities and/or provides balancing authority services, in any of the asset categories of generation, transmission, or distribution; or any entity that is owned by or subject to the governmental authority of a state and that is engaged in the generation, delivery, and/or sale of electric power to end-use customers primarily within the political boundaries of the state.
- (c) Cooperative Sector – This Sector includes any non-governmental entity that is incorporated under the laws of the state in which it operates, is owned by and provides electric service to end-use customers at cost, and is governed by a board of directors that is elected by the membership of the entity; and any non-governmental entity owned by and which provides generation and/or transmission service to such entities.
- (d) Municipal Sector – This Sector includes any entity owned by or subject to the governmental authority of a municipality, that is

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engaged in the generation, delivery, and/or sale of electric power to end-use customers primarily within the political boundaries of the municipality; and any entity, whose members are municipalities, formed under state law for the purpose of generating or purchasing electricity for sale at wholesale to their members.

- (e) **Marketer Sector**– This Sector includes any entity that is engaged in the activity of buying and selling of wholesale electric power in the SERC Region on a physical or financial basis.
- (f) **Merchant Electricity Generator Sector** – This Sector includes any entity that owns or operates an electricity generating facility or provides balancing authority services for such entities. This includes, but is not limited to, small power producers and all other non-utility producers such as exempt wholesale generators who sell electricity at wholesale.
- (g) **ISO-RTO Sector** – This Sector includes any entity that operates a FERC approved ISO or RTO.

The Executive Committee’s classification of a Member Company in a particular Sector may only be changed by the Executive Committee.

2.5 **Transfer of Membership.** A Member Company may not give or otherwise transfer its membership, except to a successor that becomes a Member Company in accordance with the terms and conditions of these Bylaws, and provided that the successor continues to meet its predecessor’s obligations.

2.6 **Powers.** Notwithstanding any other provisions of these Bylaws, except for the appointment of Directors as provided in Section 4.2 below, Member Companies shall be non-voting members and shall have no power or authority or right to vote with respect to the actions of the Corporation, specifically including, but not limited to, the dissolution or merger of the Corporation.

ARTICLE III - PURPOSES

3.1 **General Purposes.** The purpose of the Corporation is to promote effective and efficient administration of Bulk Power System reliability in the SERC Region, as defined in Section 3.2. In pursuit of this goal, the Corporation shall:

- (a) enter into a Delegation Agreement to serve as a Regional Entity pursuant to 16 U.S.C. § 824o or the corresponding provisions of any subsequent U.S. Code revisions;

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- (b) promote the development of reliability and adequacy arrangements among the systems in the SERC Region;
- (c) participate in the establishment of Reliability Standards;
- (d) participate in the measurement of performance relative to these Reliability Standards;
- (e) promote conformance to and compliance with these Reliability Standards;
- (f) develop and exchange information with respect to planning and operating matters relating to the reliability and adequacy of the Bulk Power System;
- (g) review as necessary activities in the SERC Region on reliability and adequacy in order to meet Reliability Standards;
- (h) provide a mechanism to resolve disputes on reliability issues in a manner that meets the needs of the parties and the SERC Region; and
- (i) provide information with respect to matters considered by the Corporation, where appropriate, to the Federal Energy Regulatory Commission ("FERC") and to other federal and state agencies concerned with reliability and adequacy.

3.2 **Geographic Area.** The Corporation accomplishes its purposes in a geographic area (the "SERC Region") that is defined in Exhibit A of the Amended and Restated Delegation Agreement Between North American Electric Reliability Corporation and SERC Reliability Corporation.

3.3 **Other Statutory Functions.** The Corporation may also perform statutory functions outside of the SERC Region, on behalf of NERC or other Regional Entities. The Corporation may undertake such activities pursuant to a contract that is approved by the Executive Committee.

ARTICLE IV - BOARD OF DIRECTORS

4.1 **General Powers.** The affairs of the Corporation shall be managed by its Board of Directors except as otherwise provided in these Bylaws.

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4.2 **Composition and Eligibility.** The Board of Directors shall be comprised of no fewer than three (3) Directors.

Each Director shall be the principal officer or other authorized employee from a Member Company or a company that controls, is controlled by, or is under common control with such Member Company (an “affiliated entity”). Each Member Company, together with any affiliated entities, may appoint one (1) Director to the Board of Directors. For clarification purposes only, each Member Company and all of such Member Company’s affiliated entities (including any affiliated entities which may be a separate Member Company) shall have the right to appoint only one (1) Director to serve on behalf of such Member Company and all of such Member Company’s affiliated entities. Each Director shall serve until otherwise replaced by the applicable Member Company, together with any affiliated entities. Each Member Company, together with any affiliated entities, may designate one (1) alternate Director, who shall be a principal officer or other authorized employee from the Director’s Member Company or an affiliated entity, to serve in the place of the Member Company’s Director at any meeting of the Board of Directors (an “Alternate Director”). Directors may not otherwise use proxy votes. Any vacancy occurring among the Directors or Alternate Directors shall be filled by the applicable Member Company, together with any affiliated entities.

4.3 **Customer Advisors; Board Advisors; and Other Participants.** The Board of Directors may, but shall not be required to, appoint one or more Customer Advisors to serve the Corporation. Each Customer Advisor shall be a person in the SERC Region who is (i) employed by an entity that receives service at retail and does not otherwise sell, purchase, or transmit power over the Bulk Power System or own, operate or maintain, control or operate facilities or systems that are part of the Bulk Power System; (ii) a state public utility commission representative; or (iii) any other customer advocate. The term of the Customer Advisor(s) shall be for a two (2) year period. The role of the Customer Advisor(s) is purely advisory and the Customer Advisor(s) shall have no authority whatsoever to bind the Corporation in any way.

The Board of Directors may, but shall not be required to, appoint one but no more than five Board Advisor(s) to serve the Corporation, the Board of Directors, the Executive Committee and the Officers of the Corporation. The Board Advisor(s) shall be either former Directors of the Corporation or former NERC Trustees. Appointments shall be made by the Board of Directors and those appointed shall serve for a term of one (1) year with no limits on eligibility for reappointment. The purpose of the Board Advisor(s) shall be to advise the Board of Directors, Executive Committee and Officers of the Corporation, as directed from time to time by the Board of Directors or the Executive Committee. The role of the Board Advisor(s) is purely advisory and the Board Advisor(s) shall have no authority whatsoever to bind the Corporation in any way.

The Chair of FERC and the chair or president of any State Utility Commission in a state in which electric service is provided by a Member Company of the Corporation shall be invited to designate an observer to attend meetings of the Board.

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4.4 **Regular Meetings of the Board.** Unless otherwise determined by the Chair, a regular meeting of the Board of Directors shall be held without other notice than these Bylaws on the fourth Wednesday in the months of April and October in each year. Notwithstanding the foregoing, the Chair may elect to hold a regular semi-annual meeting of the Board of Directors on another date provided that the Board receives at least ten (10) days advance notice. If the day fixed for the meeting shall be a legal holiday in the State of North Carolina, the meeting shall be held on the next succeeding business day. The Board of Directors may designate any place as the place of meeting for any meeting. The Board of Directors may provide by resolution the time and place for the holding of additional regular meetings of the Board without other notice than the resolution. Directors or any committee designated by the Board of Directors may participate in such Board or committee meetings by means of a telephone conference, webcast or any other communication by means of which all persons participating in the meeting can hear each other at the same time, and participation by such means shall constitute presence in person at such meeting.

4.5 **Special Meetings of the Board.** Special meetings of the Board of Directors may be called at the request of the Chair, or by Directors holding twenty percent (20%) or more of the Individual Votes. The Chair may fix any place as the place for holding any special meeting of the Board.

4.6 **Notice of Special Meetings.** Notice of any special meeting of the Board of Directors shall be given at least two (2) days prior to the special meeting by written notice delivered personally, or sent by mail or electronic mail to each Director at the address as shown by the records of the Corporation. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail in a sealed envelope so addressed, with postage prepaid. If sent by electronic mail, such notice shall be deemed to be delivered when sent via electronic mail. Any Director may waive notice of any meeting. The attendance of a Director at any meeting shall constitute a waiver of notice of such meeting, except where a Director attends a meeting for the express purpose of objecting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any special meeting of the Board need be specified in the notice or waiver of notice of such meeting, unless specifically required by law or by these Bylaws.

4.7 **Election of Board Officers and Executive Committee.** Biennially, at the April meeting, the Board of Directors shall elect Board Officers from among the Directors for the positions of Chair, Vice Chair, and Secretary-Treasurer, each for a term of two (2) years beginning on July 1st after the election. No Director may serve in more than one (1) Board Officer position at the same time. The Chair shall conduct and preside at all meetings, be responsible for the preparation of the agenda, and carry out all other duties assigned by the Board of Directors. In the Chair's absence, the Vice Chair shall serve as acting Chair and shall preside at all meetings, be responsible for the preparation of the agenda, and carry out all other duties assigned by the Board of Directors. In the event that a Board Officer cannot complete his or her term, the Board of Directors may hold a

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special election to elect a replacement Board Officer for the remainder of the unexpired term.

~~At the same time~~ Initially, at the first April Board meeting following the integration of FRCC into SERC, the Board shall approve two groups (Group 1 and Group 2) of representatives to the Executive Committee which shall be nominated by the Sectors. Group 1 shall serve an initial three (3) year term and then for two (2) year terms thereafter, with terms beginning on July 1 after the approval; Group 2 shall serve an initial two (2) year term and then for two (2) year terms thereafter, with terms beginning on July 1 after the approval in alternating years from Group 1 terms. The initial allocation of Executive Committee representatives to Group 1 and Group 2 shall be recommended by the Nominating Committee and approved by the Chair, or in the absence of the Chair, by the Vice Chair. to serve for a period of two (2) years beginning July 1st, after the approval. Each Sector may also elect alternates to the Executive Committee, which shall be elected on the same schedule as their representatives and, if a Sector has more than one (1) representative on the Executive Committee, such Sector shall designate the priority of succession by such alternates.

4.8 **Agenda.** As far in advance of each regular and special meeting as practical, an agenda shall be distributed to Directors and other participants.

4.9 **Compensation.** Directors shall not receive any compensation from the Corporation for their services to the Corporation.

4.10 **Duties.** The Board of Directors shall have the exclusive responsibility to:

- (a) Authorize distributions;
- (b) Recommend to members or approve dissolution, merger or the sale, pledge or transfer of substantially all of the Corporation's assets;
- (c) Fill vacancies on any of the Board's committees;
- (d) Adopt, amend, or repeal the Articles of Incorporation or Bylaws;
- (e) Form or dissolve committees of the Board as it deems necessary to carry out the business of the Corporation; and
- (f) Resolve any disputes regarding the Member Companies and the Corporation, if those issues cannot be resolved by the standing committees or subcommittees of the Corporation and are not otherwise subject to NERC's dispute provisions for non-compliance with Reliability Standards.

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4.11 **Voting.** The intent of Sections 4.12 and 4.14 is to ensure that no two Sectors should be able to control any decision and that a single Sector should not be able to veto any matter, respectively. In the event that either of the foregoing shall nevertheless occur, the Board shall promptly revise the provisions of these Bylaws so that no two Sectors shall be able to control any decision and no single Sector shall be able to veto any matter.

4.12 **Voting Definitions.**

- (a) "Adjusted Weighted Vote" shall mean the number of votes of each Director determined in the manner set forth in Section 4.13 hereof.
- (b) "Simple Majority" shall require the presence of a quorum and the (i) concurrence of Directors whose combined Individual Votes are greater than fifty percent (50%) of the total Individual Votes of all Directors present at the meeting and entitled to vote on the issue, (ii) concurrence of Directors whose combined Adjusted Weighted Votes are greater than fifty percent (50%) of the total Adjusted Weighted Vote of all Directors at the meeting and entitled to vote on the issue, and (iii) for at least one of the Individual Vote test or the Adjusted Weighted Vote test, on an individual Sector basis, the positive vote shall outweigh the negative vote for at least three Sectors.
- (c) "Supermajority" shall require the presence of a quorum and the (i) concurrence of Directors whose combined Individual Votes equal or exceed two-thirds (2/3) of the total Individual Votes of all Directors present at the meeting and entitled to vote on the issue, (ii) concurrence of Directors whose combined Adjusted Weighted Votes are greater than two-thirds (2/3) of the total Adjusted Weighted Vote of all Directors present at the meeting and entitled to vote on the issue, and (iii) for at least one of the Individual Vote test or the Adjusted Weighted Vote test, on an individual Sector basis, the positive vote shall outweigh the negative vote for at least three Sectors.
- (d) "Individual Vote" shall mean a single vote accorded to each Director.
- (e) "Given Year" shall mean the applicable fiscal year for which the Adjusted Weighted Votes are calculated.
- (f) "Reporting Year" shall mean the fiscal year immediately preceding the Given Year.
- (g) "Previous Year" shall mean the fiscal year immediately preceding the Reporting Year.

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4.13 **Determination of Adjusted Weighted Vote.** The Directors' Adjusted Weighted Votes for a Given Year shall be determined by the following formula:

$$V = 10(1/N) + 30(B/C) + 30(D/E) + 30(F/G)$$

V = % of Adjusted Weighted Vote

N = total number of Member Companies

B = Member Company's Previous Year internal peak demand

C = total of factor B for all Member Companies

D = Member Company's owned generating capacity as of January 1 of the Reporting Year

E = total of factor D for all Member Companies

F = Member Company's sum of circuit miles of transmission times the respective operating voltage for facilities of 69 kV and above as of December 31 of the Previous Year

G = total of factor F for all Member Companies

4.14 **Voting; Manner of Acting; Voting Rights; Quorum.**

- (a) Except as otherwise provided in these Bylaws, all actions by the Board of Directors require approval by a Simple Majority vote.
- (b) A motion which requires a vote shall be deemed to have passed by the requisite vote if it passes either:
 - (i) the Individual Vote test; or
 - (ii) the Adjusted Weighted Vote test;

and, for purposes of the failed test (any test that is not satisfied), on an individual Sector basis, the positive votes outweigh the negative votes in every Sector but one.

- (c) Directors holding two-thirds (2/3) of the Individual Votes shall constitute a quorum for action by the Board. If Directors holding less than two-thirds (2/3) of the Individual Votes are present at the meeting, a majority of the Directors present may adjourn the meeting from time to time without further notice.

4.15 **Action without a meeting.** Any action required by law to be taken at a meeting of Directors, or any action which may be taken at a meeting of Directors, may be taken without a meeting if all of the Directors consent in writing to the action so taken. The action shall be evidenced by one or more written consents describing the action taken, signed by each Director, and included in the minutes or filed with the corporate records reflecting the action taken. Action taken under this section is effective when the last Director signs the consent unless the consent specifies a different effective date. A consent signed under this section has the effect of a meeting vote. A Director's consent to action taken without a meeting may be in electronic form and delivered by electronic means.

ARTICLE V - CORPORATE OFFICERS

5.1 **Corporate Officers.** The Board of Directors shall appoint a President/Chief Executive Officer, one or more Vice Presidents, a Secretary, and a Treasurer of the Corporation. Two (2) or more of such offices may be held by the same person, except for the offices of President/Chief Executive Officer and Secretary. The Board of Directors may appoint such other officers and assistant officers as it deems necessary. The Board Officers shall determine the compensation and benefits for all Corporate Officers.

5.2 **President/Chief Executive Officer.** The President shall be the Chief Executive Officer of the Corporation and shall manage the operations of the Corporation to the end that its purposes shall be accomplished. The President shall:

- (a) Promote the mission of the Corporation and implement the goals and objectives of the Corporation;
- (b) Report to the Board of Directors and carry out the policies and procedures set by the Board of Directors;
- (c) Represent SERC at all NERC Stakeholder and Board of Trustees, meetings, as appropriate;
- (d) Attend all Board of Directors meetings and serve as ex-officio non-voting member of (i) the Board of Directors, (ii) the Executive Committee, and (iii) all other Board committees;
- (e) Coordinate subregional activities and interregional affairs, to include data collection;

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- (f) Oversee the business affairs of the Corporation, including the Corporation staff, and enact such policies and procedures for staff as are needed to implement the goals and objectives of the Corporation; and
- (g) Provide other assistance to the Corporation and NERC, as appropriate.

5.3 **Vice President.** The Corporation may have one or more Vice Presidents. A Vice President of the Corporation shall perform such duties and exercise such powers as may be assigned to him or her from time to time by the Board of Directors, the Executive Committee, or the President. In the absence of the President, or in the case of the President's inability to act (because of death, resignation, removal, disqualification, or otherwise), a Vice President of the Corporation may be appointed to perform the duties and exercise the powers of the President, subject to the control of the Board of Directors and the Executive Committee.

5.4 **Secretary.** The Secretary of the Corporation shall be custodian of and shall maintain the corporate books, records and the minutes of the meetings of the Board of Directors and other Corporation-related meetings and shall assure that all required notices are duly given in accordance with these Bylaws, the Articles of Incorporation or as otherwise may be required by law. The Secretary of the Corporation shall also be the custodian of the seal of the Corporation. The Secretary of the Corporation shall, in general, perform all duties incident to the office of Secretary of the Corporation and such other duties as may, from time to time, be assigned to him or her by the Board of Directors, the Executive Committee, or the President.

5.5 **Treasurer.** The Treasurer of the Corporation shall have charge and custody of, and be responsible for, all funds and securities of the Corporation and deposit all such funds in the name of the Corporation in such banks, trust companies, or other depositories as shall be selected in accordance with the provisions of these Bylaws. The Treasurer of the Corporation shall, in general, perform all of the duties incident to the office of Treasurer of the Corporation and such other duties as from time to time may be assigned to him or her by the Board of Directors, the Executive Committee, or the President.

ARTICLE VI - EXECUTIVE COMMITTEE

6.1 **Executive Committee Representatives.** The Executive Committee shall be comprised of ~~twelve~~ fifteen (15) Sector representatives from the Board of Directors, consisting of:

Approved by the SERC Board of Directors on April 22, 2015 October 24, 2018
Approved the NERC Board of Trustees on
Approved by the Federal Energy Regulatory Commission on

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- (a) The Investor-Owned Utility Sector shall have ~~three-four~~ (34) representatives;
- (b) The Federal/State Sector shall have two (2) representatives;
- (c) The Cooperative Sector shall have ~~two-three~~ (23) representatives;
- (d) The Municipal Sector shall have ~~two-three~~ (23) representatives;
- (e) The Marketer Sector shall have one (1) representative;
- (f) The Merchant Electricity Generator Sector shall have one (1) representative; and
- (g) The ISO-RTO Sector shall have one (1) representative.

It is the desire of the Board of Directors that the Cooperative and Municipal sectors have representation from both transmission dependent and transmission owning Members.

Each Sector shall be responsible for nominating their representative(s) and alternates from among the Directors. The Chair of the Board shall serve as Chair of the Executive Committee and shall conduct all meetings and shall be responsible for the preparation of the agenda. In the event that a representative on the Executive Committee is unable to complete a term, the Sector's alternate shall replace such representative.

6.2 **Ex Officio Representatives.** The Chair, Vice Chair, and Secretary-Treasurer of the Board of Directors shall also be ex officio representatives on the Executive Committee, but shall not have voting rights unless such Board Officer is also elected by a Sector to the Executive Committee pursuant to Section 6.1 above.

6.3 **Authority of Executive Committee.** Except as limited by Section 55A-8-25 of the North Carolina Nonprofit Corporation Act and Section 4.10 of these Bylaws, the Executive Committee is empowered to make all such decisions and take such actions as are deemed to be necessary for the operation of the Corporation.

6.4 **Action.** Each voting representative on the Executive Committee shall have one vote. The presence of three-quarters (3/4) of the voting representatives on the Executive Committee shall constitute a quorum. The positive vote of two-thirds (2/3) of Executive Committee voting representatives present and voting is necessary to pass a particular action.

ARTICLE VII - OTHER COMMITTEES

7.1 **Designation by Board.** The Board of Directors, by resolution adopted by a Simple Majority vote, may designate Board committees and standing committees, as shall be necessary to address the purposes of the Corporation. Each Board committee shall have at least two Directors among its members.

7.2 **Rules for Governance.** Each committee shall adopt rules for its own governance that are not inconsistent with these Bylaws, rules adopted by the Board of Directors, applicable NERC or FERC rules or regulations, or applicable state or federal laws. Each committee shall maintain its rules for governance in a written scope document that is approved by the Board of Directors.

7.3 **Ad-Hoc Support Committees.** The Board or its committees may, from time to time, appoint ad-hoc committees to research and/or advise it on compliance or technical issues or matters, among other things. Such ad-hoc committees may be formed on an as-needed basis and may vary in makeup depending on the needs of the Board or its committees.

ARTICLE VIII - MISCELLANEOUS

8.1 **Conflicts of Interest.** All Directors, Alternate Directors, Customer Advisors, Board Advisors, and Board committee representatives shall comply with the Corporation's Standards of Conduct policy that prohibits conflicts of interest, as such conflicts could cast doubt on the ability of such persons to act with total objectivity with regard to the overall interests of the Corporation.

8.2 **Contracts.** The Board of Directors may authorize any officer or agent of the Corporation, in addition to the officers so authorized by these Bylaws, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

8.3 **Checks, Drafts, etc.** All checks, drafts, or orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation, shall be signed by an authorized officer or agent of the Corporation and in such manner as shall from time to time be determined by resolution of the Executive Committee. In the absence of such determination by the Executive Committee, such instruments shall be signed by the Board's Secretary-Treasurer, the Corporation's President, or the Corporation's Finance Director, as stipulated by the Executive Committee. The Corporation's Finance Director may arrange audits of financial records, sign appropriate documents, and perform such duties normally performed by the Board's Secretary-Treasurer, except duties assigned to the Corporation's President.

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8.4 **Deposits.** All funds of the Corporation shall be deposited from time to time to the credit of the Corporation in such banks, trust companies, or other depositories as the Corporation's President may select.

8.5 **Books and Records.** The Corporation shall keep correct and complete books and records of account and shall also keep minutes of the proceedings of the Board of Directors and committees having any of the authority of the Board of Directors, and shall keep at its registered or principal office a record giving the names and addresses of the Directors. All books and records of the Corporation may be inspected by any Director, or agent or attorney representing any Director, for any proper purpose at any reasonable time.

8.6 **Seal.** The corporate seal shall be in circular form and shall have inscribed thereon the name of the Corporation, the words "Corporate Seal", and such other word or words, if any, as may be determined by the Board of Directors to be inscribed thereon.

8.7 **Fiscal Year.** The fiscal year of the Corporation shall begin on the first day of January and end on the last day of December in each year.

ARTICLE IX - EXPENSES

9.1 **Allocation of Specific Expenses.** The expenses of Directors and Board Officers shall be borne by that person's regular employer.

9.2 **Statutory Functions.** The Corporation anticipates that as a general rule all of its expenses shall be incurred in the furtherance of statutory activities pursuant to Section 215 of the Federal Power Act, and that all such expenses shall be funded by NERC, subject to FERC approval.

9.3 **Non-Statutory Functions.** Notwithstanding Section 9.2, the Board of Directors may from time to time authorize the Corporation to participate in non-statutory activities (i.e., activities not described in Section 215 of the Federal Power Act). In the event that the Corporation proposes to engage in non-statutory activities, such activities shall be identified in the Corporation's annual business plan that is submitted to NERC and, if approved by NERC, shall be submitted to FERC for approval in advance of engaging in such non-statutory activities. The expenses incurred by the Corporation for any such approved non-statutory activities shall be allocated by the Board of Directors to the beneficiaries of such activities on a basis proposed in the business plan submitted for NERC and FERC approval.

ARTICLE X - DISPUTE RESOLUTION PROCESS

10.1 **Dispute Resolution.** All disputes regarding non-compliance with Reliability Standards shall be handled in accordance with the NERC Rules of Procedure. The organizational units of the Corporation shall deal with all other disputes within the framework of their respective organizations. For such other disputes, Member Companies of the Corporation are encouraged to utilize the appropriate Dispute Resolution Process within the Corporation prior to seeking resolution at NERC, FERC, or with legal counsel.

ARTICLE XI - DISSOLUTION

11.1 **Dissolution.** The Corporation may be voluntarily dissolved upon unanimous consent of the Board of Directors, and in accordance with Section 55A-14-02 of the North Carolina Nonprofit Corporation Act, as amended from time to time.

11.2 **Distribution of Assets.** Upon dissolution of the Corporation as provided in Section 11.1, the residual assets, after payment of all just obligations, shall be distributed exclusively to organizations which are exempt from federal income tax under Section 501(c)(6) of the Internal Revenue Code of 1986, or corresponding provisions of any subsequent federal tax laws, as the Board of Directors shall determine.

ARTICLE XII - WAIVER OF NOTICE

12.1 **Waiver.** Whenever any notice is required to be given under the provisions of the North Carolina Nonprofit Corporation Act or under the provisions of the articles of incorporation or the Bylaws of the Corporation, a waiver thereof in writing signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice.

ARTICLE XIII - INDEMNIFICATION

13.1 **Indemnification of Directors, Alternate Directors, Customer Advisors, Board Advisors, Committee Members, Officers, Employees and Agents.** Every person who is, or has served as, a Director, Alternate Director, Customer Advisor, Board Advisor, committee member, Officer, employee, or agent of the Corporation shall be

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indemnified by the Corporation in the manner and to the extent authorized by the North Carolina Nonprofit Corporation Act. The foregoing rights of indemnification shall be without prejudice to any other rights to which any such Director, Alternate Director, Customer Advisor, Board Advisor, committee member, Officer, employee, or agent may be entitled as a matter of law.

ARTICLE XIV - AMENDMENT OF THE BYLAWS AND ARTICLES OF INCORPORATION

14.1 **Amendment of the Bylaws and Articles of Incorporation.** After a request by twenty percent (20%) of the Board of Directors or an affirmative vote of the Executive Committee, a proposal to amend the Bylaws or the Articles of Incorporation shall be put before the Board of Directors at any regular or special meeting for a vote. Copies of the proposed amendments shall be distributed to the Board of Directors at least thirty (30) days before the meeting at which they are to be considered. An amendment to the Bylaws or the Articles of Incorporation shall be adopted after being approved by a Supermajority vote of the Board of Directors, provided that a quorum is present.

Proposed Amendments to the Bylaws of Texas RE

Action

Approve proposed amendments to the Bylaws of Texas RE and file with the Applicable Governmental Authority for approval. The amendments to the Bylaws do not affect Texas RE's qualifications or ability to function as a Regional Entity under its Regional Delegation Agreement with NERC.

Background

Texas RE is proposing several amendments to its Bylaws following a comprehensive review to examine their consistency with the Texas Business Organizations Code ("BOC"). The BOC is state law that applies to all corporations, including non-profit corporations, organized in Texas. The proposed amendments also update the Bylaws to reflect Texas RE's current business practices and to clarify ambiguous language. The changes were approved by the Texas RE Board of Directors on December 5, 2018 and by the Texas RE membership on December 17, 2018. Highlights of the proposed Bylaw amendments are provided herein.

Justification for Proposed Amendments

- Article IV – Board of Directors
 - *Section 1 – Board of Directors*

Two seats on the Board of Directors are held by *ex officio*, non-voting Directors who serve on the Texas RE Board by virtue of their gubernatorial-appointed positions at the Public Utility Commission of Texas ("PUCT") and at the Office of Public Utility Counsel ("OPUC").

Under the current Bylaws, one *ex officio* Directorship can be held either by OPUC's Texas Public Counsel or any other employee of the OPUC designated by the Texas Public Counsel. The proposed Bylaw amendment clarifies that this seat may only be held by the Texas Public Counsel.

- *Section 2 – Independent Directors – Term*

The proposed amendment clarifies the term that each type of Director can serve.

Under the current Bylaws, Affiliated Directors, who are Chair and Vice Chair of the Member Representatives Committee, serve a two year term. Since Chair and Vice Chair terms often span slightly more than two years due to the timing of elections, the proposed amendment clarifies that an Affiliated Director term will now coincide with the Chair and Vice Chair of the Member Representatives Committee term.

The proposed amendment provides that *ex officio* Directors – specifically the PUCT Chair (or the Chair's designee) and the Texas Public Counsel – may only sit on the Board for the duration that

they serve in their capacity as PUCT Chair (or Chair’s designee) or Texas Public Counsel, not indefinitely.

- *Section 2 – Independent Directors – Alternates and Proxies*

The proposed amendment clarifies that alternates of *ex officio* Directors may only participate in public meetings.

The current Bylaws do not address whether the Chief Executive Officer (“CEO”) of Texas RE can appoint a proxy. The proposed amendment allows the CEO to appoint an Independent Director to serve as a proxy.

- *Section 5 – Vacancies and Removal*

The proposed amendment clarifies that a vacancy for an *ex officio* Director can only be filled by the appointment of a new PUCT Chair (or Chair’s designee) or a new Texas Public Counsel. Existing language was deleted as unnecessary because only the Texas Governor has the authority to appoint a PUCT Commissioner or Public Counsel.

Language regarding removal of *ex officio* Directors is eliminated because that is addressed by Section 5(a)(3). The proposed amendment clarifies that any Director facing removal cannot vote on his or her own removal.

Language prohibiting the right to assign, sell, pledge or transfer the right to elect Directors is removed because it is inconsistent with the concept of proxies.

- Article V – Meetings of Members of the Corporation

- *Section 1 – Annual and other Meetings of Members*

The proposed amendment aligns language in the Bylaws with current practice to keep membership votes open for at least ten (10) days, unless good cause exists to hold a shorter election period.

Language regarding a Member’s ability to “immediately elect” to become a Member in a Sector for which it qualifies if it stops qualifying to be in another Sector is removed because it is inconsistent with Article III, Section 5 – Participation. Article III, Section 5 provides that a “Member . . . must give notice to the Corporate Secretary when it elects or is required to change Sectors.”

- *Section 3 – Waivers of Notice of Meetings of Members and Member Meeting Adjournments*

Notice of a meeting to members is not required if a member waives notice in writing. The proposed amendment clarifies that members will no longer be able to waive notice by electronic means, in person, or by proxy. This change is consistent with written waiver requirements under the BOC. Similar amendments are made for meetings of the Board of Directors as well as the Member Representatives Committee.

- Article VI – Meetings of the Board of Directors
 - *Section 3 – Quorum and Voting Requirements for Meetings of the Board*

Consistent with the BOC, the proposed amendment eliminates the ability to establish a quorum for meetings of the Board by proxy. It also clarifies that the “in-person” requirement for quorum includes “any communications system by which all persons participating in the meeting are able to hear each other.”

- *Section 5 – Waivers of Notice of Board Meetings and Board Meeting*

When a meeting of the Board is adjourned to another time or place, the proposed amendment clarifies that it is not necessary to give notice of the adjourned meeting so long as (1) the time and place of the adjourned meeting is announced at the original meeting and (2) if at the adjourned meeting, only the business scheduled for the original meeting is discussed.

Similar changes are made for adjournment of meetings of the Member Representatives Committee.

- Article VIII – Member Representatives Committee
 - *Section 3 – Election of Representatives of the Member Representatives Committee*

The proposed amendment makes it mandatory for the Board to approve alternative procedures to nominate and elect representatives of the Member Representatives Committee.

- Article IX – Other Committees and Subcommittees

The proposed amendment clarifies that the Board has the authority to create and to determine the scope of all committees and subcommittees of Texas RE.

- Article X – Budgets and Funding
 - *Section 1 – Compensation of the Board and Member Representatives Committee*

The Director Compensation Committee consists of two (2) Independent Directors that are not currently serving as Board Chair and Vice Chair, two (2) Affiliated Directors, and the CEO. The proposed amendment allows the Board Vice Chair to serve on the Director Compensation Committee if there is an Independent Director vacancy. In this event, he or she may only serve on the committee until the vacancy is filled.

- Article XI – Amendments to the Bylaws
 - *Section 1 – Amendments to the Bylaws*

The proposed amendment clarifies that any proposed revisions should be sent to the Corporate Secretary instead of to the CEO. The proposed amendment also updates the process for amending the Bylaws to reflect the current practice at Texas RE. After the Secretary receives proposed amendments, Bylaw revisions may either go directly to the Board or to a Board-designated standing committee authorized to make a recommendation to the Board.

**AMENDED AND RESTATED BYLAWS
OF
TEXAS RELIABILITY ENTITY, INC.**

(A Texas Non-Profit Corporation)

Approved by Membership – ~~November 16, 2016 and December 23, 2016~~ December 17, 2018

Approved by Federal Energy Regulatory Commission – ~~May 30, 2017~~ _____

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ARTICLE I. DEFINITIONS

Section 1. Definitions. The capitalized terms used in these Bylaws of Texas Reliability Entity, Inc. (the “Corporation” or “Texas RE”), shall have the meanings set forth below, or if not set forth below, shall have the meanings given them in the NERC Rules of Procedure.

(a) “Affiliate” means any entity controlling, controlled by or under common control with the entity under consideration, and includes any entity (i.e., any commercial enterprise) in any of the following relationships: (i) an entity that directly or indirectly owns or holds at least five percent of the voting securities of another entity, (ii) an entity in a chain of successive ownership of at least five percent of the voting securities of another entity, (iii) an entity which shares a common parent with or is under common influence or control with another entity or (iv) an entity that actually exercises substantial influence or control over the policies and actions of another entity. Evidence of influence or control shall include the possession, directly or indirectly, of the power to direct or cause the direction of the management and/or policies and procedures of another, whether that power is established through ownership or voting of at least five percent of the voting securities or by any other direct or indirect means. In cases where the level of control or influence is disputed, the Board shall have discretion to determine whether or not the entities are Affiliates of one another. Membership in Texas RE shall not create an affiliation with Texas RE.

(b) “Board” means the Board of Directors of the Corporation.

(c) “Bulk Power System” or “BPS” means facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) and facilities generating electric energy as needed to maintain transmission system reliability, but does not include facilities used in the local distribution of electricity.

(d) “Delegated Authority” means the authority delegated by NERC to the Corporation to propose and enforce NERC Reliability Standards and perform other reliability-related activities in the ERCOT region under the Delegation Agreement executed by NERC and the Corporation and approved by the Federal Energy Regulatory Commission, pursuant to Section 215 of the Federal Power Act (16 U.S.C. §824o).

(e) “Delegation Agreement” means the agreement between the Corporation and NERC and approved by FERC, which describes the Delegated Authority and may be amended from time to time.

(f) “Electric Reliability Organization” or “ERO” means the organization that is certified by FERC pursuant to Section 39.3 of its regulations, and has received recognition by appropriate regulatory authorities in Canada and Mexico, as applicable, to establish and enforce Reliability Standards for the Bulk Power Systems of the respective countries and that has entered into a delegation agreement with the Corporation pursuant to which the Electric Reliability Organization delegates enforcement authority for Reliability Standards for the Bulk Power System in the ERCOT region. NERC was certified as the ERO on July 20, 2006.

(g) “ERCOT region” means the geographic area and associated transmission and distribution facilities that are not synchronously interconnected with electric utilities operating outside the jurisdiction of the Public Utility Commission of Texas.

(h) “FERC” means the Federal Energy Regulatory Commission.

(i) "Independent Director" means a person who is not (a) an officer or employee of the Corporation; (b) a NERC Registered Entity or Member or an officer, director, or employee of a Member of the Corporation; or (c) an officer, director, or employee of any company or entity that would reasonably be perceived as having a direct financial interest in the outcome of Board decisions or having a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a Director, as more specifically described in Article IV of these Bylaws.

(j) "Member" means a member of the Corporation pursuant to Article III of these Bylaws.

(k) "NERC" means North American Electric Reliability Corporation, the entity certified by FERC as the ERO on July 20, 2006.

(l) "NERC Rules of Procedure" means the Rules of Procedure that are adopted by NERC and approved by FERC.

(m) "PUCT" means the Public Utility Commission of Texas.

(n) "OPUC" means the Texas Office of Public Utility Counsel.

(o) "Originally Elected Independent Director" means a Director approved by the membership on June 2, 2010, in the first election of Texas Reliability Entity, Inc. Independent Directors.

(p) "Regional Entity" means an entity with a Delegation Agreement with NERC, as ERO, ~~including the following organizations, in addition to Texas Reliability Entity: Florida Reliability Coordinating Council (FRCC), Midwest Reliability Organization (MRO), Northeast Power Coordinating Council (NPCC), ReliabilityFirst Corporation (RF), Southeastern Electric Reliability Council (SERC), Southwest Power Pool (SPP), and Western Electricity Coordinating Council (WECC).~~

(q) "Regional Reliability Standard" means a standard or variance for the ERCOT region that is proposed and approved in accordance with the Texas RE Standards Development Process and either, (i) sets more stringent reliability requirements than a national Reliability Standard, or (ii) covers matters not covered by a national Reliability Standard.

(r) "Registered Entity" means an entity that is registered with NERC and listed on the NERC Compliance Registry (available at www.nerc.com).

(s) "Reliability Standard" means a requirement to provide for Reliable Operation of the Bulk -Power System, ~~which is approved by NERC and FERC, pursuant to Section 215 of the Federal Power Act and~~ and all amendments thereto. This term includes requirements for the operation of existing Bulk -Power System facilities, including cybersecurity protection, and the design of planned additions or modifications to such facilities to the extent necessary to provide for Reliable Operation of the Bulk Power System.

(t) "Reliable Operation" means operating the elements of the Bulk Power System within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of the Bulk Power System will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements.

(u) "Sector" means a group of Members of the Corporation that are Bulk Power System owners, operators, or users, as defined in Article III, Section 4 of these Bylaws. Each Sector shall constitute a class of Members for purposes of Chapter 22 (Nonprofit Corporations) of the Texas Business Organizations Code.

ARTICLE II. PURPOSE

Section 1. General Purpose. The purpose of the Corporation is to preserve and enhance electric reliability in the ERCOT region. In furtherance of this goal, the Corporation will:

(a) Perform Reliability Standards development, compliance monitoring, compliance enforcement, and other related activities as a Regional Entity, pursuant to 16 U.S.C. §824o, in accordance with the Corporation's Delegation Agreement with NERC;

(b) Carry out other activities as set forth in the Delegation Agreement, the NERC Rules of Procedure, or as otherwise required or requested by NERC, in support of the Delegated Authority, including but not limited to organization registration and certification, reliability assessment and performance analysis, training and education, and situational awareness and infrastructure security; and

(c) Engage in any other lawful act or activity that is not in conflict with the Corporation's duties as a Regional Entity and for which non-profit corporations may be organized under the Texas Business Organizations Code.

Section 2. Non-Profit Corporation. The Corporation is a Texas non-profit corporation.

Section 3. Geographic Area. The Corporation will perform its operations primarily within the ERCOT region.

ARTICLE III. MEMBERSHIP

Section 1. Members. The Corporation is a membership corporation. Membership in the Corporation is voluntary and is open only to any entity that is a user, owner or operator of the ERCOT region Bulk Power System, registers with the Corporation as a Member, maintains its registration in accordance with this Article III, and complies with the other conditions and obligations of membership specified in these Bylaws. All Members must qualify and be registered in one of the Sectors defined in Article III, Section 4. Membership in the Corporation is not a condition to participating in the development or consideration of proposed Regional Standards.

Section 2. Registration as a Member. Any entity that is eligible to be a Member of the Corporation in accordance with Article III, Section 1 may become a Member by completing and submitting to the Corporation a membership registration on a form prescribed by the Corporation. The Member shall designate one representative and an alternative representative with authority to receive notices, cast votes, and execute waivers and consents on behalf of the Member. The Corporate Secretary shall maintain a current roster of the Members of the Corporation including each Member's designated representative and alternative representative. All Members shall be required to renew or reaffirm their registrations annually. The Corporate

Secretary may remove any Member from the roster that has not submitted a registration renewal or reaffirmation by a date established by the Corporation.

Section 3. Obligations and Conditions of Membership.

(a) Members must agree to promote, support, and comply with Reliability Standards, and assist the Corporation in its compliance with the terms and provisions of the Corporation's Delegation Agreement with NERC. Each Member shall agree, in writing, to accept the responsibility to comply with policies of NERC and the Corporation as set forth in their respective certificates of formation, bylaws, rules of procedure, and Reliability Standards, as applicable, as from time to time adopted, approved, or amended.

(b) As an additional condition of membership in the Corporation, each Member shall be required to execute an agreement with the Corporation, in a form to be specified by the Corporation, that such entity will hold all Directors, officers, employees, and agents of the Corporation, as well as volunteers participating in good faith in the activities of the Corporation, harmless for any injury or damage caused by any act or omission of any director, officer, employee, agent, or volunteer in the course of performance of his or her duties on behalf of the Corporation, other than for willful acts of misconduct.

(c) Consistent with applicable laws and regulations, Members must share nonproprietary information at the Corporation's request as necessary for the furtherance of the Corporation's activities and consistent with NERC, PUCT, or any other applicable rules relating to confidentiality.

Section 4. Membership Sectors. Each Member shall elect to be assigned to one of the following membership Sectors:

(a) **System Coordination and Planning:** An entity that is registered with NERC as a Reliability Coordinator (RC), Balancing Authority (BA), Planning Authority (PA), or Resource Planner (RP).

(b) **Transmission and Distribution:** An entity that is registered with NERC as a Transmission Owner (TO), Transmission Planner (TP), Transmission Service Provider (TSP), Distribution Provider (DP), and/or Transmission Operator (TOP) and is not a Cooperative or Municipal Utility.

(c) **Cooperative Utility:** An entity that is (a) a corporation organized under Chapter 161 of the Texas Utilities Code or a predecessor statute to Chapter 161 and operating under that chapter; or (b) a corporation organized as an electric cooperative in a state other than Texas that has obtained a certificate of authority to conduct affairs in the State of Texas; or (c) a cooperative association organized under Chapter 251 of the Texas Business Organizations Code ~~Tex. Rev. Civ. Stat. 1396-50.01 or a predecessor to that statute and operating under that statute~~ and is registered with NERC for at least one reliability function.

(d) **Municipal Utility:** A municipally owned utility as defined in Public Utility Regulatory Act, Tex. Util. Code §11.003 and is registered with NERC for at least one reliability function.

(e) **Generation:** An entity that is registered with NERC as a Generator Owner (GO) or Generator Operator (GOP).

(f) **Load-Serving and Marketing:** An entity that secures wholesale transmission service or is engaged in the activity of buying and selling of wholesale electric power in the ERCOT region on a physical or financial basis, or qualifies under any newly defined NERC reliability function for demand response.

Section 5. Participation.

(a) There is only one level of Membership, and no company or entity may simultaneously hold more than one Membership.

(b) Members must qualify in and join a Sector.

(c) A Member that is eligible for more than one Sector may join only one Sector and it must be the most appropriate Sector for its business. Any disputes regarding appropriateness of a Member's Sector will be decided by a majority vote of the Board.

(d) A company or entity that is an Affiliate of a Member may hold a separate membership in a different Sector if the companies are separate legal entities.

(e) A Member must continue to vote in the same Sector for a minimum of the remainder of the membership year in which it becomes a Member or until it is no longer eligible to remain in such Sector, and it must give notice to the Corporate Secretary when it elects or is required to change Sectors.

(f) The Corporate Secretary may review the Sector qualification of any Member and upon a determination that a Member does not qualify for membership in a particular Sector, may require the Member to change Sectors or may terminate their membership.

(g) A Member that is no longer eligible or that is not in good standing may not vote on any matters that require membership.

Section 6. Membership Fees. There is no Membership Fee to join the Corporation.

Section 7. Term of Membership. Membership in the Corporation must be renewed or reaffirmed on an annual basis and will only be retained as long as a Member meets its respective qualifications, obligations, and conditions of membership as set forth in these Bylaws.

Section 8. Disciplinary Action. A Member or Member representative may be sanctioned, suspended, or expelled pursuant to a procedure that is fair and reasonable and is carried out in good faith. The Board will establish a procedure to sanction, suspend, or expel a Member that includes notice to the Member and exercise of appropriate due process procedures, and allows for a determination by the Board in its sole discretion that in its judgment the Member has violated its obligations and responsibilities to the Corporation.

Section 9. Resignation. Any other provision of these Bylaws notwithstanding, any Member may withdraw from participation in the activities of the Corporation at any time upon written notice to the Secretary of the Corporation, whereupon it shall cease to be a Member, and its representatives shall cease to be entitled or obligated to participate in the activities of the Board or any activities requiring membership.

Section 10. Reinstatement. A former Member, except a Member subject to Disciplinary Action under Section 8, may submit a membership application form to rejoin the Corporation as a Member. A Member disciplined under Section 8 may submit a written request for reinstatement of Membership. The request for reinstatement will be considered by the Board, and will be granted or denied within the sole discretion of the Board.

ARTICLE IV. BOARD OF DIRECTORS

Section 1. Board of Directors. The business and affairs of the Corporation shall be managed by the Board. The Board shall consist of (i) four (4) Independent Directors who are nominated and elected in accordance with the requirements and procedures specified in this Article IV (the "Independent Directors"); (ii) the Chairman of the PUCT or another PUCT Commissioner designated by the Chairman, as an *ex officio* non-voting member; (iii) Texas Public Counsel, from OPUC ~~(or another employee of OPUC designated by Texas Public Counsel)~~, as an *ex officio* non-voting member, representing the interests of residential and small commercial electricity consumers; (iv) the CEO of the Corporation as a voting member (the "Management Director"); (v) the chair of the Member Representatives Committee as a voting member; and (vi) the vice chair of the Member Representatives Committee as a voting member. The Directors who are the chair and vice chair of the Member Representatives Committee will be collectively referred to herein as "Affiliated Directors." ~~Each Director, including the Affiliated Directors and excluding the non-voting members of the Board, shall have one (1) vote on any matter brought before the Board for a vote.~~ All Directors are expected to serve the public interest and to represent the reliability concerns of the entire ERCOT region Bulk Power System.

Section 2. Independent Directors. The Independent Directors shall be elected, shall have the qualifications specified, and shall serve in the manner provided in this Section.

(a) Qualifications:

(1) Experience in one or more of these fields: senior corporate leadership; professional disciplines of finance, accounting, engineering, bulk power systems, or law; regulation of utilities; and/or risk management.

(2) Independence of any NERC Registered Entity. Requirements of independence include but are not limited to the following:

(i) Independent Directors and the spouse, mother, father, sibling, or dependent, and any spouse of mother, father, or sibling and including any step and adoptive parents, siblings or children, and household members of Independent Directors and their spouses shall not have current or recent status (within the last two years) as a director, officer, or employee of an ERCOT region NERC Registered Entity.

(ii) Independent Directors and immediate family (any spouse or dependent) and household members of Independent Directors shall not have current status as a director, officer, or employee of a non-ERCOT region NERC Registered Entity.

(iii) Independent Directors and immediate family and household members of Independent Directors shall not have direct business relationships, other than retail customer relationships, with any NERC Registered Entity.

(iv) Independent Directors and immediate family and household members of Independent Directors shall not own stocks or bonds of NERC Registered Entities or their affiliates. To the extent that an Independent Director or his or her spouse, dependent child, or any other household member owns stocks or bonds of NERC Registered Entities, these must be divested or placed in a blind trust prior to being seated on the Board. Ownership in broadly diversified mutual funds or similar funds, which may include stocks or bonds of NERC Registered Entities or their affiliates, is not prohibited.

(v) Independent Directors shall not have any relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a Board member, including the Delegated Authority.

(vi) Other criteria as approved by the Board.

(b) Term. The term for Independent Directors shall be staggered three year terms. An Independent Director may be elected for up to three consecutive terms. For the Originally Elected Independent Directors, two positions will have three-year terms, one position will have a two-year term, and one position will have a one-year term, and these terms shall not be counted for purposes of term limits. The term for the Affiliated Directors ~~who are chair and vice chair of the Member Representatives Committee shall be two years~~ coincide with their Affiliated Directors' terms as chair and vice chair of the Member Representatives Committee. , and t The terms of the *ex officio* Directors ~~will not expire~~ terminate when the individual ceases to be Chairman of the PUCT (or the PUCT Chairman designates another Commissioner) or ceases to be Texas Public Counsel. If an Independent Director is elected to fill an unexpired term in the event of a vacancy, that term shall not be counted for purposes of term limits.

(c) Selection.

(1) The Board shall appoint, on an annual basis, or more frequently if needed in the event of a special election pursuant to this subsection, a nominating committee (the "Nominating Committee") to recommend candidates (i) to succeed the Independent Directors whose terms expire during the current year; (ii) to serve the remainder of the term of any Independent Director who ceased to serve as a Director subsequent to the last annual election of Directors; (iii) to serve as the Chair and Vice Chair on an annual basis; and (iv) to serve as CEO in the event of a vacancy. The Nominating Committee shall consist of two (2) Independent Directors whose terms do not expire during the current year and are not seeking re-election and one (1) Affiliated Director. The PUCT Chairman (or the PUCT Commissioner designated by the Chairman) may choose to participate on the Nominating Committee. The Board Chair shall appoint the Chair of the Nominating Committee. The Nominating Committee may retain an executive search firm to locate and present candidates to serve as Independent Directors with the required qualifications, as set forth in Article IV, Section 2(a) or to locate and present candidates to serve as CEO. Meetings of the Nominating Committee are not required to be publicly posted.

(2) The Nominating Committee shall select and nominate, by at least a two-thirds majority, qualified candidate(s) to serve as Independent Directors to present to the Membership for its approval. The Nominating Committee shall strive to ensure that the Board as a whole reflects expertise in the areas of technical electric operations and reliability, legal, senior corporate leadership, financial, risk

management, and regulatory matters, and familiarity with regional system operation issues in the ERCOT region.

(3) The Membership shall vote by Sector as described in Article V in favor or against the proposed Independent Director(s). A proposed Independent Director who is approved by a majority of the Sectors shall become an Independent Director.

(4) The Nominating Committee shall select and recommend to the Board, by at least a two-thirds majority, a qualified candidate to serve as CEO. The Directors may choose to participate in interviewing CEO candidates.

(d) Director Voting Weights. All voting Directors shall have a single vote each.

(e) Alternates and Proxies. Independent Directors may designate another Independent Director as a proxy if unable to attend a Board meeting. *Ex officio* Directors may designate an alternate representative who may attend public meetings in the absence of such Director. The chair and vice chair of the Member Representatives Committee may designate each other or may designate an Independent Director as their proxy if unable to attend a Board meeting. The CEO may designate an Independent Director as a proxy if unable to attend a Board meeting.

Section 3. Appointment of Management Director. The president and chief executive officer (CEO) of the Corporation shall serve as the Management Director of the Corporation, effective as of the date of his or her appointment by the Board as CEO of the Corporation in accordance with these Bylaws, to serve until such time that he or she ceases to hold the position of CEO. No action of the Members of the Corporation shall be required in connection with the appointment of the CEO as the Management Director of the Corporation.

Section 4. Chair and Vice Chair. Annually, the Board shall elect from the Board's membership, by resolution of the Board, a Chair and a Vice Chair. The Chair and Vice Chair shall each be one of the Independent Directors.

Section 5. Vacancies and Removal.

(a) Should any vacancy on the Board arise from the death, resignation, retirement, disqualification, or removal from office of any Director, or from any other cause, such vacancy shall be filled as follows:

(1) For an Independent Director, by the election of a new Independent Director at the next annual election of Directors to fill the remainder, if any, of the term of the departed Independent Director; provided, that the Board by resolution may in its discretion call a special election to fill any such vacancy for the remainder, if any, of the term of the departed Independent Director.

(2) For the Management Director, by the appointment of a new CEO or interim CEO to fill the vacancy.

(3) For an *ex officio* Director, by the appointment of a new PUCT Chair (or the Chair's designee) or the appointment of a new Texas Public Counsel ~~by whomever had the right to appoint such Director.~~

(4) For an Affiliated Director, by the election of a new chair or vice chair, as applicable, by the Member Representatives Committee.

(b) ~~An Director may be removed with or without cause at any time by whomever had the right to appoint such Director (for ex officio Directors), or for the elected Independent Directors, may be removed~~ by an affirmative vote of sixty percent (60%) of the Members. In addition, the Board may remove any voting Director for cause, upon at least seventy-five percent (75%) affirmative votes of the eligible, remaining voting Directors, not counting any Director whose removal is under consideration. ~~The right to elect Directors may not be assigned, sold, pledged or transferred in any manner.~~

Section 6. Committees of the Board. The Board shall by resolution create and appoint all committees of the Board as the Board deems necessary to perform its responsibilities. All committees of the Board shall have such duties as are prescribed and delegated by the Board. Committees to which any of the authority of the Board to manage the Corporation is delegated must have at least two Directors, and a majority of the members of the committee must be Directors.

ARTICLE V. MEETINGS OF MEMBERS OF THE CORPORATION

Section 1. Annual and Other Meetings of Members.

(a) An annual meeting of the Members to elect Directors, announce election results from electronic elections, and conduct such other business as may come before the meeting, shall be held in December each year, or as soon as practicable thereafter. ~~The failure to hold an annual meeting in accordance with these bylaws shall not affect the validity of a corporate action.~~

(b) Meetings of Members of the Corporation may be called for any purpose or purposes by resolution of the Board, by the chair of the Board, the CEO or the Corporate Secretary, or by a number of Members constituting at least ten ~~(10)~~-percent (10%) of all Members on the roster of Members maintained by the Corporate Secretary, ~~which number shall include Members in at least three (3) of the Sectors~~. Meetings of Members shall be held at the principal office of the Corporation or at such other place fixed by the Board as shall be specified in the notice of meeting. Meetings shall be called upon written notice of the time, date, place, and purposes of the meeting given to all Members on the roster of Members maintained by the Corporate Secretary not less than ten (10) nor more than sixty (60) days prior to the date of the meeting. Only Members in good standing with the Corporation, as determined by the Board, have the right to vote at any meeting of the Members. ~~Further, if at any point a Member no longer meets the qualifications for the Sector of which it is a member, the entity may immediately elect to become a member in any Sector for which it does qualify.~~

Section 2. Quorum and Voting Requirements for Meetings of Members.

(a) At any meeting of the Members of the Corporation, attendance in person or by proxy by a majority of the Members in each of at least two-thirds of the Sectors on the roster of Members maintained by the Corporate Secretary shall constitute a quorum.

(b) Except as otherwise expressly provided in the Corporation's Certificate of Formation, these Bylaws, or applicable law, Members shall vote by Sector and each Sector shall have one vote.

(c) To the extent practicable, membership votes will be conducted electronically and prior to annual membership meetings, and will generally be open for a ten (10) day period unless good cause exists to shorten the period.

(d) Except as otherwise expressly provided in the Corporation's Certificate of Formation, these Bylaws or applicable law, actions by the Members of the Corporation shall be approved upon receipt of the affirmative vote of a majority of the Sectors of the Corporation at (1) a meeting at which a quorum is present, in person or by proxy, or (2) an electronic vote which has participation by a quorum. Each Sector's vote shall be determined by the affirmative vote of a majority of the members of the Sector voting at the meeting or in the electronic election.

Section 3. Waivers of Notice of Meetings of Members and Member Meeting Adjournments. Notice of a meeting of Members need not be given to any Member who waives notice, ~~either electronically or~~ in writing, ~~in person or by proxy,~~ whether before, during, or after the meeting. The attendance of any Member at a meeting, in person or by proxy, without protesting prior to the conclusion of the meeting the lack of proper notice of such meeting, shall constitute a waiver of notice of the meeting by such Member. When any meeting of Members is adjourned to another time or place, it shall not be necessary to give notice of the adjourned meeting if the time and place to which the meeting is adjourned are announced at the meeting at which the adjournment is taken, and if at the adjourned meeting only such business is transacted as might have been transacted at the original meeting.

Section 4. Action Without a Meeting of Members. Any action, required or permitted to be taken at a meeting of Members, may be taken without a meeting if the proposed action is posted to all Members (via direct email or email to an email distribution list to which Members may subscribe and by posting on the Corporation website) and consented to in writing by the minimum number of Members that would be required to approve the action at a meeting of the Members at which all Members were present. The voting in such a circumstance shall be performed in writing, including via email or other electronic means. The Members shall receive written notice of the results within ten (10) days of the action vote, and all written responses of the Members shall be filed with the Corporate records. The results of such voting will be posted on the Corporation's website.

Section 5. Meetings of the Members to be Open. Notice to the public of the dates, places, and times of meetings of the Members, and all non-confidential material provided to the Members, shall be posted on the Corporation's website at approximately the same time that notice is given to the Members. Meetings of the Members shall be open to the public, subject to reasonable limitations due to the availability and size of meeting facilities; provided, that the meeting may be held in or adjourned to closed session to discuss matters of a confidential nature, including but not limited to compliance and enforcement matters, personnel matters, litigation, or commercially sensitive or critical infrastructure information of the Corporation or any other entity. ~~The results of any action taken without a meeting, as described above, will be posted on the Corporation's website.~~

ARTICLE VI. MEETINGS OF THE BOARD OF DIRECTORS

Section 1. Regular Meetings of the Board. Regular meetings of the Board shall be held at least quarterly. By resolution adopted at any meeting of the Board, the Board may provide for additional regular meetings that may be held as needed.

Section 2. Special Meetings of the Board. Special meetings of the Board for any purpose or purposes may be called at any time by the chair or by any two Directors. Such meetings may be held upon notice given to all Directors not less than three (3) days prior to the date of the meeting. Such notice shall specify the time, date, place, and purpose or purposes of the meeting and may be given by telephone, email, or other electronic media, or by express delivery.

Section 3. Quorum and Voting Requirements for Meetings of the Board. Unless otherwise expressly provided in the Corporation's Certificate of Formation, these Bylaws or applicable law, (i) the quorum necessary for the transaction of business at meetings of the Board shall be a majority of the voting Directors in person (including by means of any communications system by which all persons participating in the meeting are able to hear each other), or by proxy and of which at least three must be Independent Directors, and (ii) actions by the Board shall be deemed approved upon receipt of the affirmative vote of a majority of the Directors present and voting in person (including by means of any communications system by which all persons participating in the meeting are able to hear each other) or by proxy at a meeting at which a quorum is present but in no case less than four votes.

Section 4. Meetings of the Board to be Open. Notice to the public of the dates, places, and times of meetings of the Board, and all non-confidential material provided to the Board, shall be posted on the Corporation's website at approximately the same time that notice or such material is given to the Directors and at least five (5) business days prior to the scheduled meeting. Meetings of the Board shall be open to the public, subject to reasonable limitations due to the availability and size of meeting facilities; provided, that the Board may meet in or adjourn to closed session to discuss matters of a confidential nature, including but not limited to compliance and enforcement matters, personnel matters, litigation, or commercially sensitive or critical infrastructure information of the Corporation or any other entity. Any or all of the Directors or members of a Board committee, may participate in a meeting of the Board, or a meeting of a committee, in person or by proxy, by means of any communications system by which all persons participating in the meeting are able to hear each other.

Section 5. Waivers of Notice of Board Meetings and Board Meeting Adjournments. Notice of a ~~board meeting~~ of the Board need not be given to any Director who ~~signs, or sends an email confirming a~~ waives ~~of~~ notice, in ~~person or by proxy~~ writing, whether before, during, or after the meeting. ~~The attendance of any Director at a meeting, in person or by proxy, or who attends the meeting without protesting the lack of notice of such meeting prior to the conclusion of the meeting the lack of proper notice of such meeting, shall constitute a waiver of notice of the meeting by such Director. When a meeting of the Board is adjourned to another time or place, it shall not be necessary to give notice of the adjourned meeting. Notice of an adjourned board meeting need not be given if the time and place to which the meeting is adjourned are announced at the meeting at which the adjournment is taken and if at the adjourned meeting, only such business is transacted as might have been transacted at the original meeting and if the period of adjournment does not exceed ten (10) days.~~

Section 6. Action Without a Meeting. Any action required or permitted to be taken at a meeting of the Board, or of any committee thereof, may be taken by the Board or by the committee without a meeting if the action is consented to in writing by the number of Directors or members of the committee, as the case may be, entitled to vote on the action that would be required to approve the action at a meeting of the Board or committee with all members of the Board or committee present. The call for action without a meeting of the Board may be initiated by the chair or by any two voting Directors. Notice of the proposed call for action without a meeting, and all non-confidential material provided to the Board in connection with the call for

action without a meeting, shall be posted on the Corporation's website and shall be sent via email to an email distribution list to which Members and the public may subscribe at approximately the same time notice of the call for action without a meeting or such material is provided to the Board. The call for action without a meeting of a committee of the Board may be initiated by the chair of the committee or by any two members of the committee. The Directors or members of the committee shall receive written notice of the results of such action within seven (7) days of the action vote. All written responses of the Directors shall be filed with the minutes of the Corporation, and all written responses of members of a committee shall be filed with the minutes of such committee.

Section 7. Emergency Meetings. The Board may meet on urgent matters with not less than two (2) hours' public notice, as necessary or appropriate for emergency conditions threatening health or safety or a reasonably unforeseen situation.

ARTICLE VII. OFFICERS

Section 1. Selection of Officers. The Board shall elect a CEO and shall ratify the selection of the officers of the Corporation (collectively, the "Officers"). The Management Director shall not participate in votes electing or ratifying Officers. The Corporation shall maintain a list of current Officers ratified by the Board. The duties and authority of the Officers shall be determined from time to time by the Board. Subject to any such determination, the Officers shall have the following duties and authority:

Section 2. Chief Executive Officer ("CEO"). The CEO shall be the chief executive officer of the Corporation. He or she shall be responsible for the day-to-day ongoing activities of the Corporation and shall have such other duties as may be delegated or assigned to him or her by the chair. The CEO may enter into and execute in the name of the Corporation contracts or other instruments not in the regular course of business that are authorized, either generally or specifically, by the Board.

Section 3. Corporate Secretary. The Secretary shall maintain the roster of Members of the Corporation, shall cause notices of all meetings to be served as prescribed in these Bylaws, shall keep or cause to be kept the minutes of all meetings of the Members and the Board, and shall have charge of the seal of the Corporation. The Secretary shall perform such other duties and possess such other powers as are incident to his or her office or as shall be assigned to him or her by the CEO. The CEO may select an Assistant Corporate Secretary at his or her discretion. The Assistant Corporate Secretary is not an Officer of the Corporation.

Section 4. Chief Financial Officer. A Chief Financial Officer shall have custody of the funds and securities of the Corporation, shall keep or cause to be kept regular books of account for the Corporation and shall have the duties normally assigned to a treasurer of a corporation. The Chief Financial officer shall perform such other duties and possess such other powers as are incident to his or her office or as shall be assigned to him or her by the CEO.

Section 5. Other Officers. The CEO may select such other Officers as he or she deems appropriate, subject to ratification by the Board. Any such Officer shall perform such other duties and possess such powers as are incident to his or her office or as shall be assigned to him or her by the CEO.

**ARTICLE VIII.
MEMBER REPRESENTATIVES COMMITTEE**

Section 1. Purpose of Member Representatives Committee. The Corporation shall have a “Member Representatives Committee” that shall provide advice and recommendations to the Board with respect to: annual budgets, business plans and funding mechanisms of the Corporation; the development of Regional Reliability Standards and Regional Variances in accordance with Texas RE’s process; other matters relevant to reliability of the ERCOT Bulk Power System; and other matters pertinent to the purpose and operations of the Corporation. The Member Representatives Committee shall provide its advice and recommendation to the Board through its chair and the vice chair, who also serve as the Affiliated Directors on the Board. The Member Representatives Committee may create subcommittees, task forces, or working groups (“subcommittees”) as it deems appropriate to study or discuss selected technical or compliance matters, provide a forum for the review and discussion of current and proposed Reliability Standards, and to make recommendations to the Board as requested or required by the Board or as deemed appropriate to its purpose by the Member Representatives Committee. Because it is elected by the Members of the Corporation and not appointed by the Board, the Member Representatives Committee shall not be a standing committee of the Board of Directors of the Corporation, but is authorized to provide advice and recommendations directly to the Board, through its elected chair and vice chair.

Section 2. Composition of the Member Representatives Committee. The Member Representatives Committee shall consist of two representatives from each Sector to serve two-year terms and will select a chair and vice chair for the Member Representatives Committee to serve two-year terms. The representatives of each Sector shall be officers, employees, or directors of Members in that Sector (or the Member’s parent, subsidiary, or other Affiliate); provided however, except for a Sector that has only one Member, only one officer, employee, or director of a Member in a Sector (or the Member’s parent, subsidiary, or other Affiliate) may be a representative from that Sector. The Board may by resolution create additional non-voting positions on the Member Representatives Committee on its own initiative or at the written request of any group of Members of the Corporation that believes its interests are not adequately represented on the Member Representatives Committee. There shall be no limit on the number of terms that an officer, employee, or director of a Member (or the Member’s parent, subsidiary, or other Affiliate), may serve on the Member Representatives Committee.

Section 3. Election of Representatives of the Member Representatives Committee. Unless a Sector adopts an alternative election procedure, the election of representatives from each Sector to the Member Representatives Committee, and any election to fill a vacancy, shall be conducted in accordance with the following process, which shall be administered by the Secretary of the Corporation:

(a) During the period beginning no more than ninety (90) days and ending no less than fifteen (15) days prior to an annual meeting, or beginning no more than forty-five (45) days and ending no less than fifteen (15) days prior to a special election to fill a vacancy on the Member Representatives Committee, nominations may be submitted for candidates for election to the Member Representatives Committee. A nominee for election as a Sector representative must be an officer, employee, or director of a Member in that Sector (or the Member’s parent, subsidiary, or other Affiliate). No more than one nominee who is an officer, employee, or director of a Member (or the Member’s parent, subsidiary, or other Affiliate) may stand for election in any single Sector; if more than one officer, employee, or director of a Member (or the Member’s parent, subsidiary, or other Affiliate) is nominated for election from a Sector, the Member shall designate

which such nominee shall stand for election. The election of representatives shall be conducted over a period of ten (10) days using an electronic process approved by the Corporate Secretary.

(b) Each Member in a Sector shall have one vote for each Representative to be elected from the Sector in that election and may cast no more than one vote for any nominee. The nominee receiving the highest number of votes in each Sector shall be elected to one Representative position to be filled from that Sector and the nominee receiving the second highest number of votes shall be elected as the second Representative position for that Sector. To be elected on the first ballot, a nominee must receive a number of votes equal to a simple majority of the Members in the Sector casting votes in the election. If no nominee in a Sector receives a simple majority of votes cast in the first ballot, a second ballot shall be conducted which shall be limited to the number of candidates receiving the three (3) highest vote totals on the first ballot. The nominees receiving the two highest totals of votes on the second ballot shall be elected to the Representative positions for the Sector.

(c) A Sector may adopt an alternative procedure to the foregoing to nominate and elect its Representatives to the Member Representatives Committee if the alternative procedure is approved by vote of at least two-thirds of the Members in the Sector, provided, however that any alternative procedure ~~may~~must be reviewed and ~~dis~~approved by the Board.

(d) A Sector may elect an Alternate to serve in place and at the convenience of the Sector's Member Representatives Committee Representative(s) in the event a Member Representatives Committee Representative cannot attend a Member Representatives Committee meeting.

Section 4. Chair and Vice Chair of the Member Representatives Committee.

After the selection of its Representatives, the Member Representatives Committee shall select a chair and vice chair from among its voting Representatives by majority vote to serve during the upcoming two-year term and be the Affiliated Directors on the Board. The selected chair and vice chair may not be representatives of the same Sector and may not concurrently serve on the Board of ERCOT ISO. The Board shall be notified of the selection of the chair and vice chair, but the selection will not be subject to approval of the Board. The chair is responsible for ensuring that minutes of the meetings are properly maintained and made available to the public, but the chair may delegate this responsibility to the vice chair or to another Representative of the Member Representatives Committee who may be designated as secretary of the Member Representatives Committee.

Section 5. Vacancies on the Member Representatives Committee. In the event that any Representative of the Member Representatives Committee ceases to serve as a Representative of the Member Representatives Committee as a result of his or her death, resignation, retirement, disqualification, removal, or other cause, the Members in the Sector of which such Representative was a representative shall elect, as soon thereafter as reasonably practicable, and in accordance with the procedures in this Article VIII, a new Representative to replace the Representative of the Member Representatives Committee who ceased to serve. For those Sectors that have elected an Alternate, the Alternate will fill a vacancy left by the Sector's Member Representative until a new Sector Member Representative is elected by the Sector.

Section 6. Meetings of the Member Representatives Committee. The Member Representatives Committee will plan and hold quarterly meetings, at a time and place determined by the Member Representatives Committee, normally shortly before the regular meetings of the Board, and posted on the Corporation's website. Except for closed session meetings specifically allowed by this Section, all meetings shall be open to the public. ~~The~~

~~Member Representatives Committee shall adopt such procedural rules as are needed to operate in accordance with its purpose and will include procedures for coordinating with employees of the Corporation who provide administrative support, as set forth in subsection 6(c), below.~~

(a) Notice to the public of the dates, places, and times of meetings of the Member Representatives Committee and any subcommittees, and all non-confidential material provided to the Representatives on the Member Representatives Committee or any subcommittees, shall be posted on the Corporation's website at approximately the same time that notice or such material is given to the Member Representatives Committee, which will normally be at least five (5) business days prior to the scheduled meeting. Meetings of the Member Representatives Committee and subcommittees shall be open to the public, subject to reasonable limitations due to the availability and size of meeting facilities; provided, that the Member Representatives Committee and subcommittees may meet in or adjourn to closed session to discuss matters of a confidential nature, including but not limited to confidential planning information, critical infrastructure information, or commercially sensitive information of the Corporation or any other entity. Participation in a meeting of the Member Representatives Committee or subcommittee may be accomplished through use of a communications system by which all persons participating in the meeting are able to hear each other.

(b) Special meetings may be called for any purpose or purposes by the chair of the Member Representatives Committee or by any three (3) Representatives of the Member Representatives Committee, which number shall include representatives from at least three Sectors, and require notice given to all Representatives of the Member Representatives Committee not less than seven (7) days prior to the date of the meeting. Such notice shall specify the time, date, place, and purpose or purposes of the meeting and may be given by telephone, ~~facsimile~~email, or other electronic media, or by express delivery.

(c) The Member Representatives Committee shall effectively coordinate with the employees of the Corporation and adopt procedural rules for the voting for Representatives, scheduling of meetings, and public posting of required meeting information and minutes. The chair or vice chair of the Member Representatives Committee shall provide all meeting agendas, material, minutes and other information required or desired to be posted on the Corporation's website to appropriate Corporation employees at least one (1) business day prior to the time such information should be posted.

Section 7. Action Without a Meeting of Members. Any action, required or permitted to be taken at a meeting of the Member Representatives Committee, may be taken without a meeting if the proposed action is posted to all Committee Members via direct email and consented to in writing by a majority of the Representatives. The voting in such a circumstance shall be performed in writing, including via email or other electronic means. The Representatives shall receive written notice of the results within ten (10) days of the action vote, and all written responses of the Representatives shall be retained as a corporate record. The results of such voting will be reported at the next in-person Member Representatives Committee meeting.

Section 8. Waivers of Notice of Meetings of the Member Representatives Committee and Meeting Adjournments. Notice of a meeting of the Member Representatives Committee need not be given to any member of the Member Representatives Committee who waives notice ~~electronically or otherwise in writing~~, in ~~person or by proxy~~ writing, ~~whether~~ before, during, or after the meeting. The attendance of any Committee member at a meeting, in person or by proxy, or who attends the meeting without protesting prior to the conclusion of the meeting the lack of proper notice of such meeting, shall constitute waiver of notice of the meeting of the meeting by such Committee Member the lack of notice of such meeting. Notice of an

~~adjourned~~When a meeting of the Member Representatives Committee is adjourned to another time or place, it shall not be necessary to need not be given if notice of the adjourned meeting if the time and place to which the meeting is adjourned are announced at the meeting at which the adjournment is taken, and if at the adjourned meeting only such business is transacted as might have transacted at the original meeting and if the period of adjournment does not exceed ten (10) days.

Section 9. Quorums and Voting for Meetings of the Member Representatives Committee. The quorum necessary for the transaction of business at meetings of the Member Representatives Committee shall be the presence, in person or by proxy, of two-thirds of the voting Representatives on the Member Representatives Committee entitled to attend. Each voting member of the Member Representatives Committee shall have one (1) vote on any matter coming before the Member Representatives Committee that requires a vote. Except as otherwise expressly provided in the Corporation's Certificate of Formation, these Bylaws or applicable law, actions by members of the Member Representatives Committee shall be approved upon receipt of the affirmative vote of a majority of the voting members of the Member Representatives Committee present (by means of any communications system by which all persons participating in the meeting are able to hear each other) and voting at any meeting at which a quorum is present.

Section 10. Alternates and Proxies. Member Representatives may designate another Member Representative or an employee of the Member Representative's organization (or the Member's parent, subsidiary, or other Affiliate) as a proxy if both the Member Representative and the Sector Alternate are unable to attend a Member Representatives Committee meeting. A member of the Member Representatives Committee may give a proxy only to a person who is an officer, employee, or director of a Member, registered in the same Sector (or the Member's parent, subsidiary, or other Affiliate).

Section 11. Other Procedures of the Member Representatives Committee. Except as to any matter as to which the procedure to be followed by the Member Representatives Committee is expressly set forth in these Bylaws, the Member Representatives Committee may adopt such additional procedures, not inconsistent with these Bylaws, as it deems appropriate, subject to review and ~~dis~~approval by the Board.

ARTICLE IX. OTHER COMMITTEES AND SUBCOMMITTEES

Section 1. Other Committees and Subcommittees of the Corporation. ~~In addition to those committees specified by these Bylaws, to which the Board shall appoint members in accordance with the requirements of these Bylaws, t~~The Board may by resolution create standing committees and subcommittees of the Corporation to provide advice to the Board; ~~and may in addition by resolution~~ The Board will appoint the members of such committees, subcommittees, and task forces ~~and Sector-specific forums as the Board deems necessary or desirable to carry out the purposes of the Corporation. The Board shall appoint members to such standing committees and other committees of the Corporation that are representative of Members, and other interested parties, and the public, as appropriate, that provide for balanced decision-making and that include persons with sufficient technical knowledge and experience. All committees and, subcommittees, task forces and Sector-specific forums shall have such scope and duties, not inconsistent with law, as are specified in these Bylaws and the Rules of Procedure of the Corporation or otherwise as~~ determined by the Board.

ARTICLE X. BUDGETS AND FUNDING

Section 1. Compensation of the Board and Member Representatives Committee.

(a) The Board shall have a Director compensation committee (the "Director Compensation Committee") to have the right to evaluate and fix from time to time, by simple majority vote, the amount of the annual retainer fee or other compensation to be paid to the Independent Directors for their services to the Corporation, including any fees to be paid for each meeting of the Board or any Board committee attended by an Independent Director. The Director Compensation Committee will evaluate the fee or other compensation annually to ensure that Director compensation is appropriate. The Director Compensation Committee shall consist of two (2) Independent Directors that are not currently serving as Board Chair and Vice Chair (unless there is an Independent Director vacancy, in which case the Board Vice Chair will serve on the Committee until the vacancy is filled), two (2) Affiliated Directors, and the CEO. The Board Chair shall appoint an Independent Director as the Chair of the Director Compensation Committee. Meetings of the Director Compensation Committee are not required to be publicly posted.

(b) No compensation shall be paid to any Management Director, Affiliated Director, or *ex officio* Director for his or her services on the Board, other than the compensation paid to the Management Director for services as CEO of the Corporation. No compensation shall be paid by the Corporation to any member of the Member Representatives Committee for his or her services on the Member Representatives Committee.

(c) Independent Directors shall be entitled to be reimbursed their reasonable out-of-pocket expenditures for attending meetings and conducting the business of the Corporation.

Section 2. Preparation and Adoption of Annual Budget, Business Plan, and Funding Mechanism. The Board shall require the CEO to prepare for Board approval an annual business plan and budget for the administrative and other expenses of the Corporation, including the expenditures for the fiscal year for any material special projects undertaken by the Corporation and reasonable and proper reserves and provisions for contingencies, in accordance with all NERC and FERC requirements. The annual business plan, budget and funding mechanism of the Corporation shall be for a fiscal year commencing on January 1 and ending on December 31. Each annual business plan, budget, and funding mechanism shall be approved by the Board at a regular meeting or a special meeting of the Board duly called for that purpose. The Board shall approve each annual business plan, budget, and funding mechanism at a time that allows for timely submittal of the approved annual business plan, budget, and funding mechanism to the applicable regulatory authorities.

Section 3. Comments During Preparation of Annual Business Plan and Budget. In preparing the annual business plan and budget, the Board shall require that the CEO post a draft business plan and budget for review and comment by the Members of the Corporation, the Member Representatives Committee, and the standing committees of the Corporation for at least five (5) business days prior to the date of the meeting of the Board at which the annual business plan and budget is to be adopted.

Section 4. Modified or Supplemental Budgets. During the course of a fiscal year, the Board may modify any approved budget or develop and approve a supplemental budget if determined by the Board to be necessary due to such factors as a shortfall in revenues of the

Corporation from projected levels, incurred or anticipated expenditures, duties, or new projects not provided for in the annual budget, or such other factors as in the judgment of the Board warrant modification of the budget for the fiscal year or development of a supplemental budget. In preparing a modified or supplemental budget, the Board shall follow the provisions of this Article X, Section 4 to the extent practicable in the judgment of the Board in light of the urgency of the circumstances necessitating preparation and approval of the modified or supplemental budget. Each modified or supplemental budget shall be approved by the Board at a regular meeting or a special meeting of the Board duly called for that purpose.

Section 5. Submission of Annual Business Plans and Budgets to the Regulatory Authorities. Each annual budget, annual business plan, and annual, modified, or supplemental budget approved by the Board shall be submitted by the Corporation to the ERO and any applicable regulatory authorities for approval in accordance with its regulations, and shall not be effective until approved by the applicable regulatory authorities. If ordered to modify or remand an annual budget, business plan, or annual, modified, or supplemental funding mechanism, the Board shall promptly following such order adopt such modifications to the business plan, budget, or funding mechanism as are required or directed by the order of the ERO and any applicable regulatory authority.

ARTICLE XI. AMENDMENTS TO THE BYLAWS

Section 1. Amendments to the Bylaws. These Bylaws may be altered, amended, or repealed by action of the Membership, as set forth below. Any alteration, amendment, repeal or adoption of Bylaws shall be subject to any applicable requirements for filing with or approval by the ERO or any other applicable regulatory authority. These Bylaws may be altered, amended, or repealed as follows:

(a) ~~Any Director or Member's~~ Suggested ~~ing~~ amendments to these Bylaws ~~must~~ may be made through the ~~submission of the~~ proposed ~~of the~~ amendments, including any necessary supporting documents, to the ~~CEO~~ Corporate Secretary.

(b) The ~~CEO~~ Corporate Secretary shall place the proposal on the agenda for a Board meeting, or if the Board has designated a standing committee with authority to review proposed amendments and make a recommendation to the Board, the Corporate Secretary shall place the proposal on that committee's next scheduled meeting agenda. ~~in the time and manner prescribed by the Board and within ninety-five (95) days of the request.~~

(c) If the proposal is approved by an act of the Board as set forth in Article VI, Section 3, the Board shall place the proposal on the agenda of the next Annual Meeting of the Corporate Members unless the Board in its discretion calls a Special Meeting of the Corporate Members to vote on the proposal or determines to seek Membership approval without a meeting as provided in Article V, Section 4.

(d) If the proposal is not approved by the Board, the Members of the Corporation may call a meeting, pursuant to Article V, Section 1(b), for the purpose of voting on a proposal not approved by the Board. Any such proposal must be approved by a vote of five of the six Sectors at a meeting of Members called for that purpose or by written consent of five of the Sectors, where the number of votes for and against the proposed alteration, amendment, repeal or adoption of Bylaws shall be determined in accordance with Article V, Section 2.

**ARTICLE XII.
INDEMNIFICATION; PROCEDURE; DISSOLUTION**

Section 1. Indemnification. The Corporation shall indemnify each person who at any time shall serve, or shall have served, as an officer, Director, employee, or other corporate agent of the Corporation, is or was serving at its request as a director, officer, partner, venturer, proprietor, employee, agent or similar functionary of another foreign or domestic corporation, partnership, joint venture, sole proprietorship, trust, employee benefit plan or other enterprise (“Indemnified Parties”), to the full extent from time to time permitted by the Texas Business Organizations Code and other applicable law. Such right of indemnification shall inure to the benefit of the legal representative of any such Indemnified Party. The foregoing indemnification shall be in addition to, and not in restriction or limitation of, any privilege or power that the Corporation may have with respect to the indemnification or reimbursement of its Indemnified Parties. The Corporation shall also pay or advance reasonable expenses incurred by an Indemnified Party in connection with a proceeding in advance of the final disposition of the proceeding upon receipt of a written affirmation by the Indemnified Party of a good faith belief that the standard of conduct necessary for indemnification under this Article XII and the Texas Business Organizations Code has been met and a written undertaking by or on behalf of the officer, Director, or other corporate agent to repay the amount if it shall be ultimately determined that the Indemnified Party was not entitled to be indemnified by the Corporation.

Section 2. Parliamentary Rules. In the absence of and to the extent not inconsistent with specific provisions in these Bylaws, meetings or other actions pursuant to these Bylaws shall be governed by procedures that the Board may, from time to time, establish by resolution.

Section 3. Dissolution. Upon dissolution of the Corporation, in accordance with the Certificate of Formation, the remaining assets of the Corporation after payment of debts shall be distributed in the manner determined by the Board, provided that, (i) no part of the assets shall be distributed to any Director of the Corporation, and (ii) the distribution of assets shall be consistent with the requirements of Section 501(c)(3) of the United States Internal Revenue Code of 1954~~1986~~, as amended.

**ARTICLE XIII.
CONFLICTS OF INTEREST**

Section 1. Conflicts of Interest.

(a) Each Director shall have an affirmative duty to disclose to the Board or committee (as the case may be) any actual or potential conflicts of interest of the Director that arise during his or her tenure as a Director where, and to the extent that, such conflicts or potential conflicts directly or indirectly affect any matter that comes before the Board. A Director with a direct or potentially conflicting interest in a matter shall recuse himself from deliberations and actions on the matter in which the conflict arises and shall abstain on any vote on the matter and not otherwise participate in a decision on the matter. Any disclosure of a potential conflict of interest by a Director shall be noted in the minutes of the Board meeting at which the direct interest is disclosed. Mere attendance at the meeting, without participating in discussion of the issue raising the potential conflict, shall not constitute participation.

(b) The Corporation may not make any loan to a Director, committee member or officer of the Corporation. A Member, Director, officer, or committee member of the Corporation may not lend money to, or otherwise transact business with, the Corporation except as otherwise

provided by these Bylaws, the Certificate of Formation, and applicable law. A related party transacting business with the Corporation has the same rights and obligations relating to those matters as other persons transacting business with the Corporation, provided the related party nature of the transaction is known to the Board. The Corporation may not borrow money from, or otherwise transact business with, a Member, Director, officer, or committee member of the Corporation unless the transaction is described fully in a legally binding instrument, is in the Corporation's best interests, and is on terms no less favorable to the Corporation than could be obtained in an arms-length transaction. The Corporation may not borrow money from, or otherwise transact business with, a Member, Director, officer, or committee member of the Corporation without full disclosure of all relevant facts and without the Board's approval, not including the vote of any person having a personal interest in the transaction.

Section 2. Prohibited Acts. No Member, Director, officer, or committee member of the Corporation may do any of the below-listed prohibited acts. Engaging in these prohibited acts may lead to sanction, suspension, expulsion or termination after a hearing as described in these Bylaws. The prohibited acts include the following:

- (a) Do any act in violation of these Bylaws.
- (b) Do any act in violation of a binding obligation of the Corporation except with the Board's prior approval.
- (c) Do any act with the intention of harming the Corporation or any of its operations.
- (d) Receive an improper personal benefit from the operation of the Corporation.
- (e) Use the Corporation's assets, directly or indirectly, for any purpose other than carrying on the Corporation's business.
- (f) Wrongfully transfer or dispose of Corporation property, including intangible property such as goodwill.
- (g) Use the Corporation's name (or any substantially similar name) or any trademark or trade name adopted by the Corporation, except on behalf of Corporation in the ordinary course of its business or as a reference to the Corporation or its region.
- (h) Disclose any of Corporation's or Members' business practices, trade secrets, or any other confidential or proprietary information not generally known to the business community to any person not authorized to receive it.

Section 3. Loans and Guarantees. Neither participation in the activities of the Corporation nor any provision of these Bylaws or of the Certificate of Formation shall be deemed to constitute a pledge or loan of the credit of any Member for the benefit of the Corporation or a guarantee by any Member of any obligation of the Corporation.

**ARTICLE XIV.
BOOKS AND RECORDS; AUDIT; FISCAL YEAR**

Section 1. Access to Books and Records. All Members of the Corporation will have access to the books and records of the Corporation, including financial statements and budgets; however, the Board shall establish procedures by which a Member, upon written demand stating the purpose of the demand may examine and copy the books and records of the Corporation. If necessary to protect the confidential information of the Corporation, a Member requesting examination of any of the Corporation's non-public books and records will be required to sign a confidentiality and non-disclosure agreement before viewing such information. The procedures shall include policies that provide reasonable protection against the unnecessary disclosure of information related to individual employees, including their compensation.

Section 2. Audit. At least annually, an audit of the financial statements of the Corporation shall be performed by the Auditor approved by the Board. The Auditor's opinion and the audited financial statements will be made available to all Members as described in Article XIV, Section 1.

Section 3. Fiscal Year. The fiscal year of the Corporation shall be from January 1 through the following December 31, unless otherwise established by resolution of the Board.

Reliability Coordinator Function in the Western Interconnection

Action

Update

Background

The Western Interconnection has been served by a single Reliability Coordinator (RC) since January 2009. Following the September 8, 2011 Southwest Outage, the Western Electricity Coordinating Council (WECC) Board of Directors began a process to establish Peak Reliability (Peak) as an independent company to provide RC services for the Western Interconnection. In January 2014, Peak began performing the RC function for the Western Interconnection (less Alberta who provides its own RC-like service).

During early 2018, the California Independent System Operator (CAISO) announced that it would become an RC and offer these services to other Balancing Authorities and Transmission Operators in the West. Then, in June 2018, the Southwest Power Pool (SPP) officially announced plans to offer RC services in the Western Interconnection beginning in late 2019. Additionally, in July 2018, Peak announced it would cease operations at the end of December 2019. In September 2018, British Columbia Hydro and Power Authority (BCH) notified WECC of its intentions to become the RC for the British Columbia province.

Summary

WECC continues working closely with NERC to assure the reliability and security of the Bulk Electric System and has been hosting a series of stakeholder RC Forums; most recently on January 24, 2019 and will continue to host them based on feedback from stakeholders. These forums have provided stakeholders with an opportunity to understand and discuss the reliability implications of multiple RCs in the Western Interconnection.

Additionally, the CAISO, SPP, BCHA, AESO, and Peak have established several coordinating subgroups to address issues associated with common tools, seams issues, SOL and Outage Coordination Methodologies, wide area modeling and situation awareness, messaging tools, shadow operations and data sharing, networks and storing issues. Two coordinating groups, consisting of both RC subject matter experts and RC customers, hold monthly meetings to coordinate and monitor the activities of the above noted subgroups; the RC-RC Coordination Group and the RC Transition Coordinating Group (RCTCG).

Certification Teams are being finalized and required certification data from each RC is being submitted. Certification site visits have been set and each RC intends to participate in a two-month shadow operation (where new RCs would operate in conjunction with the RC of record) following site visits and prior to going live.

The presentation will discuss the activities WECC, NERC, and each of the RCs have underway to understand the evolving situation and activities planned in preparation for the necessary certifications.

Operating Committee Report

Action

None

Operating Committee's (OC) Major Accomplishments for 2018

1. OC and Subcommittee Work Plans – The OC Executive Committee and the leadership of its subcommittees met on January 10, 2018 to review and update the OC Work Plan. At the March 2018 OC meeting, the OC reviewed and approved the OC Work Plans.
2. Resiliency Framework – The Reliability Issues Steering Committee (RISC) has requested that each standing committee provide the RISC, on or before March 28, 2018, with their views on how BPS resilience is currently being addressed within the scope of their committee's responsibilities and recommend any additional activities they believe should be undertaken. The OC provided its input to the Chair of the RISC, Peter Brandien on March 27, 2018.
3. OC Strategic Plan – At its March 2018 meeting, the OC formed a task team to review and revise, if appropriate, its Strategic Plan to ensure alignment with the updated NERC Strategic Plan. After a thorough review, the team believes the OC and ERO plans are fully aligned. In the process of conducting the review, the team noted a few observations on the OC Strategic Plan:
 - a. There is an opportunity to make clarifying changes to improve the plan without making substantive changes.
 - b. There is an opportunity to enhance the plan by adding metrics.
 - c. With the rapidly changing resource portfolio, including increasing Distributed Energy Resources (DERs), the team recommends the OC reviews progress on and consider being more proactive in achieving Goal - OC 1.

The OC will consider these observations during the next OC Strategic Plan revision.

4. Reliability Guidelines and Reference Documents – The OC has developed and approved, Reliability Guidelines and Reference Documents addressing:
 - a. Reliability Guideline for Operator Recognition - Cyber Intrusion into Operating System to provide System Operators with information on the recognition of cyber intrusion into their operating systems.
 - b. Methods for Establishing Interconnection Reliability Operating Limits (IROLs) Reliability Guideline which was developed by the Methods for Establishing IROLs Task Force to provide guidelines for developing such limits.
 - c. BPS-Connected Inverter-Based Performance Reliability Guideline which was developed by the Inverter-based Resource Performance Task Force (IRPTF) to address issues relating to inverter based resource performance during the Blue Cut Fire.

- d. Reliability Coordinator Reliability Plan Reference Document was developed by the ORS to address the review and endorsement of Reliability Coordinator (RC) Reliability Plans.
 - e. Reliability Guideline: Generating Unit Operations During Complete Loss of Communications was reviewed and update.
 - f. Reliability Guideline Loss of Real-Time Reliability Tools Capability / Loss of Equipment Significantly Affecting ICCP Data was retired as its contents are duplicated in the Risks and Mitigations for Losing EMS Functions Reference Document.
5. OC Charter – The OC reviewed and revised its charter. The revisions include references in the Appendix 3 to the new Operating Committee *Reliability Guideline and Reference Document Communication Process* and also removes references to the SPP Regional Entity.

OC's Major Initiatives for 2018

1. Reliability Guidelines and Reference Documents – Each subcommittee will develop a summary for each of the Reliability Guidelines and Reference Documents under their purview. The OC has also established a team to develop a formal roll-out process for new or revised documents to include industry webinars to inform industry. The OC is developing, or has developed, Reliability Guidelines and Reference Documents addressing:
 - a. A revision to the Reliability Guideline: Primary Frequency Control to include asynchronous generation. The OC authorized posting the revised Guideline at the December, 2018 meeting.
 - b. Develop a Reliability Coordinator Reliability Plan Reference Document to review and approve reliability plans. The OC approved the Reference Document at the December, 2018 meeting.
 - c. Reliability Guideline: Generating Unit Operations during Complete Loss of Communications per OC Charter requirement to review all Reliability Guideline and Reference Documents at least once every three years. The OC approved the guideline at the December, 2018 meeting.
 - d. Reliability Guideline: Loss of Real-Time Reliability Tools Capability/Loss of Equipment Significantly Affecting ICCP Data per the OC Charter requirement to review all Reliability Guidelines and Reference Documents at least once every three years. The OC retired the guideline at the December, 2018 meeting as its contents, as well as other valuable information, are contained in the Risks and Mitigations for Losing EMS Functions Reference Document which was approved in December, 2017.
 - e. NERC Balancing and Frequency Control Reference Document will be reviewed and determine whether to update this document or retire, if the topics are addressed in other reference documents.
2. Operating Reliability Subcommittee (ORS) – The ORS will continue to focus on regular review, update, and communication of Reference Documents and Reliability Guidelines within its area of responsibility and is working on several new guideline development initiatives. The ORS will also continue to prepare for implementation of the Interchange Distribution Calculator (IDC) Parallel Flow Visualization (PFV) field trial.

3. Resources Subcommittee (RS) – The RS will review and revise several reliability guidelines, reference documents and training guides under its purview. The RS will also provide ongoing support of the NERC Planning Committee’s (PC) Performance Analysis Subcommittee metric M4, Interconnection Frequency Response for the annual State of Reliability Report
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 will also review and revise the Reliability Guideline: Generating Unit Winter Weather Readiness.
5. Personnel Subcommittee (PS) – The PS has started development of the Continuing Education Program Manual, Version 5.0.
6. 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 2018 Meeting Summary:

The following is a summary of the OC’s December 2018 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 [September 2018 OC Meeting Minutes](#) are posted on the NERC website.

1. Joint OC/PC Meeting – A joint meeting of the OC and PC was held from 10:00 a.m. to 12:00 p.m. on December 11, 2018. The agenda for the joint session allowed the committees to discuss agenda items of mutual interest to both committees which included:
 - a. NERC Strategic Direction– Mark Lauby, NERC
 - b. Remarks – Billy Ball, Southern Company
 - c. Revised Participant Conduct Policy – Marisa Hecht, NERC Staff
 - d. Inverter-based Resource Performance Task Force – Al Schriver, Chair IRPTF
 - e. PJM Fuel Security Analysis - David Souder, PJM
 - f. Composite Generation and Transmission Analysis – David Till, NERC Staff
2. OC Executive Committee (OC EC) action on IRPTF Gaps Whitepaper and SAR – Chair Linke informed the OC of the OC EC actions regarding the IRPTF documents. The OCEC voted to endorse the IRPTF Gaps Whitepaper and SAR and requested that the NERC SC post the SAR for a formal comment period. The OC voted to ratify the OCEC action.
3. Operating Reliability Subcommittee – ORS Chair David Devereaux summarized the subcommittee’s status report which was included in the agenda package. Highlights of the report include:
 - a. The ORS approved minor changes to the PJM, MISO, and VACAR South Reliability Plans. The minor changes to the PJM and MISO plans were required due to the OVEC Balancing Area moving from MISO to the PJM RC area. The VACAR plan has been updated to align with terminology used in current standards.
 - b. The ORS has been reviewing the development of the California ISO Reliability Plan. The draft is largely complete, and will be finalized once the RC footprint for the area is settled.

- c. The chairs of ORS and RS presented overviews of the activities of their respective Subcommittees at each other's recent meetings. The groups will continue to look at ways to assist each other with their work plans.
- d. ORS continues to receive updates from the EIDSN Steering Committee on the IDC Tool enhancements. Specifically, the PFV project is intended to improve the data quality used by the IDC during curtailment of transactions and may eventually result in changes to both NERC Reliability Standards and NAESB Business Practices. The 12-18 month field trial began on schedule in September 2017. Throughout the field trial, ORS will receive updates on tool performance from the IDC Working Group (IDCWG). The IDCWG has advised that there is a slight risk to the project schedule due to the volume of work required by the member companies. However, the group still feels that the PFV should be ready for OC approval at its June 2019 meeting.
- e. ORS members discussed operational impacts and observations related to severe weather events through fall 2018.
- f. The Time and GMD Monitor roles will transition from FRCC to Saskatchewan Power on February 1, 2019. ORS has been working with both parties to ensure a smooth transition.

OC Approval items:

- The Reliability Coordinator Reliability Plan Reference Document was approved.
 - The ORS Scope document was approved.
4. Resources Subcommittee – RS Chair Tom Pruitt provided an overview of subcommittee's status report. Highlights of the report include:
 - a. RS Frequency Working Group (FWG) – The FWG selected M4 and BAL-003-1 frequency events for June 2018, July 2018, and August 2018 for the Interconnections.
 - b. RS Inadvertent Interchange Working Group (IIWG) – An update on the interconnection inadvertent interchange was provided and balances continue to trend downward. The Eastern Interconnection (EI) trend beginning near the end of 2017 continues, but the rate of the trend dropped by approximately 50 percent in August. The cause(s) continues to be investigated.
 - c. Reserves Working Group (RWG) – Chair Tony Nguyen reviewed the voluntary DCS submittal process for BAL-002-2. Additional changes to the form to accommodate BA footprint changes were reviewed and implemented.
 - d. Generator Survey – The EI scrubbed results were reviewed and a webinar to cover the results for all Interconnections and best practice guidance for resource operators was held on November 13.
 - e. BA Performance Data – The RS reviewed the BAL-001 CPS1 and BAAL Data submitted for the third quarter of 2018. Additional outreach will continue to help BA reconcile issues with CPS 1 and BAAL calculations. A presentation on issues and lessons learned for certain BAs was covered.
 - f. Time Error – The RS reviewed the four Interconnection time error reports for the third quarter of 2018. Manual time error correction for the EI and Western Interconnection (WI) continues to experience mostly fast corrections. The RS will

continue to monitor time error, BA's inadvertent balance changes, and mismatches of NIS and NIA between BAs.

- g. Quarterly review of ERS Measures – Measures 1, 2, 4, and 6 were reviewed. A sub-team will review additional refinements in analysis and possible additional sub-measures.
- h. Quarterly Review of Interconnection Frequency Performance – performance for all the Interconnections was reviewed. Other than the event noted above, no significant issues were noted.
- i. Changes in BA Area Footprints – In the EI, integration of OVEC into PJM Balancing Area RC occurred on December 1, 2018.
- j. BAL-002 Standards Authorization Request (SAR) – At the September 2018 OC meeting, Howard Gugel requested the OC provide input relating to the technical merits of a recently submitted SAR for revisions to Reliability Standard BAL-002. Chair Linke assigned the review to the RS. The RS reviewed the SAR at their October meeting and reported back the following:

“Standard Authorization Request for BAL-002-3: The Resources Subcommittee opinion on the soundness of the request is that the SAR should not go forward as written. The recommended modification of R1.1 of this standard to include interconnection frequency assessment will modify the original intent of standard, which is the demonstration of the deployment of reserves to recover from Reportable Balancing Contingency Events (RBCEs). However, the concerns raised in this SAR can be addressed by other means.”

The OC will follow up with a discussion and resolution at the March meeting with a report out to the NERC Standards Committee.

OC Approval Items:

- The OC authorized posting the NERC Primary Frequency Response Guideline Document for a 45-day comment period.
 - The RS Scope Document was approved.
 - The OC authorized posting NERC Balancing Authority Area Footprint Change Tasks Reference Document for a 45-day comment period.
5. Events Analysis Subcommittee – EAS Chair Rich Hydzik provided an overview of the subcommittee's status report. Highlights of the report include:
- a. EAS lesson learned presentation on the use of drones in the industry.
 - b. Data Exchange Infrastructure Requirements Task Force (DERTF) update on the clarification of “redundant and diversely routed” language and testing requirements from TOP-001-4, R20 and R21.
 - c. The 2019 Monitoring and Situational Awareness Technical Conference is scheduled for September 24-25, 2019 at Southwest Power Pool in Little Rock, AR. An announcement will be sent out to industry in the second quarter of 2019 with the conference registration links and travel information, this information is also available on the NERC calendar.

- d. 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.

OC Approval items:

- Reliability Guideline: Generating Unit Operations During Complete Loss of Communications (Item 5ci) was approved.
 - Reliability Guideline Loss of Real-Time Reliability Tools Capability / Loss of Equipment Significantly Affecting ICCP Data (Item 5cii) was retired
6. Personnel Subcommittee – Vice Chair Leslie Sink summarized the subcommittee’s status report which was included in the agenda package. Current Initiatives/Deliverables:
 - a. 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.
 - b. The PS is reviewing Continuing Education Review Panel (CERP) membership.
 - c. Keith Carman presented information regarding a proposal to move from the existing four certification exams and certification credentials to one single NERC Certified System Operator exam. He noted that over 72 percent of all credentials held today are at the Reliability Coordinator level. In an effort to reduce cost and improve efficiencies, there is a proposal to move to a single certification credential that would provide the fundamental knowledge required to maintain reliability of the bulk electric system for **any** operator function. The Personnel Certification Governance Committee (PCGC) will post the whitepaper explaining the details of this effort for comment in February 2019. The PCGC is encouraging industry review and support of the whitepaper.
 7. Reliability Assessments Subcommittee (RAS) – Chair Tim Fryfogle provided an update on RAS activities. Highlights include:
 - a. Risk Elements
 - i. NERC should coordinate with Planning Coordinators to continually review existing and to identify new planning methods and tools needed to respond to the changing system.
 - (1) Completed-Discussed with RAS at November meeting, group feels the narrative questions from the Long-Term Reliability Assessment (LTRA) supply the information needed.
 - ii. The ERO Enterprise and industry should continue to assess vulnerabilities from fuel availability as part of evaluating adequacy and capability to deliver resources.
 - iii. Review analytic data trend insights regarding resilience under severe weather conditions, identifying preventable aspects for BPS reliability.
 - (1) Sub-Teams formed-In progress
 - b. PAWG Work Plan
 - i. 2018 ProbA Presentations

- (1) Base Case Integration into LTRA
- (2) PAWG review scenarios on Nov 20
- (3) Assessment areas to produce a report
 - (a) Links to be provided to NERC - Q1 2019
- c. Data Collection Approaches and Recommendations Report
 - i. Finalized the scope and schedule Q1-2019
 - ii. RAS to review scope at the April Face to Face meeting
8. Industry Outreach efforts – In order to better coordinate activities within industry, the OC invited representatives from the NAGF and the NATF to participate in the December, 2018 meeting. Al Schriver of the NAGF and Ken Keels of the NATF provided an overview of their respective industry activities.
9. Lessons Learned – Rick Hackman, NERC Staff presented a lessons learned (which is still under development) regarding the use of drones in industry. Some entities have begun using Unmanned Aerial Vehicles (UAV), a.k.a. "Drones," for various purposes, such as storm damage survey, line repair, station & line inspections, and security. Most transmission tasks currently done with helicopters can be done with drones cheaper, safer, and with more schedule flexibility. Not all entities are taking advantage of the potential benefits of drones due to a number of factors. Rick anticipates completing and publishing the Lessons Learned in the first quarter of 2019.
10. NERC Operating Reliability Data (ORD) Confidentiality Agreement and Data Confidentiality – Meredith Jolivert, NERC Legal provided an update on the ORD as well as current activities being undertaken by NERC with respect to data confidentiality. NERC Plans to post a redline data confidentiality agreement in the first quarter of 2019 based on the 2016 Peak RC Universal Data Sharing Agreement.
11. Past OC Chairs Roundtable – Past OC Chairs Jim Castle and Jim Case were present to share their insights on the following topics:
 - a. What were some of your biggest challenges, what are you most proud of during your tenure, what seemed insurmountable but was able to be completed with herculean effort in record time?
 - b. What did you not get done that you wanted to get done? Any hanging chads? What part of the process needs to be changed to allow movement in the desired direction?
 - c. What about our current challenges? The rate of change has become exponential. CPP< ERSTF, Natural gas dependence, traditional generation retirements, renewable proliferation etc.
12. WECC Reliability Coordinator Update – The OC was provided updates on activities in the WECC regarding Reliability Coordinators.
 - a. Steve Ashbaker, WECC Staff, provided an update on the activities relating to the RC initiatives in WECC. The projected "go live" dates are:
 - i. CAISO (California footprint) - July 1, 2019
 - ii. BC Hydro (BC Province) - September 2, 2019

iii. CAISO (Expanded Footprint) - November 1, 2019

- b. SPP – CJ Brown provided an update on the progress of developing the SPP RC in the WI. SPP is working to complete RC transition from PEAK RC to SPP RC for the 16 entities who have signed with SPP to provide RC Services starting December 3, 2019.
- c. FRCC Update – Glenn Dooley, Duke Energy Florida, informed the OC that the FRCC Board of Directors voted to dissolve the FRCC Regional Entity in October, 2018. FRCC is working to transition entities to SERC Regional Entity with a target implementation date of July 2019. FRCC will continue as Reliability Coordinator and Planning Authority and continue to provide member coordination activities.

Planning Committee Report

Action Information

The Planning Committee (PC) is pleased to provide this update to the Board of Trustees (Board) for their review.

Forward Perspectives

- **Fuel Assurance Planning Guidance and Electric/Gas Working Group**
No Board Approval Required

In January, the PC leadership held a strategic planning meeting to begin development of a reliability guideline that identifies planning approaches that address fuel assurance and mitigation of fuel disruption risk to the reliable operation of the Bulk Power System. Participants included subject matter experts from ISO/RTOs, electric utilities, generator owners, and the natural gas industry, as well as various power and energy trade group representatives. Outcomes from this meeting are being used by the PC to expeditiously develop a technically strong Reliability Guideline and establish an electric/gas working group to support implementation of the tasks that PC leadership presented to the NERC Board at the November Board meeting.

- **PC Activities Addressing System Reliability with Increasing Distributed Energy Resources (DER)**
No Board Approval Required

The PC approved the work scope for the new System Planning Impacts from Distributed Energy Resources Working Group (SPIDERWG) at the December PC meeting. The SPIDERWG has conducted several phone meetings and had its first face-to-face meeting in January. The work scope for the group has been further divided into four subject matter areas (Coordination, Modeling, Studies, Verification). Between the onsite participation and those on the phone in the first meeting, we estimate that there were over 200 persons (at the high point) in the discussions and no less than a 100 during the meeting. There was active participation across the board, including several distribution-based entities who wanted to be further engaged in the topics. The agenda not only addressed the work scope for our deliverables, but also included topical and comparable information from other DER efforts in Canada, Europe, Hawaii, Australia, and Columbia. Information relating to the SPIDERWG activities can be found on the team's [project page](#) on the NERC website.

- **Geomagnetic Disturbance (GMD) Mitigation**
No Board Approval Required

The NERC GMD Task Force (GMDTF) continues to engage in the FERC Order No. 830 Research Work Plan led by the Electric Power Research Institute (EPRI). In November 2018, FERC issued Order No. 851 which included approval of the GMD Research Work Plan. EPRI research activities provide continued analysis, sensitivity testing, and model development in support of Reliability Standard TPL-007 and the Benchmark GMD Event.

The GMDTF reviews and provides feedback on EPRI research reports, and is developing data reporting guidance to implement the Board-approved NERC Rules of Procedure Section 1600 Data Request. The GMD Research Work Plan will continue through Q1 2020.

- **Synchronized Measurement Data Application Guidance**

- *No Board Approval Required*

The PC is reviewing draft technical reference documents developed by the Synchronized Measurements Subcommittee (SMS) that provide entities with information to support reliability applications for high resolution synchronized measurement data, such as from Phasor Measurement Units (PMUs). Entities employ high resolution synchronized measurement data for enhanced BPS monitoring, situational awareness, and event analysis. The PC is currently reviewing:

- *White Paper: Recommended Disturbance Monitoring for Inverter-Based Resources.* This white paper provides best practices based on disturbance analyses of recent events involving inverter-based resources, including the Blue Cut Fire and Canyon 2 Fire.
- *White Paper: State Estimation Using PMU Measurements.* The document provides descriptions and high level considerations for the application of PMUs in BES state estimation.
- *Interconnection Oscillation Analysis Report.* For this report, PMU data provided by Reliability Coordinators in each interconnection was used to analyze system oscillatory characteristics during actual system events.

The PC expects completing the work outlined above in 2019.

- **Planning Committee Work and Project Strategic Planning Session**

- *Information Item*

The Planning Committee Executive Committee will be conducting a strategic review of its current work plans and slated subgroup activities in April. This review will examine all of the work assignments and tasks that each subgroup has identified as a part of its own work scope. The effort will be to recognize those priorities that will be needed to bolster immediate reliability and/or resilience needs in 2019, and also to establish timelines for future expectations.

Recently Completed Committee Activities and Initiatives

- **Potential Gaps in Reliability Standard PRC-024-2 for BPS-connected Inverter-Based Resources.**

- *No Board Approval Required*

PC and Operating Committee (OC) submitted a Standards Authorization Request (SAR) to the NERC Standards Committee (SC) in December to initiate a standards development project for Reliability Standard *PRC-024-2 – Generator Frequency and Voltage Protective Relay Settings*. The SAR and an associated white paper were developed by the Inverter-Based Resource Performance Task Force (IRPTF) to address potential gaps in the standard related to BPS-connected inverter-based resources. The SAR supports addressing issues identified in the Blue Cut Fire and Canyon 2 Fire events, which resulted in tripping of solar photovoltaic (PV) resources.

- **PC Member Review of Policy for Handling Embargoed Material**

- *No Board Approval Required*

PC Leadership held a closed meeting of the PC on December 11, 2018, to review responsibilities for handling embargoed assessment reports during the development and review process. To complement the policy restrictions that prohibit sharing embargoed drafts, PC leadership and NERC staff are exploring technology solutions (e.g., encryptions, password protection) that can be employed during PC review periods.

Future Meetings

- March 5-6, 2019 – Pittsburgh, PA
- June 4-5, 2019 – Location TBD
- September 10-11, 2019 – Location TBD
- December 10-11, 2019 – Atlanta, GA

Critical Infrastructure Protection Committee Report

Action

Information

Background

Critical Infrastructure Protection Committee (CIPC) regular update to the Board of Trustees.

December 2018 Meeting Summary:

The following summary of CIPC's December 2018 meeting highlights the committee's key activities and its associated subcommittees in support of NERC or CIPC mission and corporate goals. The December 2018 CIPC Meeting Minutes will be posted on the NERC website.

- 1. Guidance to Industry – CIPC will undertake several projects in 2019 to address security and compliance guidance for industry stakeholders**
 - a. A whitepaper on utility essential security practices will address key security measures from a utility's perspective. The goal is to have the document approved by Q4 2019.
 - b. CIPC's Supply Chain Working Group (SCWG) will continue helping industry prepare for implementing CIP Reliability Standard CIP-013-1, Supply Chain Risk Management. The SCWG is preparing guidance and recommendations for industry and its suppliers.
- 2. Supply Chain security** – As the SCWG develops the guidance documents that are mentioned above, the critical issues identified in the EPRI Supply Chain Risk Assessment Report are key considerations. SCWG members are also supporting and supported by various departments within NERC in supply chain security efforts, such as outreach, document review, risk identification, etc.
- 3. Addressing security threats** – While the Electricity Information Sharing and Analysis Center (E-ISAC) and other sources report an increasing number of targeted efforts to breach network devices and systems, there are tools and processes available to help identify and defend against those attacks. Presentations to the Committee included examples of defense mechanisms and information sharing from organizations such as Idaho National Laboratories and EPRI.
- 4. Security Guidelines** – The Control System Security Working Group (CSSWG) reviewed results of a survey that asked CIPC members to identify their primary interests and concerns. The information will be useful for establishing priorities for the development of security guidelines, training classes, and similar activities.
- 5. Collaboration with Department of Energy** – CIPC members heard details about a pilot project that is sponsored by DOE's Office of Cybersecurity, Energy Security, and Emergency Response. "Cyber Testing for Resilience of Industrial Control Systems" (CyTRICS) will identify vulnerabilities or malicious behavior in energy technologies.
- 6. CIP Modification Team Updates** – The status update about standards development took a different approach than usual as CIPC members engaged in a feedback discussion led

by the CIPC vice chair (who also serves as chair of the CIP Modification drafting team). The drafting team’s efforts to address the protection of virtual systems and networks prompted a lengthy and substantive discussion.

7. **CIPC Executive Committee (EC)** – The EC developed work plan additions for 2019 were reviewed and adopted.

8. **Key Activities and Initiatives for 2018 and 2019:**

Strategic Input	Activity
<p>ERO Enterprise Long-term Strategy Focus Area #5 ERO Reliability Risk Priority - Risk Profile #8 & #9</p>	<p>Identification and reduction of cyber and physical security risks while improving resilience:</p> <p>Implementation guidance:</p> <ul style="list-style-type: none"> • Voice communications in environments that that are subject to compliance with the CIP Reliability Standards • Using cloud computing in a secure and compliant manner <p>Reliability guidelines:</p> <ul style="list-style-type: none"> • Physical security considerations for high-impact control centers • Security considerations during extreme events
<p>FERC-Led Audits Compliance Report</p>	<p>Assess the cyber security risk of Fuel Handling SCADA systems for Generation:</p> <ul style="list-style-type: none"> • Reliability Guidelines to address risks associated with control system security for natural gas distribution systems
<p>Remote Access Study Report</p>	<p>Address Remote Access Security Findings #1-#18</p>
<p>GridEx Planning & Preparation</p>	<p>Collaborate with the E-ISAC and industry stakeholders to plan for the next GridEx and share lessons learned.</p>
<p>Supply Chain Risk Management</p>	<p>Vendor Essential Security Practices Model.</p>
<p>Supply Chain Risk Management</p>	<p>Legacy system testing coordination with National Labs.</p>
<p>CIP-014 High Impact Control Center Report</p>	<p>Security practices for High Impact Control Centers.</p>
<p>CIPC Priority Topic <i>in coordination with PC</i></p>	<p>Reduction in asset criticality by developing design standards.</p>
<p>CIPC Priority Topic</p>	<p>Key management security guideline.</p>

Personnel Certification Governance Committee Report

Action

Information

Background

This report summarizes the key activities of the Personnel Certification Governance Committee (PCGC) during 2018. The PCGC meets four times per year. Standing Task Force meetings via conference call and/or WebEx are held as needed between meetings. The November 2018 meeting minutes are under review and pending approval.

Exam Development Activities Scheduled for 2019

- Items Review/Analyze Statistical Performance Jan-Dec 2019
- Write New Items Mar-Dec 2019
- Item Writing Workshop May 2019

Strategic Planning

The PCGC focused on analyzing the results of the System Operator Certification Program survey for the main portion of 2018. The first recommendation, from the survey results and over five years of program statistics, is converting back to one credential. The PCGC developed a white paper that will be published during first quarter 2019. An overview of the white paper was presented to the Operating Committee (OC) during its December 2018 meeting.

The PCGC will continue to review and analyze the survey results. The committee will use the data points to establish appropriate white paper topics to present to industry. The number of white papers remains to be determined by the committee. The expectation is a broad range of topics; including credential maintenance, recertification requirements, and length of certification period.

System Operator Certification Continuing Education Database (SOCCED) Update

The following enhancements have been deployed during Q4 of 2018:

- Username/Password Retrieval: All users are able to retrieve their username/password by entering the email address in the SOCCED account
- Lock Renew Button: To prevent multiple certificate renewal purchases
- Duplicate Candidate/System Operator Account Detection
- Duplicate CEH Upload Prevention
- Elimination of segment deletions
- Provider ability to sort and export transcript reports

The goal is for each user type to benefit from the monthly enhancements. As budget and resources allow, additional enhancements will be developed and deployed throughout the year. As updates occur, prioritization of the enhancements may change.

Certification Program Fees Adjustment

Effective January 1, 2019, the examination fee for all System Operator Certification exams increased from \$600 to \$650. The fee to renew any System Operator Certification credential increased from \$350 to \$400.

2018 Completed Tasks

- Implementation of Strategic Plan
- Enhancements to new SOCCED platform
- Analyzed JTA results and recommendations
- Analyzed System Operator Certification Program survey results and recommendations
- One Credential White Paper (Publication Q1_2019)

Standards Committee Report and Work Plan

Action

Approve the Standards Committee 2019 Work Plan.

Summary

Attached is the Standards Committee Quarterly Report highlighting activities over the last quarter, as well as the Standards Committee 2019 Work Plan for Board of Trustees consideration and approval.

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Reliability Standards

Quarterly Report

February 07, 2019

RELIABILITY | ACCOUNTABILITY



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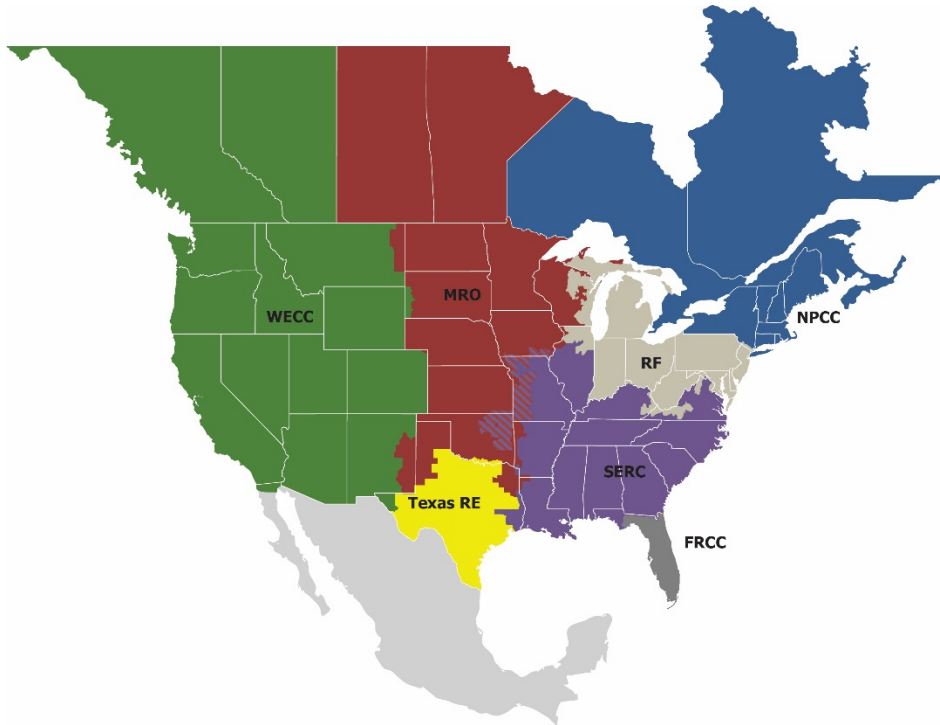
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Preface

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

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



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

Chapter 1 Standards Development Forecast (Continent-wide)

Board Forecast for Standard Projects in Active Development

February 2019

- Project 2018-01: Canadian-specific Revisions to TPL-007-2
- Project 2018-02 Modifications to CIP-008 Cyber Security Incident Reporting

May 2019

- Project 2016-02: Modifications to CIP Standards (CIP-003 directive on malicious code and CIP-002 update)
- Project 2017-01: Modifications to BAL-003-1.1

August 2019

- Project 2015-09: Establish and Communicate System Operating Limits
- Project 2016-02: Modifications to CIP Standards (Revisions related to Transition Advisory Group Identified Issues, virtualization, and CIP Exceptional Circumstances)
- Project 2017-07: Standards Alignment with Registration

November 2019

- Project 2018-04: Modifications to PRC-024-2

ANSI Reaccreditation

In November 2018, the NERC Board of Trustees approved revisions to the NERC Standard Processes Manual, Appendix 3A to the NERC Rules of Procedure. These revisions are currently pending regulatory approval. Following the receipt of regulatory approval, NERC will begin the process of seeking reaccreditation of its revised Standard Processes Manual in accordance with the accreditation processes of the American National Standards Institute (ANSI).

Projects with Regulatory Directives

Table 1 below, lists the current projects with regulatory directives. As of January 14, 2019, there are 7¹ standards-related directives to be resolved through standards development activities (not including non-standards related directives).

Project	Regulatory Directives	Regulatory Deadline
Project 2015-09 Establish and Communicate System Operating Limits	2	N/A
Project 2016-02 Modifications to CIP Standards (CIP-003 revisions for malicious code)	1	N/A
Project 2018-02 Modifications to CIP-008 Cyber Security Incident Reporting	1	4/1/2019

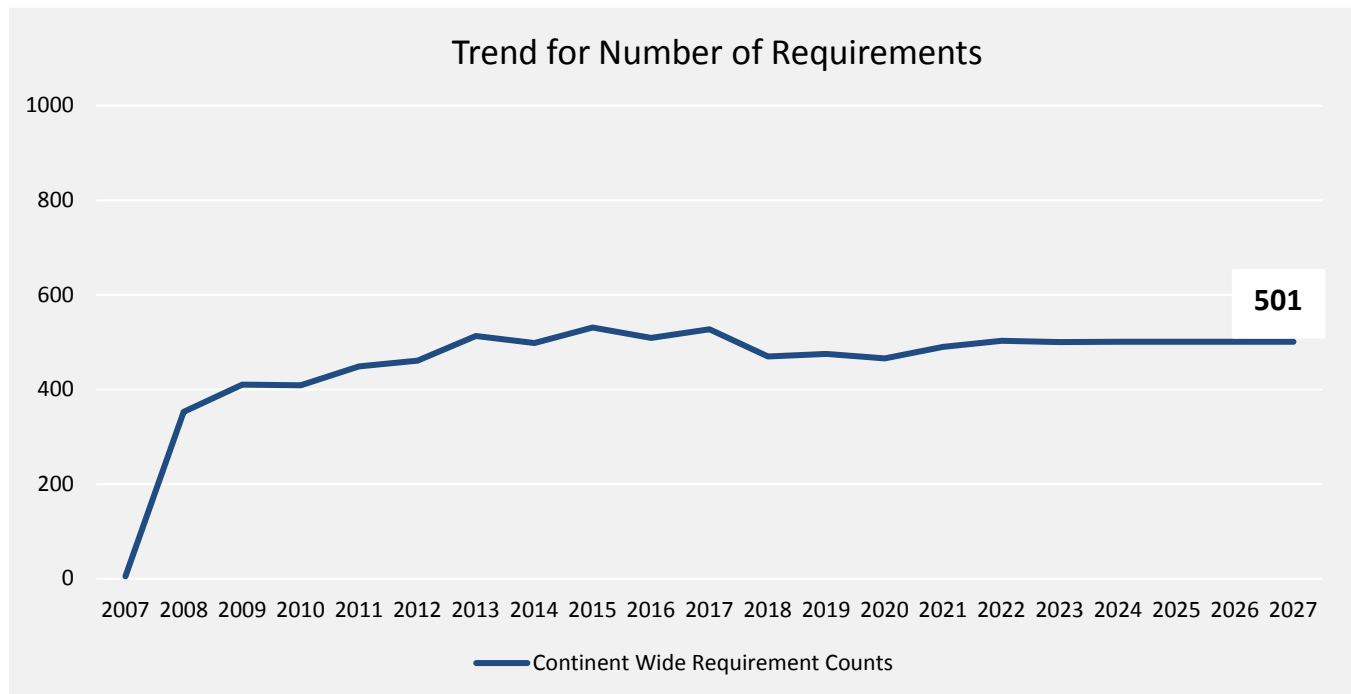
¹ In addition to the projects listed in Table 1, there are two directives for GMD event vulnerabilities and one directive for Supply Chain that will be addressed in upcoming projects.

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*² 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 Requirements for Continent-Wide standards, while Figure 2 displays Regional Reliability Standards.³ Standards with variances were not included in the requirement count. Projections from projects that include standards currently under development, and board adopted standards are also included in the total number of requirements based on their projected effective date.⁴

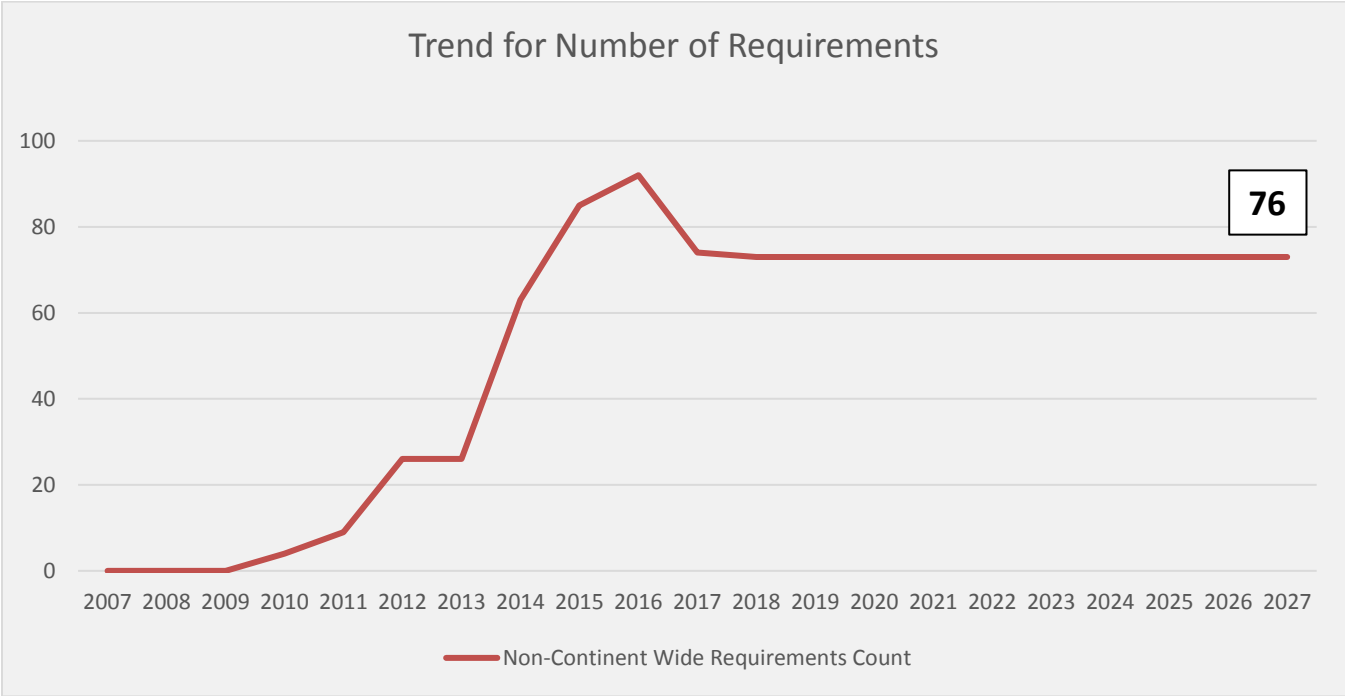
The trend for total number of requirements indicates a constant flat trend line for the last four years, with a slight decline from 2017 to 2018 for Continent-wide standards, and a significant decline in total number of requirements from 2016 to 2017 for Regional Reliability standards. Figure 1 indicates a total of 499 continent-wide requirements; Figure 2 indicates a total of 76 Regional Reliability standards forecast for 2027.



² Available from the Standards section of the NERC website: <http://www.nerc.com/pa/Stand/Pages/default.aspx>

³ Charts were developed using end of Q3 2018 data.

⁴ These projects include the following: 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 2016-02 (CIP-003-7(i))



Chapter 2 Regulatory Update

NERC Regulatory Update- Standards July 1, 2018 – September 30, 2018

NERC FILINGS TO FERC

FERC Docket No.	Filing Description	FERC Submittal Date
RM18-16-000	Petition for Approval of PER-003-2 and Retirement of Reliability Standard PER-004-2 NERC submitted a petition for approval of proposed Reliability Standard PER-003-2 (Operating Personnel Credentials) and retirement of currently-effective Reliability Standards PER-003-1 and PER-004-2.	7/23/2018
RM18-8-000	Comments of NERC in Response to Notice of Proposed Rulemaking NERC submitted comments on the Notice of Proposed Rulemaking regarding proposed Reliability Standard TPL-007-2 (Transmission System Planned Performance for Geomagnetic Disturbance Events) issued by FERC on May 17, 2018.	7/23/2018
RD18-7-000	Petition of NERC for Approval of Proposed Reliability Standard BAL-002-3 NERC submitted a petition for the approval of proposed Reliability Standard BAL-002-3 (Disturbance Control Performance - Contingency reserve for Recovery from a Balancing Contingency Event), the Implementation Plan and the retirement of currently-effective Reliability Standard BAL-002-2. Comments are due by 9/10/2018.	8/17/2018
RR10-1-000 RR13-3-000	Annual Report of NERC on Wide-Area Analysis of Technical Feasibility Exceptions NERC submitted the 2018 Annual Report on Wide-Area Analysis of Technical Feasibility Exceptions in compliance with Paragraphs 220 and 221 of FERC's Order No. 706.	9/28/2018

FERC Docket No.	Filing Description	FERC Submittal Date
RM18-20-000	Petition of NERC for Approval of Proposed Reliability Standard CIP-012-1 NERC submitted a petition for approval of proposed Reliability Standard CIP-012-1 - Cyber Security - Communications between Control Centers.	9/18/2018
RM17-13-000	Informational Filing regarding Proposed Supply Chain Risk Management Reliability Standards NERC submitted an informational filing regarding Proposed Supply Chain Risk Management Standards as directed by FERC in its NOPR on Jan. 18, 2018.	9/07/2018
RD18-8-000	Petition of NERC for Approval of Proposed Reliability Standard VAR-001-5 NERC submitted a petition for approval of proposed Reliability Standard VAR-001-5 (Voltage and Reactive Control).	9/06/2018

FERC ISSUANCES

FERC Docket No.	Issuance Description	FERC Issuance Date
RD18-8-000	Order Approving Proposed Reliability Standard VAR-001-5 (Voltage and Reactive Control) FERC issued an order approving Reliability Standard VAR-001-5 (Voltage and Reactive Control).	10/15/2018
RM17-13-000	Order No. 850 on Supply Chain Risk Management Reliability Standards FERC issued a final rule approving supply chain risk management Reliability Standards CIP-013-1 (Cyber Security - Supply Chain Risk Management), CIP-005-6 (Cyber Security - Electronic Security Perimeter(s)) and CIP-010-3 (Cyber Security - Configuration Change Management and Vulnerability Assessments). Additionally, the Commission directed NERC to develop and submit modifications to the supply chain risk management Reliability Standards so that the scope of the Reliability Standards includes Electronic Access Control and Monitoring Systems.	10/18/2018
RM18-8-000 and RM15-11-003	Order No. 851 on Geomagnetic Disturbance Reliability Standard; Reliability Standard for Transmission System Planned Performance for Geomagnetic Disturbance Events FERC issued a final rule approving proposed Reliability Standard TPL-007-2 (Transmission System Planned Performance for Geomagnetic Disturbance Events) ("GMD"). FERC also accepted the revised GMD research work plan.	11/15/2018
RD18-9-000	Letter Order Approving Reliability Standard PER-003-2 FERC issued a delegated letter order approving Reliability Standard PER-003-2 and retirement of currently-effective Reliability Standards PER-003-1 and PER-004-2.	11/21/2018

Chapter 3 Standards Committee Report

Summary

At its October 17 meeting, the Standards Committee (SC): (1) authorized posting of proposed revisions to the NERC Standard Processes Manual (SPM), (2) appointed members to the standard drafting team (SDT) for Project 2018-03 Standard Efficiency Review Retirements, and (3) endorsed a Reference Inventory Project for the SC Process Subcommittee (SCPS).

At its November 14 meeting, the SC: (1) authorized an initial posting for Project 2017-01 Modifications to BAL-003-1.1 (Frequency Response and Frequency Bias Settings), and (2) endorsed two projects of the SCPS -- Review of Standard Grading Spreadsheet and Review of the Single Portal.

At its December 12 meeting, the SC approved its 2019-2021 Strategic Plan. In addition, the SC: (1) approved a process to elect its three-at-large Standards Committee Executive Committee members, (2) accepted the Standard Authorization Request (SAR) for PRC-024-2 (Generator Frequency and Voltage Protective Relay Settings) and authorized posting it for formal comment, (3) authorized soliciting nominations for Project 2018-04 Modifications to PRC-024-2 SAR drafting team (DT), (4) rejected a Request for Interpretation for MOD-026-1 (Verification of Models and Data for Generator Excitation Control System or Plant Volt/Var Control Functions), (5) rejected a Request for Interpretation for EOP-004-3 (Event Reporting), (6) endorsed for publication the Functional Model (version 5.1) and Functional Model Technical Document (version 5.1) and (7) discussed whether to pause future work by its Functional Model Advisory Group.

2019-2021 Standards Committee Strategic Work Plan

Introduction

The 2019-2021 Standards Committee (SC) Strategic Work Plan (Plan) focuses Standards development activities on: (1) addressing Federal Energy Regulatory Commission (FERC) directives, (2) continuing Periodic Reviews (PRs), and (3) addressing emerging risks using input from various sources, including the Reliability Issues Steering Committee (RISC). The SC will continue: (1) providing oversight for standards grading activities evaluating Standards for quality and content, and (2) prioritizing standards development activities.

Emerging Risks

With input from NERC technical committees, the RISC, or a governmental authority (such as FERC), the SC manages the development of Reliability Standards, as appropriate.

Vision, Mission and Guiding Principles

Vision

A comprehensive body of Reliability Standards that collectively supports the goal of achieving an adequate level of reliability and promotes the reliable operation of the North American bulk power system.

Mission

To effectively manage and oversee development of a comprehensive set of Reliability Standards aligned with NERC's strategic goals through open and inclusive processes and procedures.

Guiding Principles

- Consistent with the 2018-2020 Reliability Standards Development Plan (RSDP), this Plan recognizes the RSDP is primarily focused on addressing a small number of FERC directives, PRs and emerging risks. The details of the goals and objectives appear in the RSDP.
- To promote and implement a collaborative working environment with other NERC Standing Committees, NERC Standards staff, stakeholders and Standard Drafting Teams.
- To execute the Standards development process for effective and efficient use of NERC and industry resources.
- To promote and take a leadership role on consensus-building activities.

Work Plan

Task No. 1 – Periodic Reviews

- The Project Management and Oversight Subcommittee (PMOS) and NERC staff will use the 2018 Periodic Review Standing Team’s grading of Standards to prioritize and schedule the 2019 PRs and submit them to the SC for endorsement by the end of February 2019.

Task No. 2 – Standards Grading

- NERC staff and the SC chair or delegate (acting in the capacity of Standing Team facilitator) will start the 2019 Standards grading as soon as practicable to allow time for conducting and commenting on the grading. NERC staff will present the Standards grading to the SC as an attachment to the RSDP. If possible, the grading should be completed by June 2019, but no later than the end of August 2019, to coordinate with the development of the 2020-2022 RSDP.

Task No. 3 – Guidelines and Technical Basis Transition

- The Standards Committee will continue to work with NERC Staff and stakeholders to review Guidelines and Technical Basis documents for transition to Technical Rationale documents and/or Implementation Guidance.

Task No. 4 – Standards Committee Process Subcommittee (SCPS)

- NERC staff and the SCPS will endeavor to complete all on-going projects and seek SC endorsement by December 2019. NERC staff and the SCPS will continue to identify opportunities for increased efficiency in existing processes and new processes to enhance the Standards Development Process.

Task No. 5 – Fourth Quarter Review of SC 2019-2021 Strategic Work Plan

- The SC will conduct a review of this Plan and provide recommendations for the 2020-2022 Plan to the SC for endorsement.
- The SC Executive Committee will evaluate the need for additional revisions to the SC Charter and provide proposed changes (if any) to the SC for endorsement in 2019.

Task No. 6 – Standards Efficiency Review

- The SC will support the evaluation of NERC Reliability Standards to identify potential efficiencies through retirement or modification of particular requirements. This project seeks to identify requirements that do not strengthen reliability and could reduce unnecessary regulatory or administrative burdens for NERC and the industry.

Reliability Issues Steering Committee Report

Action

Information

Summary

The Reliability Issues Steering Committee (RISC) met via conference call on December 14, 2018 to continue refining the proposed draft agenda and next steps for the 2019 Reliability Leadership Summit, which will be held on March 14, 2019 in Washington, DC. In addition, the Committee reviewed the ERO Reliability Risk Priorities Report timeline, including the process for vetting and distributing the Emerging Risks Survey.

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

Compliance and Certification Committee (CCC) Board Report

Action

Approve the CCC 2019 Work Plan. The CCC is providing its 2019 Work Plan for Board of Trustees approval. The CCC approved its 2019 Work Plan on December, 5 2018. The attached plan reflects input and comments from NERC staff.

Summary

Attached is the CCC Quarterly Report highlighting activities over the last quarter, as well as the CCC 2019 Work Plan for Board of Trustees consideration and approval.

Highlights

The CCC and its associated subcommittees held meetings at the NERC Atlanta offices in December 2018. The following items represent highlights from those meetings.

- The CCC initiated an effort to evaluate the efficiency and effectiveness of the committee. From the outcome of these discussions, the CCC has created three teams addressing the following concepts: Communication and Industry Collaboration, Diversity and Inclusion, and CCC Effectiveness.
- The Organization Registration and Certification Subcommittee (ORCS) continues working with the ERO Organization Registration Certification Group (ORCG) to develop proposed revisions to the NERC Rules of Procedure (ROP) changes regarding Section 500 and Appendices 5A and 5B.
- The ERO Monitoring Subcommittee (EROMS) completed their review of NERC Self-Certification with NERC Internal Audit and Corporate Risk Management (IACRM). The Self-Certifications included the Compliance Monitoring and Enforcement Program (CMEP), the Organization Registration and Certification Program (ORCP) and the Standards Processes Manual (SPM). Results were submitted to the EWRC in January 2019. The IACRM audit of Regional Entity Internal Control Evaluation is ongoing and nearing completion with CCC as observers per Appendix 4A.
- The Compliance Processes and Procedures Subcommittee (CPPS), as specified in the ROP, continued discussion on the process of working with NERC to update the criteria NERC uses to evaluate effectiveness of Regional Entity CMEP programs and how that work could be informed by the EROMS work. In addition, the CPPS continues to support NERC efforts to enhance the Reliability Standards Audit Worksheets (RSAWs). The compliance experts on this subcommittee have completed reviews most recently of the following RSAWs: VAR-001-5 and a new template for RSAWs.
- The CCC Alignment Working Group (AWG) continues to provide feedback and input regarding enhancements to the ERO Consistency Tool. The AWG conducted the quarterly review of consistency issues. The AWG continues to collaborate with NERC on the CMEP Technology and the CORES projects as a resource for information gathering and support. As requested, the AWG provided comments on a proposed CMEP Practice Guide on Inverter-based Resources.

- The CCC is collaborating with the Standards Committee with ongoing activity related to the Functional Model Advisory Group.
- The next CCC meeting will be March 12-13, 2019 at the EEI offices in Washington, DC.

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NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

NERC Compliance and Certification Committee 2019 Work Plan

NERC Board Approval: XXX XX, 2019

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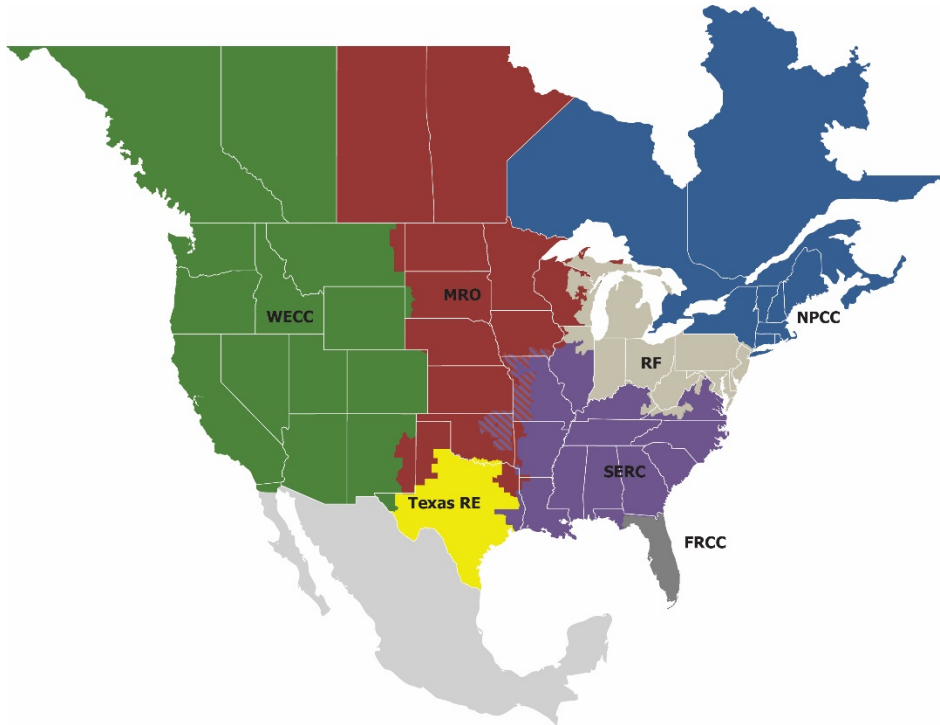
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Texas RE	Texas Reliability Entity
WECC	Western Electricity Coordinating Council

Executive Summary

The purpose of this Work Plan is to identify the anticipated activities and deliverables of the NERC Compliance and Certification Committee (CCC) for 2019. The plan is based on the responsibilities assigned to the CCC by the NERC Board of Trustees (Board) for programs across the 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 guidance 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. As a committee independent of Reliability Standards development, the CCC is responsible for establishing and implementing a program as specified in Section 405 of NERC's ROP to monitor NERC's adherence to its Standard Processes Manual (Appendix 3A), 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. In 2019, the CCC will continue to work with NERC staff and stakeholders to continue to refine the maturing and ongoing role for the CCC with respect to the ERO's adherence to its processes, procedures, and statutory obligations.
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 and associated changes to the NERC ROP and associated documents or processes.
3. **Identification and Mitigation of Significant Risks to Reliability:** In 2019, the CCC will continue its work 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

The CCC is a Board-appointed stakeholder committee serving and reporting directly to the Board. In that capacity under a NERC Board-approved charter,¹ and as approved by FERC² 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, and Organization Certification program.

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. To support this endeavor, the CCC has developed this work plan to identify the activities that the CCC intends to perform in 2019 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 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.

Revision History

Date	Version Number	Comments
9/11/2018	0	Working Draft – CCC Executive Committee Review
10/22/2018	1	Working Draft – CCC Executive Committee Review
12/05/2018	2	Approved by the CCC

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

² http://www.nerc.com/files/Order_on_Comp_Filing_06.07.2007_CCC_VSL_Order.pdf

Chapter 1: 2019 CCC Work Plan – Strategic Planning Efforts

This is a new section of the Work Plan that is intended to address the long-term value of the CCC. The projects included in this category are intended to address succession planning within the CCC as well as clarify the CCC's role in the broader scope of the maturation of the risk-based approach. Further details on these projects are shown in the following table below.

Project #	Project Name	Activities	Resource(s)
1	Succession Planning	<ul style="list-style-type: none"> • Undertake a broader CCC discussion regarding how to best address succession planning efforts <ul style="list-style-type: none"> ▪ The Committee is currently undergoing significant changes in terms of membership and leadership, while at the same time, NERC staff and the Board of Trustees are increasingly turning to the CCC for guidance and advice on behalf of the stakeholder community. • Ensure the CCC is strategically positioned to be able to fulfill the responsibilities and long-term expectations. 	CCC, CCC Subcommittees, NERC Management
2	Industry Collaboration	<ul style="list-style-type: none"> • Participate in Standards Efficiency Review process • Direct involvement in leadership of the Standing Committees Coordination Group • Communications and participation with industry groups 	CCC, CCC Subcommittees
3	Enhancing CCC Program Efficiencies	<ul style="list-style-type: none"> • Evaluate various activities and functions of subcommittees/working groups to determine ways to improve the effectiveness and efficiency of the CCC • Consider Compliance Efficiency Review Project • Explore opportunities to “cross train” across various CCC subcommittees • Collaborate with NERC Internal Audit for training opportunities 	CCC, CCC Subcommittees, NERC Management
4	Communications	<ul style="list-style-type: none"> • Develop materials that can be developed for individuals as they first join the CCC <ul style="list-style-type: none"> ▪ Reporting and Onboarding ▪ Cross Cutting Issues ▪ Roles of the Subcommittees 	CCC, NERC Management

Chapter 2: 2019 CCC Work Plan – Ongoing Responsibilities

The tables below summarize the list of ongoing responsibilities assigned to the CCC. In general, responsibilities are divided into two primary categories: 1) activities that respond to the CCC Charter and the NERC Rules of Procedure, and 2) activities that support the NERC mission. Further details on the deliverables and projects are discussed in the next section by project number identified below.

Project #	Project Name	Activities	Resource(s)
1	Review and Update of CMEP and CCC Programs and Procedures	<ul style="list-style-type: none"> Review and monitor changes to the CMEP and other NERC initiatives that could require updates or changes to CCC programs and procedures Evaluate and review of CCC Charter, including functions and responsibilities Evaluate and review of CCC Subcommittee scopes and activities Explore opportunities to “cross-train” among subcommittees 	CCC, CCC Subcommittees, NERC Management
2	Program Support Efforts (CMEP, Standards Development)	<ul style="list-style-type: none"> Identify and participate in risk-based compliance assurance outreach and feedback discussions Support outreach on internal controls Identify outreach needs and conduct activities focused on registered entities that are small or pose lower risk to the bulk power system. Support rollout of key activities or program revisions as requested Partner with ERO Enterprise to address issues related to RSAWs Review stakeholder requests to become a qualified entity to submit compliance guidance Evaluate programs and associated ROP sections for necessary revisions as program development occurs Actively participate in Phase 2 of NERC’s Standards Efficiency Review 	CCC, CPPS, NERC Management
3	Assistance with Review of Information Production, Capture and Response for ORCP	<ul style="list-style-type: none"> Review information production for opportunities to improve efficiency and effectiveness Assist with evaluation of oversight and monitoring tools for issue resolution Evaluate programs and associated ROP sections for necessary revisions as program development occurs 	CCC, ORCS
4	NERC Self-Certifications	<ul style="list-style-type: none"> Participate in and support self-certification and reporting 	CCC, EROMS, NERC Internal Audit

Project #	Project Name	Activities	Resource(s)
		<ul style="list-style-type: none"> Coordinate with NERC on criteria development, process, and assessment of adherence to NERC ROP 	
5	NERC Audits	<ul style="list-style-type: none"> In accordance with Sections 406 and 506 of the NERC ROP, determine NERC’s adherence with the ROP requirements of the CMEP and ORCP. CCC representatives will serve as observers of this audit. 	CCC, EROMS, NERC Internal Audit
6	ERO Regional Entity Compliance Program Audits	<ul style="list-style-type: none"> Support Regional Entity Compliance Program audits executed by NERC’s Internal Audit and Corporate Risk Management function, consistent with Appendix 4A of the ROP 	CCC, NERC Internal Audit
7	Enterprise-wide Risk Committee (EWRC) Collaboration	<ul style="list-style-type: none"> Provide input to Work plan as requested by the EWRC Fulfill advisory role as requested Participate and support in EWRC activities and discussions 	CCC Leadership, EWRC and ERO Enterprise Management, NERC Director of Internal Audits
8	NERC Reliability Issues Steering Committee Collaboration	<ul style="list-style-type: none"> Provide input to existing risks, mitigation strategies, and emerging risk identification Participate and support in RISC activities and discussions 	CCC Leadership, NERC Management
9	ERO Enterprise Program Alignment	<ul style="list-style-type: none"> Address potential ERO program alignment issues to support success of CMEP and ORCP Assist NERC with screening of information, support further review of reported items, and provide suggested resolutions if warranted Assist ERO team in development of the CMEP Technology Tool 	CCC, Alignment Working Group, NERC Management
10	ERO Effectiveness Survey	<ul style="list-style-type: none"> Participate on the ERO Effectiveness Survey Advisory Group Support development efforts for future surveys Develop survey questions specific to the ERO Enterprise Coordinated Oversight Program for Multi-Regional Registered Entities Evaluate results to provide reporting and recommend improvements 	CCC, EROMS, TalentQuest, NERC Management
11	Stakeholder Collaboration	<ul style="list-style-type: none"> Identify industry stakeholder groups where CCC collaboration will strengthen ERO process and approach Participate in industry outreach as requested with ERO personnel on designated ERO topics 	CCC, Stakeholder Committees

Chapter 3: Ongoing Responsibilities - Details

Project 1 – Review and Update of CMEP, CCC Programs and Procedures

- Review CCC programs and procedures in consultation with NERC management to identify necessary changes and procedural review or approval requirements.
- Update criteria for assessing effectiveness of Regional Entity CMEP activities, considering ERO input, to appropriately reflect program modification, improvements, and prior years' evaluations.
- Continue to assess how CMEP practices change related to risk-based CMEP implementation in regard to (a) monitoring practices (as embodied in CCCPP-010 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 of each Regional Entity CMEP, using criteria developed by the CCC.
- Per the terms of CCCPP-011, conduct annual review.
- Review the Compliance Guidance Policy and take associated actions to support.

Project 2 – Program Support Efforts

- Support program efforts related to CMEP and Standards Development areas in support of ERO Enterprise goals.
- Partner with ERO Enterprise related to review of Reliability Standard Audit Worksheets (RSAWs).
 - CCC comments on RSAWs, as requested.
- Monitor and respond to any requests from stakeholders to become pre-qualified organizations that can submit proposed Implementation Guidance.
- Hold “focus group” discussions that are intended to identify opportunities for the ERO Enterprise to drive specific improvements and information sharing across the ERO Enterprise.
- Participate with ERO Enterprise Staff in evaluation of ROP changes and recommend changes as program maturation continues.
- Monitor for regional activities on ORC functions and changes to registration and certification.

Project 3 – Assist with Review of ORCP Information Cycle

- Test the entity registration tool: Centralized Organization Registration Entity System (CORES), and provide guidance to NERC staff as needed.
- Review and provide suggestions for improvement to the 2019 Organization Certification Program activities.

Project 4 – NERC Self-Certifications

- Develop and update self-certification forms and request NERC self-certify adherence to the ROP for the following items:
 - Standard Processes Manual (SPM).
- Coordinate with NERC to prepare a summary report of the results of NERC's assessment to the EWRC.

Project 5 – NERC Audits

- In accordance with Sections 406 and 506 of the NERC ROP, work with NERC Internal Audit to select an independent auditor to conduct an audit of the following items:
 - Compliance Monitoring and Enforcement Program (CMEP), and
 - Organization Registration and Certification Programs (ORCP)
- Coordinate with NERC for the CCC to participate in the audit as observers.
- Review the final audit report and provide it to the EWRC.

Project 6 – Regional Entity Compliance Program Audits

- Work with NERC management (Internal Audit and Compliance Assurance) to develop criteria for the 2019 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 function, consistent with Appendix 4A of the ROP.

Project 7 – Enterprise-Wide Risk Committee Collaboration

- 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 to this program and criteria as appropriate.
 - Items to consider here may include work 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 Rules of Procedure.

Project 8 – NERC Reliability Issues Steering Committee Collaboration

- 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 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 9 – ERO Program Alignment

- CCC ERO Alignment Working Group (AWG) will execute the CCC role within the process 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.
- Provide stakeholder expertise to support the development of the CMEP Technology Project and CORES.

Project 10 – 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 11 – 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: 2019 CCC Work Plan - Deliverables

The tables below summarize the list of CCC work plan deliverables for projects in 2019. Further details on the deliverables and projects are discussed in the next section by project number identified below.

	Project Name	Deliverable	Schedule
1	ERO Program Alignment	<ul style="list-style-type: none"> Periodic reports regarding the effectiveness of the ERO Program Alignment Initiative and Reporting Tool (with NERC management) 	Q1 2019 (AWG)
2	ERO Effectiveness Survey	<ul style="list-style-type: none"> CCC Report on the 2018 CCC Effectiveness Survey 	Q1 2019 (EROMS)
3	NERC Self-Certifications	<ul style="list-style-type: none"> 2018 CMEP, ORCP, and SPM results memo to CCC 2019 Self-Certification Form to NERC, via direct communication from CCC Chair 	Q1 2019 Q2 2019 (EROMS)
4a	Review and Update of CMEP and CCC Programs and Procedures	<ul style="list-style-type: none"> Updated CCC Charter, reflecting: 1) any changes to the ERO Enterprise and/or adjustment to the CCC scope of work, 2) updated vision statement 	Complete by Q2 2019 BOT approval by Q4 2019
4b	Review and Update of CMEP and CCC Programs and Procedures	<ul style="list-style-type: none"> Revised CCC Subcommittee Scope 	Q2 2019
4c	Review and Update of CMEP and CCC Programs and Procedures	<ul style="list-style-type: none"> Revised documents for CCCPP-01 to CCCPP-09, to reflect changes to the CMEP and other NERC initiatives that involve CCC programs and procedures. Note that CCCPP-010 and CCCPP-011 were in the process of being updated in 2018 and will not be part of the 2019 review. 	Complete by end of 2019. Subcommittees will develop review schedule.
4d	Review and Update of CMEP and CCC Programs and Procedures	<ul style="list-style-type: none"> Revised CCCPP-012 document (Procedures for becoming a Pre-Qualified Organization for Compliance Guidance) 	Q2 2019 (ORCS)
5	CCC Onboarding Materials	<ul style="list-style-type: none"> Full package of briefing materials for new CCC members 	Q3 2019 (Executive Committee)
6	Standards Efficiency Review Project	<ul style="list-style-type: none"> Take projects from Phase II SER team into CCC channels to work to completion or resolution. 	Schedule based on timing of feedback from Phase II SER Team
7	Regional Entity Compliance Audits	<ul style="list-style-type: none"> Audit Report to EWRC 	Q2 2019
8	NERC CMEP and ORCP Independent Audit	<ul style="list-style-type: none"> Audit report on CMEP and ORCP to EWRC 	Q4 2019

Chapter 5: Logistics and NERC Budget Requirements for CCC Activities

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

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)

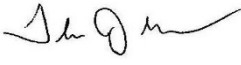
Assumptions: Three CCC/Subcommittees NERC WebEx or conference calls quarterly.

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 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.

To: NERC Board of Trustees (BOT)
From: Thomas J. Galloway, NATF President and CEO 
Date: January 14, 2019
Subject: NATF Periodic Report to the NERC BOT (February 2019)
Attachments: NATF External Newsletter (January 2019)

The attached January NATF external newsletter, which is also available on our public website at www.natf.net/news/newsletters, highlights NATF efforts to support our members and the industry. The NATF interfaces with both the industry and regulatory agencies on key reliability and resiliency topics to promote collaboration and continuous improvement. Some examples are highlighted below.

Documents and Resources

In recent years, the NATF has begun posting select publications for the entire industry. We currently have 22 documents on our public-facing website (<http://www.natf.net/documents>) in the form of guidelines, overviews, reference documents, and best practices. As part of this effort, we have also started posting public, redacted versions of member operating experiences that provide built-in lessons learned for review. To-date, we have posted approximately 20 operating experience reports to help improve safety, reliability, and resiliency.

Partnerships

A more-formal part of the open-sharing effort includes collaborating and partnering with NERC on select projects, such as MIDAS, annual human performance conferences and modeling workshops, and the upcoming April Resiliency Summit, all of which are geared toward enhancing grid reliability and resiliency. To help accelerate this collaboration, the NATF and NERC are revising their memorandum of understanding (MOU), which the NATF plans to present for approval at our March members meeting. Part of the NATF's role, as highlighted in the MOU, is to identify and validate risks and implement appropriate strategies with our members, which represent about 90 percent of North American electrical demand, to support mitigation of the identified BPS risks.

Projects

The NATF membership is presently working on several important topics:

Cyber security supply chain. We have two public documents on our website for industry use:

1. *CIP-013-1 Implementation Guidance*
2. *Cyber Security Supply Chain Risk Management Guidance*

NATF members are working on an enhancement to the CIP-013 guidance document to improve clarity with addressing R1.2. We received helpful and positive comments from the regions on how best to be prepared to demonstrate an entity's controls to address supply chain risk, and we are working to incorporate the changes for resubmittal for ERO endorsement. In addition, the NATF is working to develop additional guidance for our

Open Distribution

members, and industry as a whole, regarding cybersecurity supply chain compliance risk; we plan to make this document available to the public when completed.

Facility ratings. Our members are currently working on facility-ratings/change-management practices to address inaccurate equipment inventory, ratings that are not being updated, and inaccurate models.

Vegetation management. Our members are developing guidance on best practices related to inspection processes.

Both facility ratings and vegetation management are focus areas referenced in the “2019 ERO Enterprise Compliance Monitoring and Enforcement Program Implementation Plan.” We will have more information on these topics in the coming months.

cc: R. Carter, T. Aldred, L. Underwood, K. Keels

North American Transmission Forum External Newsletter

January 2019

TPL-001-4 Reference Document Posted for Industry

The NATF has posted version 3.0 of the “NATF TPL-001-4 Reference Document” to our [public website](#) for the benefit of the industry. The document provides guidance regarding the use of consistent, industry-wide approaches to certain topics in NERC standard TPL-001-4. The goal of sharing this information externally is to support responsible Transmission Planners and Planning Coordinators with the various transmission system planning analyses as called for under TPL-001-4, thus enhancing the reliable planning and operation of the entire Bulk Electric System.

NATF CEO Testifies on Blackstart at Senate Committee Hearing

NATF President and CEO Tom Galloway served on a panel of experts and provided testimony during the October 11 [Senate Energy and Natural Resources Committee hearing on blackstart](#). In his written testimony, Galloway noted the significant industry efforts to preserve high levels of grid reliability and resiliency and improve restoration from broad-scope outages, including educating the industry and regulators on resiliency threats, hardening the bulk power system, ensuring adequacy of key spares, augmenting mutual aid, enhancing restoration planning, conducting comprehensive drills and exercises, and increasing coordination with cross-sector (e.g., gas and water) and governmental entities.

2018 External Coordination Highlights

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.

Examples in 2018 included:

- [Inverter-Based Resource Webinar Series](#) (March–June)
 - Hosted with NERC¹, EPRI², and the UVIG³
- [Joint NERC/NATF Human Performance Conference and Workshops](#) (March)
- Joint NATF-EPRI resiliency summit
- [NERC-NATF-EPRI 2018 Power System Modeling Conference](#) (June)
- Continued work with EPRI on equipment performance
- New MOU with the Utilities Technology Council to coordinate on topics of mutual interest and benefit
- Report to the Department of Energy related to a Grid Security Emergency (GSE)
 - Communication between the DOE and the electricity subsector after the declaration of a GSE

¹ North American Electric Reliability Corporation

² Electric Power Research Institute

³ Utility Variable-Generation Integration Group

- Suggested criteria for declaring a GSE related to a geomagnetic disturbance⁴
- Emergency operations and waivers associated with issuance of a GSE order
- NATF CEO participation in government/industry meetings
 - [July 31 FERC technical conference](#) regarding the Bulk-Power System
 - [Senate Energy and Natural Resources Committee hearing on blackstart](#)
 - Electricity Subsector Coordinating Council (ESCC)
- Posting of reliability [documents](#) for the benefit of the industry on relevant topics
 - EMS external modeling
 - Supply chain cyber security
 - Distributed energy resources
 - Physical security plans
 - Software integrity
 - Vendor remote access
 - Transmission planning
 - Redacted operating experience (safety)

Joint Resiliency Summit (NATF, EPRI, and NERC)

The NATF will conduct a spring 2019 resiliency summit with EPRI and NERC. The summit, slated for April 2-4 in Charlotte, North Carolina, will focus on restoration, including blackstart. The joint offering will address the 2018 Reliability Issues Steering Committee (RISC) [report](#) recommendation to conduct a comprehensive workshop related to risk profile 7. More information will be distributed in early 2019.

Redacted Operating Experience Reports

Since our last newsletter, we have posted three reports to our [public site](#) for members and other utilities to use internally and share with their contractors to help improve safety, reliability, and resiliency.

For more information about the NATF, please visit www.natf.net.

⁴ Criteria for other GSEs to follow in subsequent phases



North American Generator Forum

**TO: NERC Board of Trustees
James B. Robb, President and CEO**

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

DATE: January 23, 2019

SUBJECT: NAGF 2019 Winter Report

The NAGF is continuing to participate and support the NERC Inverter-Based Resource Performance Task Force (IRPTF) and the IEEE P2800 effort. The NAGF will be supporting the work on the NERC **Reliability Guideline: Interconnection Agreement Improvements for Inverter-based Resources** and will be able to contribute through discussions and points made in the NAGF Inverter Interconnection Specification developed in 2018 by the NAGF Variable Resources Working Group.

On 1/17, the NAGF attended NERC Planning Committee (PC) Fuel Assurance and Electric/Gas Interoperability meeting. The NAGF will be participating once an Electric Gas Working Group (EGWG) is approved by the PC. NAGF members will be able to bring the knowledge of gas markets and trading, mid-stream gas operations and Generator Owner/Operator experience to the EGWG discussions.

The NAGF held a webinar on November 16th to discuss testing of AVR protective functions and applicability of PRC-005-6. NAGF members shared their insights regarding whether AVR protections systems are in-scope for PRC-005-6 as well as if they are considered continuously monitored microprocessor devices, or a controller. On December 11th, the NAGF held a follow-up conference call to formalize a list of questions to be submitted to NERC for evaluation. The AVR protective function questions were submitted to NERC in late December and it is anticipated that a meeting will be scheduled with NERC sometime in January 2019.

The NAGF and the Northeast Power Coordinating Council (NPCC) initiated efforts to collaborate on DER grid edge resources to gain a better understanding of DER resource integration, explore potential coordination issues, promote appropriate solutions to emerging reliability issues, and identify benefits while providing outreach to industry.