Agenda
Board of Trustees
August 15, 2019 | 8:30 a.m.-12:00 p.m. Eastern
(Please note the Schedule may be adjusted real-time should meetings conclude early and/or extend past their scheduled end time.)

Hilton Quebec
1100 Boulevard René-Lévesque E
Québec, QC G1R 4P3

Conference Room: Salle de Bal (1st Floor)

Call to Order

NERC Antitrust Compliance Guidelines

Introductions and Chair’s Remarks

Consent Agenda – Approve
1. Minutes*
   a. June 13, 2019 Meeting
   b. May 9, 2019 Meeting
2. Committee Membership and Charter Amendments*
   a. Compliance and Certification Committee Membership
   b. Operating Committee Membership
   c. Planning Committee Membership
   d. Critical Infrastructure Protection Committee Charter Amendments
3. Appointment of Interim General Counsel, Corporate Secretary

Regular Agenda
4. Remarks and Reports
   a. Remarks by Francis Bradley, President and CEO, CEA
   b. Remarks by Bruce Walker, Assistant Secretary, DOE
   c. Remarks by David Morton, CAMPUT Representative to NERC
   d. President’s Report
   e. Report on Board of Trustees August 13, 2019 Closed Session
5. Board Committee Reports
   a. Corporate Governance and Human Resources
   b. Compliance
   c. Finance and Audit
      i. Second Quarter Unaudited Financial Statements – Accept
      ii. NERC and Regional Entity Proposed 2020 Business Plans and Budgets and Associated Assessments – Approve
   d. Enterprise-wide Risk
   e. Technology and Security
   f. Nominating
   g. Report by Trustee Rob Manning on Standards Quarterly Activities

6. Standards Quarterly Report and Actions*
   a. Supply Chain 1600 Data Request – Approve
   b. PRC-006-NPCC-2 – Automatic Underfrequency Load Shedding – Adopt
   c. BAL-002-WECC-3 – Contingency Reserve – Adopt

7. Other Matters and Reports*
   a. Policy Input and Member Representatives Committee Meeting
   b. ReliabilityFirst Bylaws Amendments* – Approve
   c. 2019 ERO Enterprise Dashboard Update* – Update
   d. Task Force to Address Resilience to Electromagnetic Pulses* – Update
   e. SERC/FRCC Integration* – Update
   f. 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
   g. Reliability Issues Steering Committee
h. Compliance and Certification Committee
   i. CCC Monitoring Program – CCCPP-001 – Approve
   ii. CCC Monitoring Program – CCCPP-011-2 – Approve
i. Electricity Subsector Coordinating Council

9. Forum and Group Reports*
   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.
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 June 13, 2019, at 1:00 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  
Janice B. Case, Vice Chair  
Robert G. Clarke  
Kenneth W. DeFontes, Jr.  
Frederick W. Gorbet  
David Goulding  
George S. Hawkins  
Robin E. Manning  
James B. Robb, President and Chief Executive Officer  
Jan Schori  
Colleen Sidford

**Board of Trustees Members Not Present**
Suzanne Keenan

**NERC Staff**
Charles A. Berardesco, Senior Vice President, General Counsel, and Corporate Secretary  
Tina Buzzard, Associate Director  
Howard Gugel, Vice President and Director of Engineering and Standards  
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

**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.
2019 State of Reliability Report
Mr. Moura introduced the State of Reliability Report and provided an overview of the report and key issues. He also outlined the key findings and reviewed the report’s recommendations. He thanked NERC Staff for their work on the report and the Board for its feedback on the draft. The Board discussed the report, including the executive summary, recommendations, and overall body of the report. Messrs. Thilly and Gorbet and Ms. Schori noted the exceptional quality of the report. Messrs. Gorbet and Goulding suggested that NERC look at opportunities to expand the dissemination of the report to new audiences.

After discussion, and upon motion duly made and seconded, the Board accepted the 2019 State of Reliability Report, endorsed the recommendations contained therein, and authorized its publication.

Request to Use Expedited Procedures for Requesting Time Sensitive Data or Information - Supply Chain
Mr. Gugel presented a request to use expedited procedures under Section 1606 of the NERC Rules of Procedure for a forthcoming request for information or data pertaining to cyber security supply chain risks. He recalled that the Board, at its May 2019 meeting, stated its expectation that NERC Staff would develop such a request for the Board’s consideration at the August 2019 meeting. The request for data or information was one of the key recommendations identified in the May 2019 NERC report Cyber Security Supply Chain Risks: Staff Report and Recommended Actions. Mr. Gugel also noted that NERC Staff have been working with the Critical Infrastructure Protection Committee Supply Chain Working Group to help tailor the request so that NERC would be able to gather the necessary information on risks and that entities would be able to respond in the time period provided.

After motion duly made and seconded, the Board adopted the following resolution:

RESOLVED, that the NERC Board of Trustees approves posting the draft request for data or information to NERC registered entities on an expedited schedule in accordance with Rule 1606 of the NERC Rules of Procedure, shortening the period for review of the draft request for data or information by the Federal Energy Regulatory Commission Office of Electric Reliability to five (5) days, and the period for public comment to twenty (20) days.

Appointment of NERC Interim Controller
Mr. Berardesco presented the request to appoint Meg Leonard as Interim Controller and update the list of authorized signatories.

Upon motion duly made and seconded, the Board approved the appointment of Meg Leonard as Interim Controller and the amendment of the authorized signatories for each banking or similar account NERC has with PNC Bank, National Association, to be James B. Robb, Andy Sharp, and Meg Leonard.
Adjournment
There being no further business, and upon motion duly made and seconded, the meeting was adjourned.

Submitted by,

[Signature]

Charles A. Berardesco
Corporate Secretary
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 St. Louis, Missouri on May 9, 2019, at 8:30 a.m. Central, and a quorum was declared present. The agenda is attached as Exhibit A.

Present at the meeting were:

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

**Board Member Not Present**
Robert G. Clarke

**NERC Staff**
Charles A. Berardesco, Senior Vice President, General Counsel, and Corporate Secretary
Tina Buzzard, Associate Director
Howard Gugel, Vice President and Director of Engineering and Standards
Scott Jones, Senior Vice President, Chief Financial and Administrative Officer, and Corporate Treasurer
Mark G. Lauby, Senior Vice President and Chief Reliability Officer
Janet Sena, Senior Vice President and Director of Policy and External Affairs

**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.
Chair's Remarks
Mr. Thilly welcomed all of the attendees to the meeting, including Commissioner Bernard McNamee of the Federal Energy Regulatory Commission (“FERC”), Mr. Bruce Walker of the U.S. Department of Energy (“DOE”), and Mr. David Morton of CAMPUT. He noted that Mr. Clarke could not be present at the meeting. Mr. Thilly remarked on the Member Representatives Committee (“MRC”) meeting the prior day and noted the excellent policy input provided by the MRC.

Mr. Thilly discussed the priorities of NERC’s ongoing effectiveness and efficiency efforts, including identifying efficiencies in Compliance Monitoring and Enforcement Program (“CMEP”) processes and ways to improve stakeholder committee structures while preserving avenues for valuable stakeholder input. He also noted that NERC is considering how it can improve the scheduling and structure of the Board and MRC meetings.

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

Minutes
The draft minutes for the February 7, 2019 meeting were approved as presented to the Board at this meeting.

Committee Membership and Charter Amendments

Critical Infrastructure Protection Committee Membership

RESOLVED, that the Board hereby approves the appointments of the following individuals to the Critical Infrastructure Protection Committee:

- John Greaves (Georgia Power), representing the SERC region; and
- Doug Currie (Hydro One), representing the Canadian Electricity Association.

Reliability Issues Steering Committee Membership

RESOLVED, that the Board hereby approves the appointment of Woody Rickerson (Electric Reliability Council of Texas) to the Reliability Issues Steering Committee to complete a term ending January 31, 2020.

Compliance and Certification Committee Membership

RESOLVED, that the Board hereby approves the appointments of the following individuals to the Compliance and Certification Committee (“CCC”), each for a three-year term effective upon the date of Board approval, as follows:

- Nicole Mosher (Nova Scotia Power), representing Regional Entity - Northeast Power Coordinating Council;
• Gregory Campoli (New York Independent System Operator), representing Independent System Operator/Regional Transmission Organization; and
• Jim Stanton (SOS International), representing Small End-Use Electricity Generator.

FURTHER RESOLVED, that the Board hereby approves the appointment of Ted Hobson (JEA), representing Regional Entity - Florida Reliability Coordinating Council, for a three-year term or until such time as FRCC no longer serves as a Regional Entity.

Planning Committee Membership

RESOLVED, that the Board hereby approves the appointment of the following individual to the Planning Committee, to complete a term ending August 2020:


Standards Committee Charter Amendments

RESOLVED, that the Board hereby approves the amended Standards Committee (“SC”) charter, substantially in the form presented to the Board at this meeting, to replace the SC charter approved by the Board on February 15, 2015.

Regular Agenda

Remarks by Bernard McNamee, Commissioner, FERC
Mr. Robb introduced Commissioner McNamee of FERC. Commissioner McNamee stated that he looked forward to a long relationship with NERC in support of reliability. He summarized his background and discussed his philosophy that the people who do business at FERC should be confident that decisions are being made on the facts and the record.

Commissioner McNamee emphasized the importance of what NERC is doing for the reliability of the electric grid, a system that is fundamental to quality of life and life itself, and noted the need for FERC, DOE, NERC, and the Department of Homeland Security to continue to work together to address challenges. He stated that NERC is facing complicated issues, including the Reliability Coordinator transition in the western U.S., natural gas interdependency, and physical and cyber security. Commissioner McNamee noted that security threats are ongoing, constant, and require constant vigilance and new strategies. He highlighted some recent FERC efforts in the area of security and emphasized the need for government and NERC to work together to address threats. Commissioner McNamee also noted his support of the mission of the E-ISAC and the 2019 Grid Security Exercise (“GridEx”).

Remarks by Bruce Walker, Assistant Secretary, DOE
Mr. Thilly introduced Mr. Walker, Assistant Secretary, Office of Electricity, at DOE. Mr. Walker remarked that NERC and DOE continue to work together to address resilience and reliability, highlighting work on natural gas interdependency issues and security issues. He stated that DOE continues to analyze the CRISP
program and is looking to expand participation. Mr. Walker also highlighted a major DOE initiative to improve storage capabilities in support of defense critical infrastructure.

Remarks by David Morton, CAMPUT Representative to NERC
Mr. Thilly introduced Mr. Morton, noting the importance of having CAMPUT present at Board meetings and NERC’s key strategic initiative to build relationships with Canada. Mr. Morton began his remarks by acknowledging Laura Hussey on her departure from NERC and wishing her well in her future endeavors. He discussed highlights from the recent CAMPUT meeting, including a session addressing grid harmonization from various North American perspectives. He noted that participants generally agreed that cybersecurity and distributed energy resources are major issues going forward. Mr. Morton also highlighted a session addressing utility hardening for fire and cold events.

President’s Report
Mr. Robb noted that he recently marked his one year anniversary as president and CEO of NERC, and he thanked all for their support. He reported that Howard Gugel was recently appointed Vice President and Director of Engineering and Standards, and Mechelle Thomas was appointed Vice President and Chief Compliance Officer.

Mr. Robb stated that he identified four areas of focus a year ago, and those areas remain relevant today: (1) Reliability Coordinator issues in the West; (2) integration of new technologies; (3) the changing resource mix; and (4) cyber and physical security, including the E-ISAC. He provided an overview of certain key NERC work streams, including: (1) implementing the E-ISAC strategic plan; (2) focus on specific risk areas, including western Reliability Coordinator transition issues, supply chain risk management, electromagnetic pulse resilience, the natural gas/electric interface, and cloud services and the CIP standards; (3) ERO Enterprise effectiveness and efficiency efforts; and (4) the annual business plan and budget process.

Mr. Robb provided background on the development of a number of new approaches to alignment across the ERO Enterprise. He reported that a new ERO Enterprise Executive Committee was created, consisting of the NERC CEO, NERC Senior Vice Presidents, and Regional Entity CEOs. Mr. Robb also stated that ERO Enterprise leadership met in April 2019 to discuss how NERC and the Regional Entities can achieve alignment and improve its working relationships and collaboration. He explained that this group created a joint declaration in recognition of the “brilliance” of the ERO Enterprise model, which states that NERC and the Regional Entities are partners committed to collective success. Mr. Robb then highlighted the six primary elements of this declaration, which include:

1. a commitment to work together as one team and honor the NERC and Regional Entity roles;
2. a commitment to listen, actively support ERO Enterprise activities, and eliminate unnecessary duplication of work;
3. A commitment to collaborate in developing clear and consistent guidance;
4. A commitment to be an information, knowledge, and resource sharing enterprise;
5. A commitment to develop and share harmonized messages across communications; and
Ed Schwerdt, CEO of NPCC, thanked Mr. Robb for his leadership and noted that the Regional Entities are committed to the achieving the aims of the joint declaration. Noting that FERC had approved the dissolution of the FRCC Regional Entity, Mr. Schwerdt thanked Stacy Dochoda, president and CEO of FRCC, for her insights and contributions on behalf of the ERO Enterprise and wished her all the best.

Mr. Thilly reported that the Board is pleased with work of NERC and the Regional Entity leadership on its work in support of the collective success of the ERO Enterprise and added his thanks to Ms. Dochoda for her contributions over the years.

Report on May 7, 2019 Board of Trustees and Regional Board Officers Joint Meeting
Mr. Thilly reported that the NERC Board of Trustees met with the Regional Entity Board Officers in closed session on May 7, 2019 to discuss the vision and aspirations for the ERO Enterprise, ERO Enterprise efficiency and effectiveness and the Regional Entity role, and board independence principles.

Report on Board of Trustees May 7, 2019 Closed Session
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. DeFontes, Committee Chair, reported that the Committee met in open session on May 8, 2019 to discuss the Board Committee self-assessment survey results, receive an update on the 2019 ERO Enterprise metrics, perform its annual review of trustee compensation, and receive an update on staffing and recruiting.

He also reported that the Committee met in closed session on April 24, 2019 to discuss topics including the Board Committee Self-Assessment results, benefits and compensation budget assumptions, trustee compensation, and the corporate governance aspects of the IRS Form 990.

Compliance Committee
Ms. Schori, Committee Chair, reported that the Committee met in executive session on March 20, 2019 and on May 7, 2019. She noted that, over the two meetings, the Committee approved three Notices of Penalty and followed up on pending cases. Ms. Schori reported that the Committee changed its meeting schedule to hold its open meetings in November and February, so as to allow the Committee to review annual performance and the upcoming year’s plan; additional open sessions will be held as needed. She also reported that she has met with compliance staff at the Regional Entities.

Finance and Audit Committee
Mr. Thilly, as Acting Committee Chair, reported on the closed and open meetings of the Committee held on May 7, 2019 and May 8, 2019, respectively, to review the 2018 audit report and the first quarter 2019
unaudited results of operations. Upon motion duly made and seconded, the Board approved the following resolutions:

**RESOLVED,** that the Board, upon recommendation of the Finance and Audit Committee, hereby accepts the 2018 Audited Financial Statements, as presented to the Board at this meeting.

**FURTHER RESOLVED,** that the Board, upon recommendation of the Finance and Audit Committee, hereby accepts the First Quarter 2019 NERC, Combined ERO Enterprise, and Regional Entity Unaudited Results, as presented to the Board at this meeting.

Mr. Thilly reviewed the draft 2020 business plan and budget and thanked the MRC budget input group for its work to date. He highlighted the timeline for posting and approval and requested that stakeholders provide comments that are as specific as possible regarding any concerns.

**Enterprise-wide Risk Committee**
Mr. Goulding, Committee Chair, reported the Committee met in closed session on May 2, 2019. At its meeting, the Committee reviewed: (1) the status of the 2018 audit plan, which is mostly completed, and status of management responses; (2) the status of the 2019 audit plan; (3) 2019 risk management activities; and (4) CCC activities.

**Technology and Security Committee**
Ms. Keenan, Committee Chair, reported that the Committee met in open session on May 8, 2019 to discuss items including: (1) the Committee’s work with the E-ISAC Member Executive Committee on the E-ISAC strategic plan, MEC feedback, and planned 2020 budget increases for headcount; (2) ERO technology efforts, including the Align CMEP technology project, the entity registration tool (“CORES”), and the situational awareness tool (“SAFNR”); and (3) the March 29, 2019 FERC/DOE technical conference on security investments for energy infrastructure.

Ms. Keenan reported that the Committee is planning to conduct a closed session in November to review NERC’s corporate security posture, which will be a new area of focus for the Committee going forward.

**Nominating Committee**
Mr. Hawkins, Committee Chair, reported that the Committee met in closed session on March 8, 2019 to authorize the issuance of a request for proposals from search firms to conduct the 2019 trustee search. He also reported that the Committee met in closed session on May 8, 2019. In this meeting, the Committee: (1) unanimously re-nominated Mr. Thilly and Ms. Keenan for an additional term; (2) reviewed
proposals from search firms and appointed Lyceum to conduct the search for the new trustee; and (3) held a discussion with Lyceum’s principal on the schedule and needs for the search.

Mr. Hawkins reported that the Committee is seeking stakeholder assistance in identifying potential Board candidates. He noted that a letter would be sent in mid-June with additional details on how to submit nominations and that nominations will be reviewed at the August meeting.

**Report by Trustee Rob Manning on Standards Quarterly Activities**

Mr. Manning reported on the recent Standards Committee conference calls and meetings, including actions taken by the Committee to authorize initial postings of Reliability Standards, Standard Authorization Requests, and appointment of drafting teams.

**Policy Input and Member Representatives Committee Meeting**

Mr. Thilly thanked the MRC for its policy input provided at the May 8, 2019 MRC meeting.

**Standards**

Mr. Gugel presented on several Reliability Standards-related projects. Mr. Manning asked Mr. Gugel why a Variance is proposed for the WECC region in Reliability Standard IRO-002-6, but no Variance is proposed for the Eastern Interconnection. Mr. Gugel explained that the proposed WECC Variance is necessary to successfully accomplish the transition to a multi-Reliability Coordinator environment in the West. He added that the need for such a Variance has not been identified in the Eastern Interconnection at this time, but NERC is continuing to examine the issue.

Mr. Manning also inquired as to whether there are any reliability concerns regarding the Standards Efficiency Review retirement proposals. Mr. Gugel explained that NERC has evaluated each of the proposals before the Board and supports them; he added that several of the initial retirement recommendations were not pursued through the development process due to reliability concerns. Mr. Gugel reported that NERC Staff has also considered concerns from FERC technical staff regarding the retirement of individual Requirements reflected in proposed Reliability Standards IRO-002-7, TOP-001-5, and VAR-001-6. Mr. Thilly asked if there was a concern that these proposals could create a gap in reliability. Mr. Gugel responded that NERC Staff is confident that there are no reliability gaps, as other Reliability Standard Requirements reach the same performance.

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

**Reliability Standard IRO-002-6 – Reliability Coordination – Monitoring and Analysis**

RESOLVED, that the Board hereby adopts the proposed Reliability Standard IRO-002-6, 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 IRO-002-5, 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.

Standards Efficiency Review

Proposed Revised Reliability Standards (Retiring Individual Requirements in Existing Standards)

FAC-008-4 – Facility Ratings

RESOLVED, that the Board hereby adopts the proposed Reliability Standard FAC-008-4, 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 FAC-008-3, as presented to the Board at this meeting.

INT-006-5 – Evaluation of Interchange Transactions

RESOLVED, that the Board hereby adopts the proposed Reliability Standard INT-006-5, 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 INT-006-4, as presented to the Board at this meeting.

INT-009-3 – Implementation of Interchange

RESOLVED, that the Board hereby adopts the proposed Reliability Standard INT-009-3, 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 INT-009-2.1, as presented to the Board at this meeting.

IRO-002-7 – Reliability Coordination – Monitoring and Analysis

RESOLVED, that the Board hereby adopts the proposed Reliability Standard IRO-002-7, 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 retirements of Reliability Standards IRO-002-5 and IRO-002-6, as presented to the Board at this meeting.

PRC-004-6 – Protection System Misoperation Identification and Correction

RESOLVED, that the Board hereby adopts the proposed Reliability Standard PRC-004-6, 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 PRC-004-5(i), as presented to the Board at this meeting.

TOP-001-5 – Transmission Operations

RESOLVED, that the Board hereby adopts the proposed Reliability Standard TOP-001-5, 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 TOP-001-4, as presented to the Board at this meeting.

VAR-001-6 – Voltage and Reactive Control

RESOLVED, that the Board hereby adopts the proposed Reliability Standard VAR-001-6, 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 VAR-001-5, as presented to the Board at this meeting.

Complete Reliability Standard Retirements

FURTHER RESOLVED, that the Board hereby approves the proposed retirement of the following Reliability Standards, as presented to the Board at this meeting:

- Reliability Standard FAC-013-2 – Assessment of Transfer Capability for the Near-Term Transmission Planning Horizon
- Reliability Standard INT-004-3.1 – Dynamic Transfers
- Reliability Standard INT-010-2.1 – Interchange Initiation and Modification for Reliability
- Reliability Standard MOD-001-1a – Available Transmission System Capability
- Reliability Standard MOD-004-1 – Capacity Benefit Margin
- Reliability Standard MOD-008-1 – TRM Calculation Methodology
- Reliability Standard MOD-020-0 – Providing Interruptible Demands and DCLM Data
- Reliability Standard MOD-028-2 – Area Interchange Methodology
- Reliability Standard MOD-029-2a – Rated System Path Methodology
- Reliability Standard MOD-030-3 – Flowgate Methodology

Implementation Plan

FURTHER RESOLVED, that the Board hereby approves the associated implementation plan for the proposed Reliability Standards and retirements, as presented to the Board at this meeting.

Withdrawal of Proposed Reliability Standard MOD-001-2

FURTHER RESOLVED, that the Board hereby withdraws proposed Reliability Standard MOD-001-2 – Available Transmission System Capability, which was adopted by the Board on February 6, 2014.

Authorization

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 CIP-003-8 – Cyber Security – Security Management Controls

RESOLVED, that the Board hereby adopts the proposed Reliability Standard CIP-003-8, 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 CIP-003-7, 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.

Supply Chain Report
Mr. Gugel presented the draft report titled *Cyber Security Supply Chain Risks: Staff Report and Recommended Actions* to the Board. He expressed his appreciation to the MRC for their policy input and discussion at the previous day’s meeting. Mr. Gugel explained that NERC Staff would make certain revisions to the report in response to feedback, including clarifying that any recommended surveys would be conducted outside of mandatory CMEP processes.

Ms. Schori thanked Mr. Gugel, NERC Staff, and stakeholders for their work on the report. She noted that the Board will need to further consider whether low impact BES Cyber Systems should be included within the scope of the Supply Chain Standards based on the results of the NERC Rules of Procedure Section 1600 data request. Ms. Schori further noted the importance of addressing this issue in a timely manner. Mr. Gugel explained that NERC Staff will evaluate the potential options for expediting the process for requesting data under Section 1600 of the NERC Rules of Procedure and will make every effort to present the Board with additional information by the end of the year.

Mr. Thilly proposed that the Board accept the supply chain report substantially in the form presented, subject to NERC Staff making the changes described and any further clarifications in response to comments and sending the revised draft back to the Board for information. After discussion, and upon motion duly made and seconded, the Board approved the following resolutions:

RESOLVED, that the Board hereby accepts the report, *Cyber Security Supply Chain Risks: Staff Report and Recommended Actions*, substantially in the form 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.

Mr. Thilly noted the urgency of this issue and stated that he hopes the proposed Section 1600 data request will be presented to the Board in August.
Other Matters and Reports

ERO Five-Year Assessment
Mr. Berardesco presented the draft 2019 ERO Five-Year Assessment to the Board, explaining that NERC is required, under FERC’s regulations, to submit a report every five years explaining how NERC continues to meet the criteria for certification as the ERO. He highlighted certain NERC initiatives and accomplishments from 2014-2018 that are featured in the report, and he noted that the report also evaluates Regional Entity performance during the assessment period. Mr. Berardesco recalled the Commission directives from the prior assessment that are addressed in the report.

He indicated that comments received from stakeholders were generally supportive, and that NERC is continuing to refine the report in response to stakeholder comments and FERC Staff feedback.

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

RESOLVED, that the Board hereby approves the Five Year Performance Assessment, substantially in the form 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.

Mr. Thilly remarked that NERC is reviewing how it can be more efficient and effective in the conduct of its surveys.

Reliability Coordinator Function in the Western Interconnection
David Godfrey, WECC Vice President of Reliability and Security Oversight, provided an update on the western Reliability Coordinator issues. He reviewed the current proposed Reliability Coordinator map and transition timelines, noting that CAISO began shadow operations on May 1, and reported on NERC and WECC’s continuing engagement efforts. Mr. Godfrey thanked the NERC Board for approving the WECC Variance to the IRO-002 standard.

In response to a question from Mr. Thilly regarding the proposed Gridforce Reliability Coordinator areas, Mr. Godfrey clarified that the proposed Reliability Coordinator map reflects those applications that have been received and that these applications are still under review. Mr. Dodge asked whether generation-only Balancing Authorities will be reflected in the coordinated model, to which Mr. Godfrey replied that the model must reflect everything. Mr. Robb noted that the proposed map appears to create seams issues, particularly in Arizona. Mr. Godfrey responded that WECC is monitoring the issue and will help ensure that any seams agreements are being enforced.
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: (1) the results of the Committee’s review of its organization; (2) development of the 2019 Committee work plan; (3) work by the Operating Reliability Subcommittee on reliability plans; and (4) recent lessons learned on different topics.

Planning Committee
Brian Evans-Mongeon, Committee Chair, referenced the written report and highlighted the Committee’s work on the 2019 Summer Reliability Assessment and State of Reliability report, inverter-based resource issues, and the electric/gas working group. He thanked former Committee member Todd Snitchler for his service to the Committee and wished him well in his future endeavors.

Critical Infrastructure Protection Committee
Marc Child, Committee Chair, referenced the written report and highlighted the Committee’s work on supply chain risk management issues, security and cloud-based services, and the guideline on physical security controls during extreme events.

Member Representatives Committee
Greg Ford, Committee Chair, summarized the matters addressed at the May 8, 2019 MRC meeting, including: (1) the results of recent surveys; (2) policy input provided on the supply chain report; (3) an update on ERO Enterprise effectiveness and efficiency efforts; (4) an update on efforts to promote resilience to electromagnetic pulses; (5) an update on FERC matters; and (5) a preview of forthcoming reliability assessment reports.

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 the results of recent surveys and comments received on the one credential white paper and thanked Mechelle Thomas for her support.

Standards Committee
Amy Casuscelli, Committee Vice Chair, referenced the quarterly report included in the advance agenda package and summarized recent Committee activities, including: (1) two special elections; (2) revisions to the Committee charter; and (3) and postings for standards projects, including revisions to the PRC-024 standard to address inverter based resources and a Standard Authorization Request seeking to modify the CIP standards to address cloud services. She thanked Mr. Manning for his participation in Committee matters.

Reliability Issues Steering Committee
Nelson Peeler, Committee Chair, provided an update on the activities of the Committee, referencing the written report. He highlighted the March 2019 Reliability Leadership Summit in Washington, DC and
noted that work is underway to prepare the ERO Reliability Risk Priorities Report. Mr. Peeler noted that the report will identify a new risk related to the independency of critical infrastructure.

**Compliance and Certification Committee**

Jennifer Flandermeyer, Committee Chair, referred to the written report included in the advance agenda package, highlighting the Committee’s work on the 2018 report on the ERO stakeholder survey and efforts to improve the Committee’s effectiveness and efficiency. She reported that further information will be presented in August.

**Electricity Subsector Coordinating Council**

Mr. Robb reported that the ESCC met in March 2019 to discuss the Center for Advanced Technology in Telecommunications and Distributed Information Systems (“CATT”) 2.0 initiative, including integrating different sectors and discussing how industry can be more involved in shaping the proposal. He also reported that the ESCC conducted a joint meeting with the U.S. DOE, Department of Homeland Security, and Department of Defense to discuss the speed at which information can be declassified. Mr. Robb further noted the issuance of an all-points bulletin on certain Chinese telecommunications providers and that more information on the presence of these providers may be sought in the supply chain Section 1600 data request.

**Forum and Group Reports**

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

Jonathan Booe, NAESB Executive Vice President and Chief Administrative Officer, referenced the written report and noted that NERC and NAESB continue to collaborate on items of mutual interest. He reported that NAESB received two standard requests from NERC to evaluate whether any NAESB action should be taken in light of the NERC Board action on the proposed Standards Efficiency Review retirements and that these requests will be routed through the usual NAESB process. Mr. Booe also reported that NAESB will be participating in efforts to develop third-party accreditation processes for supply chain risk management.

**North American Transmission Forum**

Tom Galloway, Forum Chief Executive Officer, referenced the written report and highlighted certain items, including the Forum’s work on supply chain issues and recent meetings and workshops.

**North American Generator Forum**

Mr. Shriver, Forum Chief Operating Officer, referenced the written report and added that the NAGF is looking to add the merchant gas perspective on reliability issues.

At the conclusion of the reports, Ms. Case thanked the Committees and Forums for their excellent reports.
Adjournment
There being no further business, and upon motion duly made and seconded, the meeting was adjourned.

Submitted by,

[Signature]

Charles A. Berardesco
Corporate Secretary
Compliance and Certification Committee Membership

Action
Approve

Background
The Compliance and Certification Committee (CCC) is recommending that the Board of Trustees approve the following membership appointments and changes for a three-year term.

- Keith Comeaux, Cleco Cajun, Electricity Marketer
- James Crawford, Burns & McDonnell, Small-End-use Electricity Customer
- Mark Hegerle, Federal Energy Regulatory Commission, U.S. Federal
- Kimberly Jones, NC Utilities Commission, U.S. State
- Leigh Mullholland, Capital Power, Merchant Generator
- Thad Ness, Xcel Energy, Investor-Owned Utility
- Jamie Young, MISO, Regional Entity (MRO)
Operating Committee Membership Changes

Action
Approve the following committee membership officers and appointments.¹

Operating Committee Annual Election Results - 2019-2021 Term

<table>
<thead>
<tr>
<th>Sector</th>
<th>Elected Member</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>OC Chair</td>
<td>David Zwergel</td>
<td>MISO</td>
</tr>
<tr>
<td>OC Vice Chair</td>
<td>Doug Hils</td>
<td>Duke Energy</td>
</tr>
<tr>
<td>1. Investor-Owned Utility</td>
<td>Darryl Yohnk</td>
<td>ITC Holdings</td>
</tr>
<tr>
<td></td>
<td>David Cullum²</td>
<td>American Transmission Company, LLC</td>
</tr>
<tr>
<td>2. State/Municipal Utility</td>
<td>Doug Peterchuck</td>
<td>OPPD</td>
</tr>
<tr>
<td>3. Cooperative Utility</td>
<td>Keith Carman</td>
<td>Tri-State G&amp;T</td>
</tr>
<tr>
<td>4. Federal or Provincial Utility/Federal Power Marketing Administration</td>
<td>Lloyd Linke</td>
<td>WAPA</td>
</tr>
<tr>
<td></td>
<td>Jason Boniface</td>
<td>Hydro One</td>
</tr>
<tr>
<td></td>
<td>Stephane Desbiens</td>
<td>Hydro-Québec TransÉnergie</td>
</tr>
<tr>
<td>5. Transmission Dependent Utility</td>
<td>John Stephens</td>
<td>City Utilities of Springfield</td>
</tr>
<tr>
<td>6. Merchant Electricity Generator</td>
<td>David Ball</td>
<td>American Electric Power</td>
</tr>
<tr>
<td>7. Electricity Marketer</td>
<td>Greg Darnell</td>
<td>Southern Company</td>
</tr>
<tr>
<td>8. Large End-Use Electricity Customer</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Robert Blohm</td>
<td>Keen Resources Ltd.</td>
</tr>
<tr>
<td></td>
<td>Garry Baker⁴</td>
<td>JEA</td>
</tr>
<tr>
<td>10. Independent System Operator/Regional Transmission Organization</td>
<td>Wes Yeomans</td>
<td>NYISO</td>
</tr>
</tbody>
</table>

¹ OC members from Sector 11 – Regional Entity are appointed by the Regional Entity.
² Fulfilling a vacancy, term ends September 2020.
³ Sector expanded to fulfill Canadian representation.
⁴ Fulfilling a vacancy, term ends September 2020.
Agenda Item 2c
Board of Trustees Meeting
August 15, 2019

Planning Committee Membership

Action
Approve the following Planning Committee membership appointments and changes for a term of two years.

Planning Committee Annual Election Results — 2019-2021 Term

<table>
<thead>
<tr>
<th>Sector</th>
<th>Elected Members</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC Chair</td>
<td>Brian Evans-Mongeon</td>
<td>Utility Services Inc.</td>
</tr>
<tr>
<td>PC Vice Chair</td>
<td>Joseph Sowell</td>
<td>Georgia Transmission Corp.</td>
</tr>
<tr>
<td>1. Investor-Owned Utility</td>
<td>William Allen</td>
<td>Exelon</td>
</tr>
<tr>
<td>2. State/Municipal Utility</td>
<td>Gary McAdam</td>
<td>MEAG</td>
</tr>
<tr>
<td>3. Cooperative Utility</td>
<td>Paul McCurley</td>
<td>NRECA</td>
</tr>
<tr>
<td></td>
<td>Gordon Pietsch¹</td>
<td>Great River Energy</td>
</tr>
<tr>
<td></td>
<td>Ian Grant</td>
<td>Tennessee Valley Authority</td>
</tr>
<tr>
<td>5. Transmission Dependent Utility</td>
<td>Carl Turner</td>
<td>Florida Municipal Power Agency</td>
</tr>
<tr>
<td>6. Merchant Electricity Generator</td>
<td>Todd Snitchler</td>
<td>Electric Power Supply Association</td>
</tr>
<tr>
<td>7. Electricity Marketer</td>
<td>Gwen Frazier</td>
<td>Southern Company</td>
</tr>
<tr>
<td>8. Large End-Use Electricity Customer</td>
<td>Suzanne Lemieux</td>
<td>American Petroleum Institute</td>
</tr>
<tr>
<td>9. Small End-Use Electricity Customer</td>
<td>Darryl Lawrence</td>
<td>Pennsylvania Office of Consumer Advocate</td>
</tr>
<tr>
<td></td>
<td>Gary Brownfield</td>
<td>Self-employed</td>
</tr>
<tr>
<td>10. Independent System Operator/Regional Transmission Organization²</td>
<td>Charles Hendrix</td>
<td>Southwest Power Pool</td>
</tr>
<tr>
<td></td>
<td>David Short [加拿大]</td>
<td>Independent Electric System Operator (Ontario)</td>
</tr>
<tr>
<td>12. State Government</td>
<td>Christine Ericson</td>
<td>Illinois Commerce Commission</td>
</tr>
</tbody>
</table>

¹ Fulfilling a vacancy, term ends September 2020
² Sector expanded to fulfill Canadian representation
**Critical Infrastructure Protection Committee Charter**

**Action**
Approve

**Summary**
At its June 4, 2019 meeting the Critical Infrastructure Protection Committee (CIPC) approved revisions to the CIPC Charter last approved by the Board on February 8, 2018 and by the CIPC on December 12, 2017.

The revisions are to remove references to and membership representation by FRCC entities; these changes affect the number of voting members as well. The number of voting members changed from 25 to 22.

**Attachment**
- Critical Infrastructure Protection Committee Charter – Redline Copy
- Critical Infrastructure Protection Committee Charter – Clean Copy
Critical Infrastructure Protection Committee Charter

Board Approved: February 8, 2018
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Chapter 1: General Functions of the CIPC

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

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

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

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

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

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

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

Expectations and Requirements
Voting members of the CIPC are expected to:

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

Terms
Terms are expected to be a minimum of two years.

Selection

1. There will be a minimum total of thirty-two voting members. The maximum will be thirty-four, as described below.

2. A minimum of twenty-two voting members shall be representatives from NERC registered entities. There shall be at least three such members from each of the six NERC regional entities (REs) selected by the registered entities from that NERC RE. The three members from each NERC RE must collectively have expertise in three technical areas – physical security, cyber security, and operations, as defined below:
   a. Physical Security – Members are primarily focused on the physical protection of electricity sector facilities. Members should have a background in corporate or physical security at an asset owner utility, Independent System Operator (ISO) or Regional Transmission Operator (RTO).
   b. Cyber Security – Members are technical experts in one or more areas of control systems security, enterprise information security, or systems architecture and design that affect the reliable operation of the BES.
   c. Operations – Members are primarily focused on system operations. Members should have a background in supervisory control and data acquisition (SCADA), Energy Management System (EMS), substation or generating plant control equipment operation and administration.

3. A minimum of two voting members (more if required as stated later in this paragraph) selected by CEA. The CIPC shall contain the number of Canadian voting representatives equal to the percentage of the Net Energy for Load (NEL) of Canada to the total NEL of the United States and Canada, times the total number of voting members on the CIPC, rounded up to the next whole number. The representatives from paragraph two,
above, can fulfill this requirement. If the Canadian representatives from paragraph two are not in sufficient numbers, then NERC will ask the CEA to select sufficient Canadian representatives to meet the requirement.

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

**Alternates**

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

**Partner Members**

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

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

**Executive Committee Review**

The Executive Committee (EC) will annually review the membership to ensure sufficient expertise is represented on the CIPC and that the members are meeting the expectations and requirements listed above. The chair will contact any member who has missed two consecutive meetings (even if the member has sent a proxy) to seek a commitment to actively participate, or ask the member to resign from the committee. The chair may remove any member who has missed two consecutive meetings (even with a proxy).
Chapter 3: Officers

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

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

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

Selection Process
The Committee selects officers using the following process:

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

Vacancies
If an officer is unable to complete their term, that person’s replacement will be selected by the EC to serve the remainder of that term.
Chapter 4: Executive Committee

Members

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

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

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

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

Duties

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

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

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

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

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

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

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

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

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

Antitrust Compliance 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 shall be included with each meeting agenda.

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

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

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

Non-Voting Members.
Non-voting members will have a voice at all open meetings.
Chapter 6: Subgroups

Appointing Subgroups

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

Nominating Subcommittee

1. At the last regular meeting (normally the June meeting) before the selection of a new committee chair (normally the September meeting), the incumbent chair will nominate, for the committee’s approval, a chair of the nominating subcommittee. The subcommittee will recommend candidates for the committee’s chair, two vice-chairs, and four SME EC members. The nominating subcommittee may be formed upon the vacancies.

2. The subcommittee chair will then assemble five committee members which shall include the subcommittee chair and four additional members drawn from the larger committee.

3. The subcommittee will solicit nominations for the Officer and SME EC positions from the voting members of the committee.

4. The subcommittee will review the nominations received and develop a slate of seven candidates: one for the committee chair, two for the committee vice-chairs, and four SME members of the EC.

5. The subcommittee will present its slate of officers at the committee’s September meeting and SME EC members at the committee’s December meeting.
Appendix A: Security Guidelines Approval Process

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

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

The process described below will be followed by the CIPC:

1. New/updated draft guideline approved for comment by the committee. The workgroup Chair approves for comment request the release of a new or updated draft guideline developed by its groups. Alternately, the EC reserves the right to waive such posting.

2. Post draft guideline for comment if required. The draft guideline is posted for comment for 45 days (or a period specified by the EC). If the draft guideline is an update, a redline version against the previous version must also be posted.

3. Post comments and responses. After the comment period, the CIPC will post the comments received as well as its responses to the comments. The committee may delegate the preparation of responses to a committee subgroup.

4. New/updated guideline approval and posting. A new or updated guideline, which considers the comments received, is approved by the CIPC and posted as “Approved” on the NERC website. Updates must include a revision history and a redline version against the previous version.

5. Guideline updates. After posting a new or updated guideline, the CIPC will periodically assign a workgroup task to review the library of guidelines.

6. Standards Committee authorization is required for a security guideline to become a supporting document that is posted with or referenced from a NERC Reliability Standard. See Appendix 3A in the NERC’s Rules of Procedure under “Supporting Document.”

7. In order to receive ERO endorsement, the CIPC must follow the NERC approved process for development and publication of implementation guidance for documents that support a NERC Reliability Standard.
Supply Chain 1600 Data Request

Action
Approve

- Supply Chain Risk Assessment Data Request

Background
In May 2019, the Board of Trustees (Board) accepted in substantial form NERC staff’s final supply chain report titled Cyber Security Supply Chain Risks: Staff Report and Recommended Actions. In this report, NERC staff evaluated the risks posed by different categories of devices and systems not currently addressed by the Supply Chain Standards (Reliability Standards CIP-005-6, CIP-010-3, and CIP-013-1) and made recommendations for further action.

With respect to low impact (BES) Cyber Systems, the report recommended that NERC use its authority under Section 1600 of the NERC Rules of Procedure to obtain more information about the nature and number of BES Cyber Systems currently in use. This information would help NERC better understand the risks associated with low impact BES Cyber Systems, particularly those with external routable connectivity. This information, combined with the results of voluntary industry surveys, would assist NERC and its stakeholders in determining whether to modify the Supply Chain Standards to include these systems.

In accepting the report, the Board stated that it expected NERC would move with all deliberate speed to collect the necessary data to assess the potential risks associated with low impact BES Cyber Systems and report back to the Board.

To meet the Board’s expectations for a prompt evaluation of the cyber security supply chain risks associated with low impact BES Cyber Systems, NERC staff proposed a shortened comment schedule for the proposed Section 1600 request for data or information. The NERC Board authorized the shortened comment period at its June 13, 2019 meeting. The proposed Section 1600 request for data or information was posted for a 20 day industry comment period on July 2, 2019. NERC staff evaluated the comments provided and will provide a summary of those comments and changes made to the data request in response at the Member Representatives Committee meeting on August 14, 2019. Upon approval of the data request, the following will take place:

- August 19, 2019: Issue data request to NERC registered entities.
- October 3, 2019: Responses to data request due to NERC.
- November 6, 2019: Summary of responses to data request presented to NERC Board.

Additional Information
A link to additional material on the Supply Chain Data Request is included here for reference:
[Supply Chain Risk Assessment Data Request - Redline to Draft]
[Supply Chain Risk Assessment Data Request Response to Comments]
Regional Reliability Standard
PRC-006-NPCC-2 – Automatic Under Frequency Load Shedding

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

- [PRC-006-NPCC-2] [Redline to last approved] [Summary of Changes] [Mapping Document]
- Violation Risk Factors (VRFs)/Violation Severity Levels (VSLs) [VRFs and VSLs]
- Implementation Plan [Implementation Plan]
- Retirement [PRC-006-NPCC-1 – Automatic Under Frequency Load Shedding]

Background
On March 21, 2015, the Northeast Power Coordinating Council (NPCC) received a Regional Standards Authorization Request seeking a review of Regional Reliability Standard PRC-006-NPCC-1 for redundancy with the implementation of PRC-006-1, PRC-006-2, PRC-024-1 and PRC-024-2.

Proposed Regional Reliability Standard PRC-006-NPCC-2 was approved by the NPCC Board of Directors on May 1, 2019.

Summary
The NPCC drafting team reviewed Regional Reliability Standard PRC-006-NPCC-1 and made the following changes:

1. Removed redundancies with the most recent continent-wide NERC Reliability Standard, PRC-006-3. Some of the redundancies removed from the Regional Standard PRC-006-NPCC-2 are those related to:
   a. The Québec Interconnection portion of NPCC shall implement an automatic UFLS program in accordance with Attachment C Table 4;
   b. Requirements for a UFLS Database;
   c. Notification of changes to load distribution needed to satisfy UFLS program performance characteristics; and
   d. Development of an implementation plan when changes to load distribution are needed.
2. Ensured that UFLS island boundaries, once identified, are provided upon request, to affected entities.
3. Added minimum time UFLS relay time delay to Attachment C tables and removed as a separate requirement.

4. Added the ability for a Transmission Owner or Distribution Provider to calculate net load shed for UFLS, if direct metering is not available.

5. Made a number of minor clarifications, such as the requirement that the Under Frequency trip relay must be set to operate “on or below” the appropriate curve. (In Version 1 it currently states “below”, and questions arose whether settings on the curve were considered in compliance.)

6. Clarified that any compensatory load shedding for non-conformance with the Under Frequency trip specification for generation (in service prior to July 1, 2015) must be within the same island as the generator resides.

NERC staff supports the proposed Regional Reliability Standard. NERC posted proposed PRC-006-NPCC-2 for a 45-day comment period from May 8, 2019 through June 21, 2019. No adverse comments were received.

**Pertinent FERC Directives**
None.

**Additional Information**
Links to the relevant project history pages and files are included here for reference: [NPCC Standards in Development: PRC-006-NPCC: Automatic Under Frequency Load Shedding]
Regional Reliability Standard  
BAL-002-WECC-3 - Contingency Reserve

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

- Regional Reliability Standard – BAL-002-WECC-3 – Contingency Reserve  
  [BAL-002-WECC-3] [Redline to last approved]
- Implementation Plan  
  [Implementation Plan]
- Retirements  
  [BAL-002-WECC-2a]

**Background**
The Western Electricity Coordinating Council (WECC) received a Standards Authorization Request for the retirement of BAL-002-WECC-2a, Requirement R2 as it became redundant with the implementation of BAL-003-1.1., Requirement R1 on April 1, 2016. The WECC drafting team developed proposed Regional Reliability Standard BAL-002-WECC-3. The WECC Board of Directors approved the Regional Reliability Standard on June 19, 2019.

**Summary**
WECC conducted a field test from May 1, 2017–April 30, 2018 and concluded that the retirement of Regional Reliability Standard BAL-002-WECC-2a, Requirement R2 would not have an adverse impact on reliability. The drafting team reviewed the field test results and proposed the retirement of Requirement R2 in proposed Regional Reliability Standard BAL-002-WECC-3.

NERC staff supports the proposed Regional Reliability Standard. NERC posted proposed BAL-002-WECC-3 for a 45-day comment period from June 20, 2019 through August 5, 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**
Links to the relevant project history pages and files are included here for reference:  
[WECC-0115 BAL-002-WECC-2 Request to Retire Requirement 2]
Proposed Amendments to the Bylaws of ReliabilityFirst

**Action**
Approve proposed amendments to the Bylaws of ReliabilityFirst (“Bylaws”) and file with the Applicable Governmental Authority for approval. The amendments to the Bylaws do not affect ReliabilityFirst’s qualifications or ability to function as a Regional Entity under its Regional Delegation Agreement with NERC.

**Background**
ReliabilityFirst is proposing amendments to its Bylaws to incorporate and adopt NERC’s Consolidated Hearing Process, which is described in Section 403.15 of NERC’s Rules of Procedure. NERC’s Consolidated Hearing Process will replace the Regional Hearing Process ReliabilityFirst has in place today. The proposed amendments were approved by ReliabilityFirst’s Board of Directors on March 14, 2019, and by ReliabilityFirst’s membership on May 15, 2019.

**Justification for Proposed Amendments**
Article VII – Board of Directors

- **Section 7.14. – Hearing Body**
  Under the current Bylaws, the “Hearing Body” provision states that the Hearing Body will consist of ReliabilityFirst’s Board compliance committee members.

  The proposed amendment will remove this provision and establish policies and procedures to designate members to the Hearing Body pursuant to NERC’s Consolidated Hearing Procedures.

- **Section 7.14.1 – Quorum**
  The proposed amendment will remove this provision as it is no longer applicable under the Consolidated Hearing Procedure.

- **Section 7.14.2 – Voting**
  The proposed amendment will remove this provision as it is no longer applicable under the Consolidated Hearing Procedure.
AMENDED AND RESTATED BYLAWS

OF

ReliabilityFirst Corporation
a Delaware nonprofit corporation

Adopted December 19, 2006
Amended September 21, 2007¹
Amended December 6, 2007²
Amended May 22, 2008³
Amended December 4, 2008⁴
Amended December 1, 2011⁵
Amended August 17, 2012⁶

¹ Section 5.9.2
² Sections 1.2, 1.26, 16.1
³ Sections 1.12, 7.13, 7.14
⁴ Sections 5.8, 6.8, 6.9, 6.10.2, 6.10.4, 7.4, 7.5, 7.7, 7.9, 7.11, 7.13
⁵ Sections 1.24, 2.2, 6.8, 7.4, 7.7
⁶ Sections 2.1, 2.2
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AMENDED AND RESTATED
BYLAWS OF
ReliabilityFirst Corporation
a Delaware nonprofit corporation
(the “Corporation”)

[As adopted by the Members on December 19, 2006,
amended by the Board of Directors on September 21, 2007,
amended by the Members on December 6, 2007,
amended by the Board of Directors on May 22, 2008,
amended by the Members on December 4, 2008,
amended by the Members on December 1, 2011,
and amended by the Members on August 17, 2012]

ARTICLE I.
DEFINITIONS


Section 1.2. Adjunct Member. “Adjunct Member” shall mean any entity that does not qualify to join an Industry Sector but has been approved for membership. Adjunct Members may include Regulatory Participants.

Section 1.3. Affiliate. “Affiliate” shall mean, with respect to any entity, any other entity that, directly or indirectly, through one or more intermediaries, controls, or is controlled by, or is under common control with, such entity, as determined in the sole discretion of the Board of the Corporation. For this purpose, “control” may be presumed by the direct or indirect ownership of ten percent (10%) or more of the outstanding voting capital stock or other equity interests having ordinary voting power.

Section 1.4. Associate Member. “Associate Member” shall mean any entity that has joined an Industry Sector and is an Affiliate or Related Party of a Regular Member.

Section 1.5. Board. “Board” shall mean the Board of Directors of the Corporation.

Section 1.6. Bulk Power System. “Bulk Power System” shall mean facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) and electric energy from generation facilities needed to maintain transmission system reliability, but does not include facilities used in the local distribution of electricity.

Section 1.7. Certificate of Incorporation. “Certificate of Incorporation” shall mean the Certificate of Incorporation of the Corporation filed with the Delaware Secretary of State, as from time to time amended.
Section 1.8. **Commission.** “Commission” shall mean the Federal Energy Regulatory Commission.

Section 1.9. **Delegation Agreement.** “Delegation Agreement” shall mean the delegation agreement, as supplemented or amended from time to time, between NERC and the Corporation pursuant to which NERC has delegated its authority to the Corporation to propose and enforce Reliability Standards within the Region.

Section 1.10. **Electronic Transmission.** “Electronic transmission” shall mean any form of communication, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process.

Section 1.11. **ERO.** “ERO” shall mean the electric reliability organization established under the Act to enforce Reliability Standards applicable to all owners, operators and users of the Bulk Power System in North America.

Section 1.12. **Hearing Body.** “Hearing Body” shall mean a group established with authority to conduct and render decisions in a formal compliance hearing of an entity registered in the NERC compliance registry who is the subject of a notice of alleged violation, proposed penalty or sanction, contested mitigation plan or contested remedial action directive.

Section 1.13. **Industry Sector.** “Industry Sector” shall mean a group of Bulk Power System owners, operators or users in the Region with substantially similar interests as pertinent to the purposes and operations of the Corporation of the Bulk Power System. The Industry Sectors shall consist of the following: (1) Suppliers, (2) Transmission Companies, (3) RTOs, (4) Small LSEs, (5) Medium LSEs, and (6) Large LSEs.

Section 1.14. **Large LSEs.** “Large LSEs” shall mean entities that serve, or whose Related Parties serve, end use load with annual energy delivery to such load in the Region of 50,000 GWh or greater.

Section 1.15. **Medium LSEs.** “Medium LSEs” shall mean entities that serve, or whose Related Parties serve, end use load with annual energy delivery to such load in the Region between 10,000 GWh and 50,000 GWh.

Section 1.16. **Members.** “Members” shall mean Regular Members, Associate Members and Adjunct Members.

Section 1.17. **NERC.** “NERC” shall mean the North American Electric Reliability Corporation, or any successor entity, which has been certified by the Commission as the ERO pursuant to the Act to establish and enforce Reliability Standards for the Bulk Power System.
Section 1.18. NERC Rules. “NERC Rules” shall mean the NERC Rules of Procedure as approved by the Commission.

Section 1.19. Net Energy for Load. “Net Energy for Load” shall mean net generation of an electric system plus energy received from others less energy delivered to others through interchange. It includes system losses, but excludes energy required for storage of energy at energy storage facilities. Calculations of net energy for load for all purposes under these Bylaws shall be based on the most recent calendar year for which data on net energy for load of the Region is available.

Section 1.20. Person. “Person” shall mean a natural person, corporation, cooperative, partnership, association, or other private or public entity.

Section 1.21. Region. “Region” shall mean the geographic boundaries of the Corporation described in the Delegation Agreement.

Section 1.22. Regional Entity. “Regional Entity” shall mean any entity with which NERC has entered into a delegation agreement to delegate, or which the Commission or a governmental authority in Canada or Mexico has directly assigned, enforcement authority for reliability standards for the Bulk Power System in a defined geographic area of North America.

Section 1.23. Regional Variance. “Regional Variance” shall mean an aspect of a Reliability Standard that applies only within a particular Regional Entity or group of Regional Entities. A Regional Variance may be used to qualify how a particular Regional Entity or Regional Entities achieves the objectives of a Reliability Standard or may establish different measures or performance criteria as necessary to achieve reliability within the particular Regional Entity or group of Regional Entities. A Regional Variance may not be inconsistent with any Reliability Standard as it would otherwise exist without the Regional Variance. Such a Regional Variance may be proposed by a Regional Entity and, if adopted by NERC and approved by the Commission, shall be enforced within the applicable Regional Entity or Regional Entities pursuant to delegated authority.

Section 1.24. Regional Reliability Standard. “Regional Reliability Standard” shall mean a type of Reliability Standard that is applicable only within a particular Regional Entity or group of Regional Entities. A Regional Reliability Standard may augment, add detail to, or implement another Reliability Standard or cover matters not addressed by other Reliability Standards. A Regional Reliability Standard is not binding upon any Member or Registered Entity, nor is it effective or enforceable, until the Regional Reliability Standard has been adopted by NERC and approved by the Commission as a Reliability Standard within the applicable Regional Entity or Regional Entities pursuant to delegated authorities.

Section 1.25. Regular Member. “Regular Member” shall mean any entity that has joined an Industry Sector that either (i) has no Affiliates or Related Parties that are Members or (ii) is the entity designated to be the Regular Member by any related group of Associate Members.
Section 1.26. Regulatory Participant. "Regulatory Participant" shall mean any state, District of Columbia or any provincial regulatory agency in the Region exercising authority over the rates, terms or conditions of electric service of an entity other than itself within the Region, or the planning, siting, construction or operation of electric facilities of an entity other than itself within the Region, as well as the Commission, regional advisory bodies that may be established by the Commission, or any federal regulator or agency or any entity authorized by any state, the District of Columbia or any province to represent utility consumers.

Section 1.27. Related Party. “Related Party” shall mean, solely for purposes of the governance provisions of these Bylaws, any entity that is registered as part of another entity or is registered for other entities in the NERC Compliance Registry. For purposes of these Bylaws, a representative of a state or federal government agency shall not be deemed a Related Party with respect to each other, and a public body’s regulatory authority, if any, over a Member shall not be deemed to make it a Related Party with respect to that Member.

Section 1.28. Reliability Coordinator. "Reliability Coordinator" shall mean any entity that is recognized as a reliability coordinator by NERC in the Region that does not otherwise qualify as a Transmission Company or RTO.

Section 1.29. Reliability Standard. "Reliability Standard" shall mean a requirement to provide for Reliable Operation of the Bulk Power System, including, without limitation, the foregoing requirements for the operation of existing Bulk Power System facilities, including cyber security protection, and the design of planned additions or modifications to such facilities to the extent necessary for reliable operation of the Bulk Power System, but shall not include any requirement to enlarge Bulk Power System facilities or to construct new transmission capacity or generation capacity.

Section 1.30. Reliable Operation. "Reliable Operation" shall mean 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 failure of the Bulk Power System will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements.

Section 1.31. RTOs. “RTOs” shall mean PJM Interconnection L.L.C. and Midwest Independent Transmission System Operator, Inc., or such other entity that has been recognized by the Commission as a regional transmission operator or recognized functional equivalent in the Region.

Section 1.32. Small LSEs. “Small LSEs” shall mean (i) owners or operators of entities (or their representatives) that serve, or whose Related Parties serve, end use load with annual energy delivery to such load in the Region of 10,000 GWh or less, and (ii) end-use customers interconnected with the Bulk Power System with load of at least 100 MW at one location in the Region.
Section 1.33. Suppliers. “Suppliers” shall mean owners or operators of electric 
generation connected to the transmission system and wholesale power marketers in the 
Region.

Section 1.34. Transmission Companies. “Transmission companies” shall 
mean (i) owners (or those with ownership entitlement), planners and operators of 
transmission facilities included in the Bulk Power System in the Region and (ii) 
Reliability Coordinators.

ARTICLE II. 
PURPOSE AND ACTIVITIES

Section 2.1. Purpose. The business or purposes to be conducted or promoted 
by the Corporation are:

(a) to be a Regional Entity and exercise enforcement authority for 
Reliability Standards for the Bulk Power System in the Region pursuant to the 
Delegation Agreement;

(b) to carry out certain of NERC’s activities that are in furtherance of 
NERC’s responsibilities as the ERO under the Act or in support of delegated 
functions, as specified in the NERC Rules or the Delegation Agreement; and

(c) to engage in any other lawful act or activity for which not for profit 
corporations may be organized under the Delaware General CorporationLaw.

The Corporation shall be exempt from federal income taxation pursuant to 
Section 501(c) of the Internal Revenue Code of 1986, as amended (hereinafter the 
“Code”) as an organization described in Section 501(c)(3) of the Code. The Corporation 
shall not engage directly or indirectly in any activity which would invalidate its status as 
an organization exempt from taxation under Section 501(a) of the Code as an 
an organization described in Section 501(c)(3) of the Code. No part of the net income to 
the Corporation shall inure to the benefit of or be distributed to its directors, officers, 
members or other private persons, except that the Corporation shall be authorized and 
empowered to pay reasonable compensation for services actually rendered.

Section 2.2. Activities. In support and furtherance of its purpose, and in 
accordance with and at all times subject to the NERC Rules and the Delegation 
Agreement, the Corporation’s responsibilities shall include, but not be limited to, the 
following:

(a) Reliability Standards. The Corporation shall:

(1) propose Reliability Standards, Regional Variances or 
modifications thereof to NERC; and

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(2) develop Regional Reliability Standards through the Corporation’s standards development procedure.

(b) Enforcement. The Corporation shall enforce Reliability Standards (including Regional Variances) within the Region through the Corporation’s compliance enforcement program.

(c) Delegation-Related Services. The Corporation, on behalf of NERC, shall carry out certain of NERC’s activities that are in furtherance of NERC’s responsibilities as the ERO under the Act or in support of delegated functions, including:

(1) Organization registration and certification.
(2) Reliability readiness audit and improvement.
(3) Reliability assessment and performance analysis.
(4) Training and education.
(5) Situational awareness and infrastructure security.

(d) Budget. The Corporation shall prepare and submit a budget to NERC for the amount of costs the Corporation will incur in support of delegated functions that are in furtherance of NERC’s responsibilities as the ERO under the Act.

(e) Non-delegated Functions. The Corporation may conduct such other activities for or on behalf of the Members that are not delegated to the Corporation by NERC under the Delegation Agreement if authorized by the Board and not inconsistent with the Act, NERC Rules, Section 501(c)(3) of the Internal Revenue Code, the Delegation Agreement or these Bylaws.

Section 2.3. Not-for-Profit Corporation. The Corporation is operated as a Delaware non-stock nonprofit corporation and is organized pursuant to the general corporation law of the State of Delaware.

ARTICLE III. POWERS

Section 3.1. Powers. The Corporation shall have the power to engage in any lawful act or activity for which corporations may be organized under the general corporation law of the State of Delaware, subject to any limitations provided in applicable federal, provincial or state law or in the Certificate of Incorporation or these Bylaws.
ARTICLE IV.
OFFICES

Section 4.1. Principal Office. The principal office of the Corporation shall be located initially within the Region, at such location as the Board may from time to time determine, giving consideration to the total cost to the Corporation and convenience of travel for staff, Members and Regulatory Participants. Once established, the principal office may remain in its location, even if outside the Region.

ARTICLE V.
MEMBERS

Section 5.1. General. The terms and conditions of membership in the Corporation shall be as provided in the Certificate of Incorporation and these Bylaws if not inconsistent therewith. All Regular Members and Associate Members shall be required to join a single Industry Sector.

Section 5.2. Classes of Members. The Corporation shall have three (3) classes of Members: Regular Members, Associate Members and Adjunct Members.

5.2.1 Regular Members. Except as set forth in Sections 5.5 and 6.5 of these Bylaws, Regular Members shall have the right to vote on all matters within their Industry Sector. Regular Members shall have all the rights and obligations of being a Member in the Corporation.

5.2.2 Associate Members. Associate Members shall not be entitled to vote within their Industry Sector or for any other purpose as a Member. Associate Members shall otherwise have all the rights and obligations of being a Member in the Corporation.

5.2.3 Adjunct Members. Adjunct Members shall not be entitled to vote for any purpose as a Member. Adjunct Members shall otherwise have all the rights of being a Member in the Corporation.

Section 5.3. Qualifications of Members. Any entity eligible to join an Industry Sector may be a Regular Member or Associate Member of the Corporation. Any entity not eligible to join an Industry Sector may be an Adjunct Member of the Corporation.

Section 5.4. Admission of Members. New Members may join the Corporation upon submittal of an application, in a form approved by the Board, and upon payment of such fees or charges, if any, as may be established by the Board or required by NERC. Each Regular Member and Associate Member shall designate the Industry Sector it wishes to join. A Regular Member and Associate Member may change its Industry Sector designation once each calendar year upon notice to the Corporation. Such notice must be provided to the Secretary of the Corporation at least sixty (60) days before an annual or other meeting of Members if the change is to be effective for such meeting. The President shall review a membership application and may request demonstration by the applicant that it qualifies for membership in a particular Industry Sector. Any dispute with respect to a Regular Member’s or Associate Member’s
qualifications for a particular Industry Sector shall be resolved by the Board. The President shall have authority to approve an application for membership, subject to review by the Board.

Section 5.5. Voting Rights. Each Regular Member in good standing shall be entitled to one vote in the Industry Sector in which it belongs on all matters submitted to a vote of Members. The Board may suspend voting rights for a Regular Member delinquent by more than 60 days in payment of any penalties or because of the Regular Member’s failure to meet other obligations to the Corporation. Except with respect to the election of Industry Sector directors as described elsewhere in the Certificate of Incorporation and these Bylaws, matters properly brought before the Members at an annual or special meeting shall be acted upon by the Industry Sectors voting together as a single class. The vote of each Industry Sector shall be split into an affirmative component based on votes for the matter(s) presented, and a negative component based on votes against the matter(s) presented, in direct proportion to the votes cast within the Industry Sector for and against the matter presented, rounded to two decimal places. If authorized in advance by the Board, voting may be held electronically under such terms and conditions as are approved by the Board.

Section 5.6. Transfer of Membership. A Member of the Corporation may not transfer its membership or a right arising from it except to any Person succeeding to all or substantially all of the assets of the Member. If challenged, the President shall have authority to approve any such transfer, subject to review by the Board.

Section 5.7. Obligations of Members. By applying for and becoming a Regular or Associate Member of the Corporation, each Member agrees to comply with all Reliability Standards, all NERC standards and requirements, and the other obligations of Members of the Corporation set forth in these Bylaws or duly adopted by the Board in order to achieve the purposes of the Corporation. A Regular or Associate Member also agrees to obligate all of its Affiliates that have an impact on reliability in the Region to comply with all Reliability Standards and NERC standards and requirements. These obligations include but are not limited to: (a) obligations to provide data and information needed to perform the functions of the Corporation, (b) payment of any authorized penalties resulting from non-compliance with Reliability Standards, (c) in the case of Regular Members, electing the Board, and (d) providing qualified candidates to serve on organizational working groups. Adjunct Members agree to provide data and information needed to perform the functions of the Corporation.

Section 5.8. Withdrawal. A Member may withdraw from participation in the Corporation upon notice given in writing or by electronic transmission to the Corporation. Such notice shall specify a date, not earlier than thirty (30) days from the date of notice, on which the withdrawal shall become effective.

Section 5.9. Funding and Dues.

5.9.1 NERC Funding. In accordance with and at all times subject to the NERC Rules and the Delegation Agreement, the Corporation shall equitably allocate its dues, fees and other charges for the delegated functions conducted by the Corporation.
among all end users. The Corporation shall submit to NERC annually a list of all load-serving entities within the Region. NERC will bill all load-serving entities in the Region for the Corporation’s costs for the delegated functions based on Net Energy for Load and be responsible for collection.

5.9.2 Application Fee, User-Fees and Other Charges. The Corporation may charge a nominal fee, which shall be determined by the President, for the submission of applications for membership. The Board of Directors may from time to time fix the amount of user-fees or other charges, if any, for activities that are not delegated to the Corporation by NERC under the Delegation Agreement and determine the methods of collection from entities that choose to participate in such activities.

Section 5.10. Penalties. If the Corporation initiates an investigation that leads to the imposition of a penalty, the Corporation shall receive any penalty monies that result from the investigation. All monies which the Corporation collects from the issuance of penalties shall be applied as a general offset to the Corporation’s budget requirements for the subsequent fiscal year. Funds from financial penalties shall not be directly applied to any program maintained by the Corporation.

ARTICLE VI.
MEETING OF MEMBERS

Section 6.1. Annual Meeting of Members. The Members shall hold an annual meeting in December of each year, or at such other time specified by the Board. At the annual meeting of Members: (i) each Industry Sector shall elect the successor(s), if any, for any director(s) from their Industry Sector whose term will expire before the next annual meeting of the Members, provided however, that any Industry Sector may elect a successor director representing such Industry Sector prior to such annual meeting, in accordance with the provisions of this Article VI, in which case the election of such succeeding director(s) shall be reported to the Corporation at such annual meeting; (ii) the President and Treasurer shall report on the activities and financial condition of the Corporation; (iii) the Industry Sectors shall elect a slate of at-large and independent directors to fill vacancies or expiring terms; and (iv) the Industry Sectors shall consider and act upon such other matters as are consistent with the notice of the annual meeting. The failure to hold an annual meeting in accordance with these Bylaws shall not affect the validity of a corporate action.

Section 6.2. Special Meetings of Members. Special meetings of the Members may be called by six (6) directors on the Board, by the President, or by Members if at least ten percent (10%) of the Regular Members sign, date, and deliver to the President one or more written demands for a special meeting describing the purpose for which it is to be held. Within fifteen (15) days after receipt of a demand for a special meeting from Regular Members, the President shall cause a special meeting to be called and held on notice in accordance with Section 6.4 of these Bylaws. If the President fails to cause a special meeting to be called and held as required by this Section 6.2, a Regular Member making the demand may call the meeting by giving notice under Section 6.4. In either event, notice of the meeting and the costs of the meeting shall be at the expense of the Corporation. The business transacted at a special meeting is limited to
the purposes stated within the notice of the meeting. Business transacted at a special meeting that is not included in those stated purposes is voidable by or on behalf of the Corporation, unless ninety percent (90%) of the Regular Members entitled to vote were present at such meeting or have waived notice of the meeting under Section 6.4.

Section 6.3. Location of Meetings of Members. Meetings of Members shall be held at a location designated by the President or the Board. If a Regular Member calls a meeting pursuant to Section 6.2, the Regular Members making the demand for the meeting may designate the location, provided the meeting must be held within the Region and in a facility of appropriate size to accommodate the Members.

Section 6.4. Notice of Meetings.

6.4.1 Notice Requirements. Notice of meetings of Members must be given at least five (5) days before the date of a meeting and not more than sixty (60) days before the date of a meeting. The notice must contain the date, time and place of the meeting, instructions for electronic attendance or voting, if applicable, and an agenda of the matters upon which action may be taken at the meeting. A matter may be added to the agenda of a meeting at the meeting upon the affirmative vote of three-quarters (3/4) of the Industry Sector votes cast on a motion to amend the agenda. If the meeting is an adjourned meeting and the date, time and place of the meeting were announced at the time of the adjournment, notice is not required unless a new record date for the adjourned meeting is or must be fixed. Notice shall be deemed given by the Corporation to the Members when (a) posted on the Corporation's public website in a reasonably prominent location, and (b) sent by mail, facsimile or reputable overnight delivery service or by electronic transmission to each Member’s representative authorized pursuant to Section 6.10.1

6.4.2 Waiver of Notice; Objections. A Member may waive notice of a meeting of Members. A waiver of notice by a Member entitled to notice is effective whether given before, at, or after the meeting, and whether given in writing, or by attendance. Attendance by a Member at a meeting is a waiver of notice of that meeting, unless the Member objects at the beginning of the meeting to the transaction of business because the meeting is not lawfully called or convened, or objects before a vote on an item of business because the item may not lawfully be considered at that meeting and does not participate in the consideration of the item at that meeting.

Section 6.5. Record Date. The Board may fix a date not more than sixty (60) days before the date of a meeting of Members as the date for the determination of the Members entitled to notice of and entitled to vote at the meeting. When a date is so fixed, only Members on that date are entitled to notice and to vote at the meeting unless the Board fixes a new date for determining the right to notice and to vote, which it must do if the meeting is adjourned to a date more than sixty (60) days after the record date for determining Members entitled to notice of the original meeting.

Section 6.6. Right to Vote; Act of Members.
6.6.1 **Industry Sector Voting.** Voting of the Members shall be by Industry Sector, with each Industry Sector entitled to cast one vote. Each Member entitled to vote in an Industry Sector shall be entitled to cast one vote in its Industry Sector. The vote of each Industry Sector shall be split into an affirmative component based on votes for the pending motion, and a negative component based on votes against the pending motion, in direct proportion to the votes cast within the Industry Sector for and against the pending motion, rounded to two decimal places. To the extent practicable, all Member votes may be held electronically under such terms and conditions as are approved by the Board.

6.6.2 **Act of Members.** If a quorum is present, except with respect to any matter described in Section 6.6.3, a majority of the Industry Sector votes cast on the matter shall be the act of the Members.

6.6.3 **Special Voting Requirements.** Notwithstanding any other provision of these Bylaws, and except as set forth in the Certificate of Incorporation and Section 13.2 of these Bylaws, two-thirds (2/3) of the Industry Sector votes cast shall be required to:

(a) Amend the Bylaws, except as otherwise provided in Section 19.1 of these Bylaws. The substance of the proposed amendment must be contained in the notice of the meeting at which the vote will be taken; however, the Members may modify a proposed Bylaw amendment at the meeting.

(b) Approve any proposal to terminate the Corporation.

Section 6.7. **Quorum.** A quorum for a meeting of Members is a majority of the Regular Members entitled to vote in each Industry Sector at the meeting. A quorum for a meeting of an Industry Sector is a majority of the Regular Members of that Industry Sector entitled to vote at the meeting. In both cases, electronic participation is acceptable if authorized by the Board. A quorum is necessary for the transaction of business at a meeting of Members or of any Industry Sector. If a quorum is not present, a meeting may be adjourned for that reason by the Industry Sectors or Regular Members then represented or present.

Section 6.8. **Action by Written Ballot.** All elections of directors shall be by written ballot. The requirement of a written ballot shall be satisfied by a ballot submitted by electronic transmission provided that any such electronic transmission must either set forth or be submitted with information from which it can be determined that the electronic transmission was authorized by the Member.

Section 6.9. **Action by Electronic Communication.** A conference among Members by a means of communication through which the participants may simultaneously hear each other during the conference is a meeting of the Members, if the same notice is given of the conference as would be required for a meeting and if the number of persons participating in the conference is a quorum. Participation in a meeting by this means is personal presence at the meeting. A Member may participate in a meeting of the Members by a means of communication through which the Member,
other persons participating, and all persons physically present at the meeting may simultaneously communicate with each other during the meeting. Participation in a meeting by this means constitutes personal presence at the meeting.

Section 6.10. Member Representatives; Proxies.

6.10.1 Designation of Representative. Each year prior to the annual meeting of Members, each Regular Member shall designate the individual authorized to vote on Corporation matters on behalf of the Member, in accordance with procedures approved by the Board. A Regular Member may change such designation at any time by providing at least twenty-four (24) hour written notice to the Secretary of the Corporation. Such notice may be provided by electronic transmission.

6.10.2 Authorization. The individual designated to vote by a Regular Member may appoint a proxy to vote or otherwise act for the Regular Member at any meeting by signing an appointment form either personally or by an attorney so designated by the Regular Member. Such authorization may be in writing or by means of electronic transmission to the person who will be the holder of the proxy, provided that such electronic transmission must either set forth or be submitted with information from which it can be determined that the electronic transmission was authorized by the Member representative.

6.10.3 Effective Period. An appointment of a proxy is effective when received by the Secretary or other officer or agent authorized to tabulate votes. An appointment is valid for the next regular or specially scheduled meeting or ballot by electronic transmission. However, a proxy is not valid for more than sixty (60) days from its date of execution.

6.10.4 Revocation. An appointment of a proxy is revocable by a Regular Member. Appointment of a proxy is revoked by the person appointing the proxy either by open declaration at a meeting or by signing and delivering a revocation in writing or by electronic transmission to the Secretary or other officer or agent authorized to tabulate proxy votes. This may be done either in a statement that the appointment of the proxy is revoked or by a subsequent appointment that shall serve to cancel all prior proxies.

Section 6.11. Public Notice of Member Meetings. Notice to the public of the dates, times and places of meetings of the Members, and all nonconfidential 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 adjourn to closed session to discuss matters of a confidential nature, including, but not limited to, personnel matters, compliance and enforcement matters, litigation or commercially sensitive or critical infrastructure information of a Member or other Person.
Section 6.12. Posting of Minutes. Minutes of meetings of Members shall be posted on the Corporation’s website when available.

Section 6.13. Reimbursement of Member Expenses. The Corporation will be under no obligation to reimburse Members for expenses associated with their attendance at regular or special Member meetings.

ARTICLE VII.
BOARD OF DIRECTORS

Section 7.1. General. The composition of the Board and the terms of office of the directors, the manner of their nomination, election or appointment, and other terms and conditions of their service, shall be as provided in the Certificate of Incorporation and these Bylaws if not inconsistent therewith.

Section 7.2. Management of Corporation. The business of the Corporation shall be managed under the direction of the Board. Specific functions of the Board shall include, but not be limited to:

(a) govern the Corporation and oversee all of its activities;
(b) establish and oversee all organizational groups;
(c) approve, revise and enforce Reliability Standards utilizing a fair, open, balanced and inclusive process;
(d) establish compliance monitoring procedures and requirements, and penalties and sanctions for non-compliance consistent with applicable NERC Rules;
(e) impose penalties and sanctions consistent with the NERC Rules and the procedures approved by the Board;
(f) establish and approve an annual budget for submission to NERC;
(g) hire the Corporation’s president and approve his or her salary;
(h) annually at the first regular Board meeting following the annual meeting of Members, elect a Chair (“Chair”) and a vice-chair from among the directors on the Board; and
(i) establish Board committees as appropriate.

Section 7.3. Voting. Each director shall have one vote with respect to decisions of the Board.

Section 7.4. Composition of the Board.
(a) The Board shall consist of fourteen (14) or fifteen (15) directors which number shall be established from time to time by resolution of the Board, which resolution shall in no event have the effect of terminating the term of any incumbent director.

(b) Eight directors shall be elected by the Industry Sectors as follows:

(i) Suppliers shall elect two (2) directors;
(ii) Transmission Companies shall elect two (2) directors;
(iii) RTOs shall select one (1) director;
(iv) Small LSEs shall elect one (1) director;
(v) Medium LSEs shall elect one (1) director; and
(vi) Large LSEs shall elect one (1) director.

(c) Three (3) directors shall be at-large. At-large directors shall be elected by all of the Industry Sectors voting together as a single class.

(d) Three (3) directors, if the Board consists of fourteen (14) directors, and four (4) directors, if the Board consists of fifteen (15) directors, shall be independent from the Corporation and any Member or any Affiliate or Related Party of any Member. Independent directors shall be elected by all of the Industry Sectors voting together as a single class.

(e) Industry Sectors shall elect their respective sector and at-large directors from among individuals holding senior management positions in Member organizations. Any sector-elected or at-large director whose Member organization changes Industry Sectors or who ceases to hold a senior management position in a Member organization shall continue to serve out his or her remaining term, unless such director resigns or is removed. No two directors may be employees of a single Member or any Affiliate or Related Party of a Member or any Affiliate.

(f) An independent director is a person (i) who is not an officer or employee of the Corporation, an officer, director, or employee of a Member, or an officer, director or employee of any entity that would reasonably be perceived as having a direct financial interest in the outcome the Board’s decisions, or (ii) who does not have a relationship that would interfere with the exercise of independent judgment in carry out the responsibilities of a director. The Board may adopt additional standards for director independence not inconsistent therewith.

(g) At-large and independent directors shall be nominated by the nominating and governance committee of the Board. When nominating at-large directors, the nominating and governance committee shall consider such factors as the geographic and functional representation of the Board. The nominating
and governance committee shall seek out for nomination independent directors from diverse backgrounds, who will contribute to the effective functioning of the Board and the Corporation by bringing a broad range of industry expertise, viewpoints, experiences, skill sets and knowledge. If an incumbent independent director is not re-nominated, the nominating and governance committee will use reasonable efforts to ensure that diverse candidates are in the pool of potential nominees for the open independent director position and may retain an independent consultant to identify individuals qualified and willing to serve as an independent director.

(h) Any director which the full Board has determined has a conflict of interest on any compliance or enforcement matter brought before the Board shall not vote on such matter and shall recuse himself or herself from all Board deliberations concerning such matter.

(i) There will be no alternates or proxies for directors.

Section 7.5. Terms of Directors. The directors will be divided into three classes. The number of directors in each class shall be as nearly equal as possible. The term of office of the first class will expire at the second annual meeting of Members; the term of office of the second class will expire one year thereafter; and the term of office of the third class two years thereafter. At each annual meeting of Members, directors shall be chosen for a three year term to succeed those whose term expires. No two at-large directors and no two directors of the same Industry Sector shall be in the same class. At least one (1) independent director shall be in each class. Each director shall hold office until (a) the expiration of the term for which he or she was elected and until his or her successor is elected and qualified, or (b) his or her earlier death, resignation or removal. Any director may be removed at any time by the affirmative vote of two-thirds of the Industry Sector or Industry Sectors, as applicable, electing such director. A director may be removed by the Board for non-attendance at three consecutive Board meetings.

Section 7.6. Reimbursement. Independent directors shall have the right to reimbursement by the Corporation of their actual reasonable travel expenses to Board meetings or when specifically selected to represent the Corporation at a business meeting. The directors elected by the Industry Sectors and the at-large directors shall not be reimbursed by the Corporation for any expenses, unless specifically approved in advance by resolution of the Board.

Section 7.7. Resignations; Vacancies.

(a) Resignations. A director may resign from the Board upon notice given in writing or by electronic transmission to the Corporation. Such resignation shall take effect at the time identified in the notice as the effective date of resignation.

(b) Vacancies. If a notice of resignation provides that the effective date of resignation will occur on a future date within an unexpired term, the Industry
Sector or Industry Sectors, as applicable, may elect a successor director to fill the impending vacancy prior to the effective date of the resignation, in accordance with the procedures and requirements set forth above. The successor director elected by the Industry Sector or Industry Sectors, as applicable, shall commence on the effective date of the resigning director’s resignation and hold office for the unexpired term of the vacated directorship replaced.

If a successor Industry Sector or at-large director is not elected prior to the resignation effective date, or if an Industry Sector or at-large director resigns, dies or otherwise becomes incapacitated or is removed during the term of office for which elected, the directorship shall thereupon be vacant and shall be filled by the Industry Sector or Industry Sectors, as applicable, by written or electronic ballot in accordance with the procedures and requirements set forth above. The successor director elected by the Industry Sector or Industry Sectors, as applicable, shall hold office for the unexpired term of the vacated directorship replaced.

If a successor independent director is not elected prior to the resignation effective date, or if an independent director resigns, dies or otherwise becomes incapacitated or is removed during the term of office for which elected or ceases to be independent, as determined by the Board, his or her directorship shall thereupon be vacant and may be filled by resolution of the Board and any independent director so chosen shall hold office until the next annual meeting of Members, at which time a permanent successor shall be elected by the Industry Sectors for the remainder of the unexpired term. Upon an increase in the number of directors on the Board in accordance with Section 7.4(a) of these Bylaws, the independent directorship created thereby may be filled by resolution of the Board and any independent director so chosen shall hold office until the next annual meeting of Members, at which time a permanent successor shall be elected by the Industry Sectors for the remainder of such director’s unexpired term.

Section 7.8. Meetings; Notice; Waiver.

(a) Meetings. An annual meeting of the Board shall be held without notice immediately following the annual meeting of the Members. The Board shall elect the Chair and Vice-Chair for the next year at the annual meeting. In addition, regular meetings may be held at such time or times as fixed by the Board. Special meetings of the Board may be called by the Board’s Chair, the President or by any three directors and shall be held at the principal office of the Corporation, or such other place within the Region as determined by the Chair or the President after consultation with the Board.

(b) Notice. Notice of the dates, times, and places of all regular and special meetings of the Board shall be published by the Secretary and provided to all directors and Members not less than three (3) days prior to the date of the meeting. Notice shall be deemed given by the Corporation to directors and the Members when (a) posted on the Corporation’s public website in a reasonably
prominent location, and (b) sent by mail, facsimile or reputable overnight delivery service or by electronic transmission to each director and each Member’s representative authorized pursuant to Section 6.10.1.

(c) Waiver. Any person entitled to notice of a regular or special meeting of the Board may waive notice thereof. A waiver of notice by a person entitled to notice is effective whether given before, at, or after the meeting, and whether given in writing or by attendance. Attendance by a director at a meeting of the Board is a waiver of notice of that meeting, unless the director objects at the beginning of the meeting to the transaction of business because the meeting is not lawfully called or convened, or objects before a vote on an item of business because the item may not lawfully be considered at that meeting and does not participate in the consideration of the item at that meeting.

Section 7.9. Quorum. For the Board to take action at a meeting, a quorum of directors must be present. A quorum is a majority of the directors then in office, provided that: (a) if there are three or four independent directors holding office, two independent directors must be present to constitute a quorum, or (b) if there are two independent directors holding office, one independent director must be present to constitute a quorum. If there is only one independent director or no independent directors holding office, there is no requirement that an independent director be present in order for the Board to have a quorum. In the absence of a quorum, a majority of the directors present may adjourn a meeting, without notice, except as may be given at such meeting, until a quorum is present.

Section 7.10. Board Action. The act of a majority of the directors present at a meeting at which a quorum is present shall be the act of the Board, unless the act of a greater number is required by law or these Bylaws.

Section 7.11. Action Without a Meeting. Any action required or permitted to be taken at any meeting of the Board or any committee thereof may be taken without a meeting if all members of the Board or committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceeding of the Board or the committee. Any nonconfidential material provided to the Board or a committee in connection with such action shall be posted on the Corporation’s website at approximately the same time that it is given to the Board or the committee. The results of all actions taken by the Board or any committee thereof without a meeting shall be promptly posted on the Corporation’s website.

Section 7.12. Action by Electronic Communication. A conference among directors by a means of communication through which the directors may simultaneously hear each other during the conference is a Board meeting if the same notice is given of the conference as would be required for a meeting and if the number of directors participating in the conference is a quorum. Participation in a meeting by this means constitutes personal presence at the meeting. A director may participate in a Board meeting by any means of communication through which the director, other directors
Participating, and all directors physically present at the meeting may simultaneously
communicate with each other during the meeting.

Section 7.13. Board Committees. The Board shall have an audit committee,
compensation committee, nominating and governance committee and compliance
committee, and such other committees the Board deems necessary and appropriate.
Each committee shall be comprised of not less than three directors. The compliance
committee shall be comprised of a minimum of five directors, a majority of whom are
independent directors. All independent directors shall serve on the compliance
committee. The Board may require that a minimum number of independent directors
serve on any or all other Board committees. The Board shall have the power to appoint,
and to delegate authority to, such other committees of the Board as it determines to be
appropriate from time to time. The Board may require any committee to adopt a
charter, subject to approval by the Board, governing the activities and authority of the
committee and the composition of its members.

Section 7.14. Hearing Body. The Hearing Body shall consist of the Board
compliance committee. The Board shall establish policies and procedures governing the
designation of members to the Hearing Body pursuant to the NERC Rules of Procedure’s
Consolidated Hearing Process.

7.14.1 Quorum. For the Hearing Body to take action at a hearing, a quorum of
members must be present. A quorum is a majority of members of the Hearing Body,
provided that two independent directors are present. If a quorum of the Hearing Body
does not remain after any recusals and rulings on motions for disqualification, the
compliance committee shall appoint a new member to the Hearing Body from among
other directors to create a quorum, provided that the requirement that at least two
independent directors are present for a quorum shall at all times continue to be met.
Such new member shall serve on the Hearing Body for purposes of the subject hearing
through the conclusion of the hearing but not thereafter.

7.14.2 Voting. Each Hearing Body member shall have one vote with respect to
matters presented at a hearing. Action may be taken at a hearing at which a quorum is
present upon the vote of the majority of members present.

Section 7.15. Public Notice of Board Meetings. Notice to the public of the
dates, times and places of Board meetings, including committees thereof, and all
nonconfidential material provided to the Board or the committees, shall be posted on the
Corporation’s website, and notice of Board and committee meetings shall be sent by
electronic transmission to Members, at approximately the same time that notice is given
to the Board or the committee, as the case may be. Board and committee Meetings
shall be open to all Members and the public, subject to reasonable limitations due to the
availability and size of meeting facilities; provided, that any meeting may be held in or
adjourn to closed session to discuss matters of a confidential nature, including, but not
limited to, personnel matters, compliance and enforcement matters, litigation or
commercially sensitive or critical infrastructure information of a Member or other Person.

Section 7.16. Posting of Minutes. Minutes of Board and committee meetings
shall be posted on the Corporation’s website when available.
Section 7.17. **Compensation of Directors.** The directors elected by the Industry Sectors and the at-large directors shall not receive compensation for their service to the Corporation as directors on the Board. The independent directors shall be entitled to such compensation as the Board may from time to time determine. Nothing contained in these Bylaws shall preclude any director from receiving compensation for services to the Corporation in any other capacity.

**ARTICLE VIII.**
**ORGANIZATIONAL GROUPS**

Section 8.1. **Establishment of Organizational Groups.** The Board shall establish such organizational groups, consisting of committees, sub-committees, task forces and working groups of Members, as are necessary and appropriate to accomplish the purposes of the Corporation in an efficient and cost-effective manner. All organizational groups shall be subject to the direction and control of the Board. The membership of organizational groups shall be determined based upon experience, expertise and geographic diversity and to the extent practicable shall include balanced representation of the Industry Sectors. The Board shall establish policies and procedures governing the creation of organizational groups, how they are populated, how voting and related matters are conducted, how they may be reorganized and the direction and termination of such groups. The Board shall conduct a review of all organizational groups of the Corporation on an annual basis to ensure that the business of the Corporation is conducted in an efficient, cost-effective manner.

Section 8.2. **Reimbursement.** The Board may authorize reimbursement for persons acting on behalf of the Corporation, as necessary in the interests of the Corporation.

**ARTICLE IX.**
**OFFICERS**

Section 9.1. **Officers.** The officers of the Corporation shall include a President, one or more Vice Presidents, a Secretary, a Treasurer and any other officers as may be elected or appointed in accordance with the provisions of this Article. The Board may elect or appoint any additional officers that it deems desirable, such other officers to have the authority and perform the duties prescribed by the Board. The same individual may hold any number of offices, except that of President.

Section 9.2. **Election and Term of Office.** The officers of the Corporation shall be elected annually by the Board at the annual meeting of the Board. Each officer shall hold office at the pleasure of the Board. If the election of officers is not held at such meeting, such election shall be held as soon thereafter as is convenient. New officers may be created and the positions filled at any meeting of the Board. Each elected officer shall hold office until his or her successor has been duly elected and qualified or upon his or her earlier resignation or removal.
Section 9.3. Removal. Any officer elected by the Board may be removed by
the affirmative vote of two-thirds (2/3) of the Board whenever in its judgment the best
interests of the Corporation would be served thereby, but such removal shall be without
prejudice to the contract rights, if any, of the officer so removed. Election or
appointment of an officer or agent shall not of itself create contract rights.

Section 9.4. Vacancies. A vacancy in any office because of death, incapacity,
resignation, removal, disqualification, or otherwise, may be filled by the Board for the
unexpired portion of the term.

Section 9.5. President. The President shall:

(a) be the principal executive and operating officer of the Corporation;

(b) sign certificates of membership, and may sign any deeds, mortgages, deeds of trust, notes, bonds, contracts or other instruments
authorized by the Board to be executed, except in cases in which the signing and
execution thereof shall be expressly delegated by the Board or by these Bylaws
to some other officer or agent of the Corporation; and

(c) perform all duties incident to the office of President, including hiring
and directing staff, and such other duties as may be prescribed by the Board
from time to time.

Section 9.6. Vice Presidents. The Vice President(s) shall perform such duties
and have such powers as the Board or President may from time to time prescribe. At
the request of the Board, the Vice President (or in the event there be more than one
Vice President, the Vice Presidents in the order designated, or in the absence of any
designation, then in the order of their election) shall perform the duties of the President,
and when so acting, shall have all the powers of and be subject to all the restrictions
upon the President.

Section 9.7. Secretary. The Secretary shall ensure that the following duties
are carried out:

(a) the minutes of the meetings of the Members and of the Board, and
each committee thereof, are recorded;

(b) all required notices are duly given in accordance with these Bylaws
and as required by law;

(c) a register of the current names and addresses of all Members is
maintained and posted on the Corporation’s website;

(d) a complete copy of the Certificate of Incorporation and Bylaws of
the Corporation containing all amendments thereto are kept on file at all times
and posted on the Corporation’s website, which copies shall always be open to
the inspection of any Member; and
(e) generally perform all duties incident to the office of Secretary and such other duties as may be prescribed by the Board from time to time.

Section 9.8. Treasurer. The Treasurer shall be responsible for the following activities:

(a) maintain custody of all funds and securities of the Corporation;

(b) receipt of and the issuance of receipts for all monies due and payable to the Corporation and for deposit of all such monies in the name of the Corporation in such bank or banks or financial institutions as shall be selected by the Board; and

(c) generally perform all duties incident to the office of Treasurer and such other duties as may be prescribed by the Board from time to time.

ARTICLE X.
CERTIFICATES OF MEMBERSHIP

Section 10.1. Certificates of Membership. The Board may, but need not, provide for the issuance of certificates evidencing membership in the Corporation, which certificates shall be in such form as may be determined by the Board.

ARTICLE XI.
BOOKS AND RECORDS

Section 11.1. Books and Records; Financial Statements. The Corporation shall keep at such office selected by the Board correct and complete copies of its Certificate of Incorporation and Bylaws, accounting records, and minutes of meetings of Members, Board, and committees having any of the authority of the Board. A Member, or the agent or attorney of a Member, may inspect all books and records for any proper purpose at any reasonable time. Upon request, the Corporation shall give the Member a statement showing the financial result of all operations and transactions affecting income and expenses during its last annual accounting period and a balance sheet containing a summary of its assets and liabilities as of the closing date of the accounting period.

ARTICLE XII.
FISCAL YEAR

Section 12.1. Fiscal Year. The fiscal year of the Corporation shall be the calendar year.
ARTICLE XIII.
TRANSFER OF ASSETS

Section 13.1. Member Approval Not Required. Subject to restrictions set forth in the Certificate of Incorporation, the Corporation, by affirmative vote of the Board, may sell, lease, transfer, or dispose of its property and assets in the usual and regular course of its activities and grant a security interest in all or substantially all of its property and assets in the usual and regular course of its activities, upon those terms and conditions and for those considerations, which may be money, securities, or other instruments for the payment of money or other property, as the Board considers expedient, in which case no Member approval is required.

Section 13.2. Member Approval Required. Subject to restrictions set forth in the Certificate of Incorporation, the Corporation may sell, lease, transfer, or dispose of all or substantially all of its property and assets, including its good will, not in the usual and regular course of its activities, upon those terms and conditions and for those considerations, which may be money, securities, or other instruments for the payment of money or other property, as the Board considers expedient only when approved at a regular or special meeting of the Members by the affirmative vote of two-thirds (2/3) of all the Members. Notice of the meeting must be given to the Members. The notice must state that a purpose of the meeting is to consider the sale, lease, transfer, or other disposition of all or substantially all of the property and assets of the Corporation.

ARTICLE XIV.
CONTRACTS, CHECKS, DEPOSITS, AND GIFTS

Section 14.1. Contracts. The Board may authorize any officer or officers or agent or agents 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 may be confined to specific instances.

Section 14.2. Checks, Drafts, or Orders. All checks, drafts, or orders for the payment of money, notes, or other evidences of indebtedness issued in the name of the Corporation, may be signed by such officer or officers or agent or agents of the Corporation, and in such manner, as shall from time to time be determined by resolution of the Board.

Section 14.3. Deposits. All funds of the Corporation shall be deposited to the credit of the Corporation in such banks, trust companies, or other depositories as the Board may select.

Section 14.4. Gifts. The Board may accept on behalf of the Corporation any contribution, gift, bequest, or devise for any purpose of the Corporation.
ARTICLE XV.
INSURANCE, LIMITATION ON LIABILITY AND INDEMNIFICATION

Section 15.1. Insurance. The President is authorized to procure insurance to protect the Corporation against damages arising out of or related to any directive, order, procedure, action or requirement of the Corporation.

Section 15.2. Limitations on Liability. As provided in Article Fourteenth of the Certificate of Incorporation, a director of the Corporation shall not be personally liable to the Corporation or its Members for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the Corporation or its Members, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law or (iv) for any transaction from which the director derived any improper personal benefit. If the Delaware General Corporation Law is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended. Any repeal or modification of Article Fifteenth of these Bylaws by the Members of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of such repeal or modification.

Section 15.3. Right to Indemnification.

15.3.1 Indemnified Persons. Each person who was or is made a party to or is involved in or called as a witness in any Proceeding because he or she is an Indemnified Person shall be indemnified and held harmless by the Corporation to the fullest extent permitted under the Delaware General Corporation Law (the "DGCL"), as the same now exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than the DGCL permitted the Corporation to provide prior to such amendment). Such indemnification shall cover all expenses incurred by an Indemnified Person (including, but not limited to, attorneys' fees and other expenses of litigation) and all liabilities and losses (including, but not limited to, judgments, fines, ERISA or other excise taxes or penalties and amounts paid or to be paid in settlement) incurred by such person in connection therewith.

15.3.2 Denial of Authorization for Certain Proceedings. Notwithstanding anything to the contrary in this Section 15.3, except with respect to indemnification of Indemnified Persons specified in paragraph 15.3.3 of this Section 15.3, the Corporation shall indemnify an Indemnified Person in connection with a Proceeding (or part thereof) initiated by such person only if authorization for such Proceeding (or part thereof) was not denied by the Board of the Corporation prior to the earlier of 60 days after receipt of notice thereof from such Indemnified Person.
15.3.3 Certain Defined Terms. For purposes of this Section 15.3, the following terms shall have the following meanings (such meanings to be equally applicable to both the singular and plural forms of the terms defined):

(1) a “Proceeding” is any investigation, action, suit or proceeding, whether civil, criminal, administrative or investigative, and any appeal therefrom.

(2) an “Indemnified Person” is a person who is, was, or had agreed to become a Director of the Corporation (including, in the case of such person seeking indemnification while serving as a Director who is or was an officer of the Corporation, such person in his capacity as an officer.)

15.3.4 Expenses. Expenses, including attorneys’ fees, incurred by a person indemnified pursuant to paragraph 15.3.1 in defending or otherwise being involved in a Proceeding shall be paid by the Corporation in advance of the final disposition of such Proceeding, including any appeal therefrom, upon receipt of an undertaking (the “Undertaking”) by or on behalf of such person to repay such amount if it shall ultimately be determined that he or she is not entitled to be indemnified by the Corporation; provided that in connection with a Proceeding (or part thereof) initiated by such person, except a Proceeding authorized by paragraph 15.3.5, the Corporation shall pay said expenses in advance of final disposition only if authorization for such Proceeding (or part thereof) was not denied by the Board of the Corporation prior to the earlier of 60 days after receipt of a request for such advancement accompanied by the Undertaking required by paragraph 15.3.4; A person to whom expenses are advanced pursuant hereto shall not be obligated to repay such expenses until the final determination of any pending Proceeding in a court of competent jurisdiction concerning the right of such person to be indemnified or the obligation of such person to repay such expenses.

15.3.5 Protection of Rights. If a claim by an Indemnified Person under paragraph 15.3.1 is not promptly paid in full by the Corporation after a written claim has been received by the Corporation or if expenses pursuant to paragraph 15.3.4 have not been promptly advanced after a written request for such advancement by an Indemnified Person (accompanied by the Undertaking required by paragraph 15.3.4) has been received by the Corporation, the claimant may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim or the advancement of expenses. If successful, in whole or in part, in such suit, such claimant shall also be entitled to be paid the reasonable expense thereof. It shall be a defense to any such action (other than an action brought to enforce a claim for expenses incurred in defending any Proceeding in advance of its final disposition where the Undertaking has been tendered to the Corporation that indemnification of the claimant is prohibited by law, but the burden of proving such defense shall be on the Corporation. Neither the failure of the Corporation (including the Board, independent legal counsel, or the Members) to have made a determination, if required, prior to the commencement of such action that indemnification of the claimant is proper in the circumstances, nor an actual determination by the Corporation (including the Board, independent legal counsel, or the Members) that indemnification of the claimant is prohibited, shall be a defense to the action or create a presumption that indemnification of the claimant is prohibited.
15.3.6 Miscellaneous.

(a) Non-Exclusivity of Rights. The rights conferred on any person by this Section 15.3 shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of the Certificate of Incorporation, Bylaw, agreement, vote of Members or disinterested directors or otherwise. The Board shall have the authority, by resolution, to provide for such other indemnification of directors, and such indemnification of officers, delegates, employees, agents, or others of the Corporation as it shall deem appropriate.

(b) Insurance, contracts, and funding. The Corporation may maintain insurance, at its expense, to protect itself and any director, officer, employee, delegate or agent of the Corporation against any expenses, liabilities or losses, whether or not the Corporation would have the power to indemnify such person against such expenses, liabilities or losses under the DGCL. The Corporation may enter into contracts with any director, officer, or employee of the Corporation in furtherance of the provisions of this Section 15.3 and may create a trust fund, grant a security interest or use other means (including, without limitation, a letter of credit) to ensure the payment of such amounts as may be necessary to effect the advancing of expenses and indemnification as provided in such contracts or as otherwise provided in this Section 15.3.

(c) Contractual nature. The provisions of this Section 15.3 shall continue as to a person who has ceased to be a director and shall inure to the benefit of the heirs, executors and administrators of such person. This Section 15.3 shall be deemed to be a contract between the Corporation and each person who, at any time that this Section 15.3 is in effect, serves or agrees to serve in any capacity which entitles him to indemnification and advancement of expenses hereunder and any repeal or other modification of this Section 15.3 or any repeal or modification of the DGCL or any other applicable law shall not limit any rights of indemnification for Proceedings then existing or arising out of events, acts or omissions occurring prior to such repeal or modification, including, without limitation, the right to indemnification and advancement of expenses for Proceedings commenced after such repeal or modification to enforce this Section 15.3 with regard to Proceedings arising out of acts, omissions or events arising prior to such repeal or modification.

(d) Cooperation. Each Indemnified Person shall cooperate with the person, persons or entity making the determination with respect to such Indemnified Person’s entitlement to indemnification under this Section 15.3, including providing to such person, persons or entity upon reasonable advance request any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to such Indemnified Person and reasonably necessary to such determination. Any costs or expenses (including attorneys’ fees and disbursements) incurred by such Indemnified Person in so cooperating with the person, persons or entity making such determination shall be borne by the Corporation (irrespective of the determination as to such Indemnified Person’s entitlement to indemnification) and the
Corporation hereby indemnifies and agrees to hold such Indemnified Person harmless therefrom.

(e) Subrogation. In the event of any payment under this Section 15.3 to an Indemnified Person, the Corporation shall be subrogated to the extent of such payment to all of the rights of recovery of such Indemnified Person, who shall execute all papers required and take all action necessary to secure such rights, including execution of such documents as are necessary to enable the Corporation to bring suit to enforce such rights.

(f) Severability. If this Section 15.3 or any portion hereof shall be invalidated or held to be unenforceable on any ground by any court of competent jurisdiction, the decision of which shall not have been reversed on appeal, this Section 15.3 shall be deemed to be modified to the minimum extent necessary to avoid a violation of law and, as so modified, this Section 15.3 and the remaining provisions hereof shall remain valid and enforceable in accordance with their terms to the fullest extent permitted by law.

ARTICLE XVI.
TRANSITION

Section 16.1. Transition Standards. The Corporation will use the existing standards, criteria, rules or guides from each existing reliability council region for those Members that join the Corporation as in effect immediately prior to formation of the Corporation until such standards, criteria, rules or guides are adopted, superseded, or rejected by the Corporation. The Corporation will establish any necessary transition committees, subcommittees, working groups or task forces to administer the existing regional reliability standards, criteria, rules and guides until they are adopted, superseded, or rejected by the Corporation. The Corporation will employ its best efforts, within two (2) years of its formation, to work toward a uniform set of Reliability Standards for the entire Region. The Board will develop and implement a standards process and a plan for transition to new Reliability Standards. This process will include a requirement that two-thirds of the directors present at a meeting must vote to adopt new Reliability Standards.

ARTICLE XVII.
PARTICIPATION BY REGULATORY PARTICIPANTS

Section 17.1. Regulatory Participants. All Regulatory Participants shall be entitled to and be provided with the same rights to notice of and participation in meetings or other activities of the Corporation as are provided to Members, but shall not have the right to vote.

ARTICLE XVIII.
BUDGET AND BUSINESS PLAN

Section 18.1. Budget and Business Plan. Each annual budget and business plan of the Corporation shall be approved by the Board in sufficient time in each fiscal
year to allow for timely submittal of the approved annual budget and business plan to NERC in accordance with the NERC Rules. The Corporation shall post a draft of each budget and business plan on the Corporation’s website for purposes of review and comment by the Members at least ten (10) days prior to the Board meeting at which the budget and business plan are to be approved.

ARTICLE XIX.
AMENDMENT OF BYLAWS

Section 19.1. Amendment Of Bylaws. The power to adopt, amend or repeal these Bylaws is vested in the Members as set forth in Section 6.6.3 of these Bylaws; provided, however, that upon the passage of any federal electric reliability legislation, and/or the adoption of any rules or regulations of the Commission, NERC or other governmental entity with jurisdiction, the Board shall have authority to amend these Bylaws as necessary and appropriate to comply with such law, legislation, rules and regulations.
2019 ERO Enterprise Dashboard Update

**Action**
Review

**Summary**
The 2019 ERO Enterprise Dashboard identify key accomplishments that align closely with the performance goals in the ERO Enterprise Operating Plan. Each quarter, NERC staff provides a summary of the status towards achievement of each metric. The status of each metric is reviewed and validated by NERC management as well as internal audit staff.
**Task Force to Address Resilience to Electromagnetic Pulses**

**Action**
Update

**Background**
As presented in May, NERC launched a task force to identify reliability concerns associated with Electromagnetic Pulses (EMPs) and potential methods for promoting resilience. The task force held its first in-person meeting on June 12, 2019 in Washington, DC. Representatives from the Electric Power Research Institute (EPRI) and the Department of Homeland Security (DHS) provided an update on their respective initiatives in EMP. The task force and industry engaged in a highly interactive discussion on areas of coordination with regard to the numerous EMP efforts taking place.

The task force also convened a technical workshop on July 25, 2019 in Atlanta to receive further input from industry on how to best address the risks associated with EMPs. The task force received feedback on the following categories of information:

1. Planning and Assessments;
2. Mitigations; and

The task force intends to present a final report to the Board by the end of the year. Those recommendations will first be published as a draft for industry feedback. The estimated timeline will include 3 phases:

- Phase I: Publishing initial draft recommendations for industry feedback (August 2019)
- Phase 2: Request development of guidelines and best practices to the NERC technical committees (October 2019)
- Phase 3: Initiate Standard Development Process, if applicable
SERC/FRCC Integration

Action
Review

Summary
On July 1, 2019, SERC Reliability Corporation (SERC) officially assumed delegated authority over all of the registered entities in Florida, resulting in the transfer of thirty-five (35) registered entities to SERC. On the same day, the Florida Reliability Coordinating Council (FRCC) Regional Entity dissolved, and its Delegation Agreement with NERC terminated.

The dissolution of the FRCC Regional Entity and expansion of SERC’s regional boundaries to include all of Florida was approved by the NERC Board of Trustees on February 7, 2019 and by the Federal Energy Regulatory Commission on April 30, 2019.

Mr. Jason Blake, President and Chief Executive Officer of SERC will provide an overview of SERC’s integration strategy and the results of the integration efforts to date.
Reliability Coordinator Function in the Western Interconnection

Action
Update

Background
Since January 2014, Peak Reliability (Peak) has been the NERC-certified Reliability Coordinator (RC) serving the Western Interconnection (except the Canadian province of Alberta which has RC-like services provided by the Alberta Electric System Operator).

In 2018, the California Independent System Operator (CAISO), and the Southwest Power Pool (SPP) announced their intentions to perform the RC function and offer RC services to Balancing Authorities and Transmission Operators across the West. Subsequently, Peak decided to cease operations as the RC, effective at the end of 2019. In addition, British Columbia Hydro and Power Authority (BCH) decided to provide RC services for the province of British Columbia. The CAISO (doing business as RC West), SPP, and BCH initiated certification activities, and are in the process of being certified and registered as RCs.

In early 2019, Gridforce Energy Management, LLC (Gridforce) applied for certification to perform the RC function for its GRID Balancing Authority area. Recently, WECC received notification from Gridforce of their intentions to postpone certification until 2020 and seek RC services for the GRID Balancing Authority area from RC West until that time.

Status
• RC West was certified in May and began operation of their initial California footprint on July 1, 2019.
• WECC conducted a certification site visit with BCH in May and has provided a report to the BCUC on its findings. WECC is working with BCH and the BCUC to finalize recommended actions in the report. Upon completion of the recommended actions, WECC will recommend to the BCUC that it approve BCH to perform RC functions in British Columbia. BCH is currently in shadow operations and is expected to meet its go-live date of September 2, 2019.
• WECC conducted its certification site visit with RC West for its expanded footprint at the end of July.
• WECC is reviewing materials and information from SPP in preparation for a mid-August site visit.
• WECC is working with Gridforce to assure that RC certification timelines are understood and that RC services continue to be provided for the GRID Balancing Authority area.
Operating Committee Report

Action
Information

Operating Committee’s (OC) Highlights since May OC Report
During the March 2019 OC meeting, the OC authorized an electronic ballot on the NERC Balancing Authority Area Footprint Change Tasks Reference Document. The electronic ballot was conducted in April and the document was approved. At the June 2019 meeting, the OC elected David Zwergel to be the Chair of the OC and Doug Hils to be the Vice Chair. The OC endorsed two Compliance Implementation Guidance documents at the June 2019 meeting to be submitted to the ERO for approval. The documents address *Data Exchange Infrastructure and Testing Requirements* and *Real-time Assessment Quality of Analysis*. The OC also approved the revised *Reliability Guideline: Primary Frequency Control*, authorized posting the Version 4.0 of the ERO Events Analysis Process documents for a 45-day industry comment period and endorsed the ERO State of Reliability Report.

OC Major Accomplishments for 2019 (Through June 2019)

1. **OC and Subcommittee Work Plans** – The OC Executive Committee and the leadership of its subcommittees met on January 17, 2019 to review and update the OC Work Plan. At the March 2019 OC meeting, the OC reviewed and approved the OC Work Plans.

2. **OC Organization Chart** - At its January 17, 2019 meeting, the OC leadership reviewed its organization per Section 6.1 of the OC Charter. The OC leadership removed the Eastern Interconnection Data Sharing Network (EIDSN) and Interchange Distribution Calculator Working Group (IDCWG) from under the Operating Reliability Subcommittee (ORS), as they are now independent from NERC.

3. **Reliability Guideline: Primary Frequency Control** - The OC approved the revised Guideline at the June 2019 meeting.

4. **Compliance Implementation Guidance** - The OC endorsed two Compliance Implementation Guidance documents at the June 2019 meeting to be submitted to the ERO for approval:
   a. *Data Exchange Infrastructure and Testing Requirements*, and;
   b. *Real-time Assessment Quality of Analysis*.


OC’s Major Initiatives for 2019

1. **Reliability Guidelines and Reference Documents** – A Quick Reference Guide is under development that contains a summary of each reliability guideline or reference document. The Quick Reference Guide will also contain the Approval Date, Version Number, Applicability, and a link to the document itself. The OC is reviewing and revising the following reliability guidelines and reference documents:
a. Periodic review and update of *Reliability Guideline: Integrating Reporting ACE with the NERC Reliability Standards*.  


d. *Balancing Authority Area Footprint Change Tasks* and development of a summary document. The OC authorized posting the revised document at the December 2018 meeting. Revisions are being made to incorporate comments received.  

e. *NERC Balancing and Frequency Control Reference Document* was reviewed in 2018 and will be revised in 2019.  

f. *Time Monitoring Reference Document* and development of a summary document  

g. *Geomagnetic Disturbance Monitoring Reference Document* and development of a summary document  

h. Review and update *Dynamic Transfer Reference Document; Dynamic Tag Exclusion Reference Document; Pseudo-Tie Coordination Reference Document* and development of a summary document. These documents are being reviewed for overlapping content and are to be combined into a single reference document.  

2. **Operating Reliability Subcommittee (ORS)** — The ORS will focus on reviewing and approving Reliability Coordinator (RC) Reliability Plans in the Western Interconnection (WI) to facilitate the transfer of RC duties from Peak Reliability. The ORS will continue to focus on regular review, update, and communication of reference documents and reliability guidelines within its area of responsibility and coordinate additional reviews and revisions with the Resources Subcommittee (RS). The ORS will also continue to prepare for implementation of the Interchange Distribution Calculator Parallel Flow Visualization field trial.  

3. **RS** — The RS will review and revise several reliability guidelines, reference documents and training guides under its purview and coordinate additional reviews and revisions with the ORS. The RS will also provide ongoing support of the NERC Planning Committee’s (PC) Performance Analysis Subcommittee (PAS) metric M4, Interconnection Frequency Response for the annual State of Reliability (SOR) 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 as well as conduct the annual Monitoring and Situational Awareness Technical Conference.  

5. **Personnel Subcommittee (PS)** — The PS has started development of the Continuing Education (CE) Program Manual, Version 5.0 and will coordinate with the Personnel Certification Governance Committee (PCGC) on improved efficiencies between the groups.  

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).
June 2019 Meeting Summary:
The following is a summary of the OC’s June 2019 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 June 2019 OC Meeting Minutes are posted on the NERC website.

1. Joint OC and 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:
   b. Stakeholder Effectiveness and Efficiency Initiative – Lloyd Linke
   c. 2019 Summer Reliability Assessment – Mark Olson, NERC
   d. EMP Task Force and Actions – Howard Gugel
   e. NERC Rules of Procedure Section 1600 Data Request for Supply Chain Cyber Security – Howard Gugel

2. OC Officer Election - Keith Carman, Chair, OC Nominating Committee, thanked the Nominating Committee for their work between OC meetings and provided a slate of candidates to the OC, which consisted of David Zwergel as the candidate for OC Chair and Doug Hils as the candidate for Vice Chair. Chair Linke asked for additional nominations for Chair from the floor. There were no additional nominations. Nominations were closed and the question was called for any OC members who were opposed. There was no opposition. Chair Linke asked for additional nominations for Vice Chair from the floor. There were no additional nominations. Nominations were closed and the question was called for any OC members who were opposed. There was no opposition. David Zwergel and Doug Hils were unanimously elected Chair and Vice Chair respectively.

3. ORS – 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 endorsed minor changes to the MISO Reliability Plan. The minor changes were required to reflect the transition of Electric Energy Inc. resources (generation – only BA) from TVA to the MISO RC Area.
   b. The ORS endorsed minor changes to the TVA Reliability Plan. The minor changes were required to reflect the transition of Electric Energy Inc. resources (generation – only BA) from TVA to the MISO RC Area.
   c. The ORS endorsed minor changes to the PJM Reliability Plan. The minor changes were required to incorporate the transmission assets of Amp Transmission LLC, located in Napoleon Ohio.
   d. The ORS reviewed a draft of the BC Hydro Reliability Plan. The draft is in an advanced state. BC Hydro plans to seek ORS endorsement prior to their September 2 go-live date.
   e. The ORS was briefed by CAISO (“RC-West”) and Southwest Power Pool (SPP) on their preparations to begin RC operation in the WI. Both areas report that they are on-track for their planned go-live dates.
f. The Chairs of the 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.

g. As part of the 2019 ORS Work Plan, task teams have been formed to review:

i. Time Monitoring and GMD Reference Documents – The task team is reviewing the existing document and will coordinate updates with representatives from the RS.

ii. Dynamic Transfer Reference Document – The ORS is currently leading a joint task team with the RS to review the reference document and examine whether materials from the Pseudo Tie Coordination Reference Document and Dynamic Tag Exclusion Reference Documents can be incorporated. The three documents will be replaced by a single reference document.

h. ORS continues to receive updates from the EIDSN Steering Committee on the IDC Tool enhancements. Specifically, the Parallel Flow Visualization (PFV) project is intended to improve the data quality used by the IDC during curtailment of Eastern Interconnection transactions and may eventually result in changes to both NERC Reliability Standards and NAESB Business Practices. The IDC Working Group is currently working on a report that will summarize their observations and recommendations from the PFV field trial. The content of this report will inform ORS’ recommendation to place the new PFV in service. The ORS anticipates that OC approval will be sought in late 2019.

i. The group discussed the role of the Eastern Interconnection Frequency Monitor. TVA has filled this role for many years. The ORS will consider whether the responsibility should rotate annually, as is done with Time Error monitoring.

j. Argonne National Labs – presented an overview of a gas-electricity visualization tool under development. They have been working with industry to develop a means of showing how the gas and electric systems depend on each other.

k. EPRI – gave a presentation on high voltage challenges related to the evolving Bulk Electric System (BES). They will be sending out a survey to anyone interested in supporting their analysis. The survey is under development and will be shared with ORS members through NERC Staff.

4. RS - RS Chair Tom Pruitt provided an overview of subcommittee’s status report. Highlights of the report include:

a. Balancing and Frequency Control Technical Document – The RS approved the revision with two caveats: 1) the document should be converted to a reference document, and 2) send the document to NERC publications for review and format change to a reference document prior to presenting it to the OC.

b. Reliability Guideline: Integrating Reporting ACE with NERC Reliability Standards – A draft for posting will be brought to the OC at the December 2019 meeting. Related to this effort, a standards authorization request (SAR) to revise the Reporting ACE definition in the NERC Glossary is currently being considered.

c. Dynamic Transfer Reference Document – Work continues to support the ORS in the review and revision of this document.
d. Time Monitoring Reference Document – Work continues to support the ORS in the review and revision of this document.

e. July 10 Eastern Interconnection Frequency Event – Additional review and analysis by the assigned sub-team did not result in any additional insights. Continued work to improve the NIA/NIS tool for use in analysis of such future events is still recommended.

f. Items for OC Approval Items:
   i. *Reliability Guideline: Primary Frequency Control* - The OC approved the Reliability Guideline.

g. Terry Bilke (MISO) has been an active participant in the RS and has provided vital support for the RS and the OC for a number of years. Terry is retiring in July and was recognized by both the RS and OC for his years of industry service.

5. **EAS** – EAS Chair Rich Hydzik provided an overview of the subcommittee’s status report. Highlights of the report include:
   a. EAS lesson learned presentation on BES 2019 Winter Performance.
   b. Three lessons learned have been published since the last OC meeting. A lesson learned summary presentation has been provided to be included in the OC meeting minutes for industry use.
   c. An industry webinar to review the Substation Fires – Working with First Responders | Lessons Learned was held on June 19, 2019 from 1:30 to 2:30 p.m. Eastern.
   d. The 2019 Monitoring and Situational Awareness Technical Conference is scheduled for September 24-25, 2019 at SPP in Little Rock, AR. An announcement was sent out to industry in June with the conference registration links and travel information, this information is also available on the NERC calendar.
   e. The 2019 Cold Weather Preparation Webinar has been scheduled for Thursday, September 5, 2019 from 2:00-3:00 p.m. Eastern. An announcement will be sent out to industry in August with the webinar registration link, this information is also available on the NERC calendar.
   f. EAS requested OC approval to post the Version 4.0 of the ERO Events Analysis Process documents for a 45-day industry comment period. Ralph Rufrano made a motion to authorize posting for a 45-day comment period. The motion passed without dissent.
   g. Data Exchange Information Requirements Task Force (DEIRTF) Compliance Guidance on the clarification of “redundant and diversely routed” language and testing requirements from TOP-001-4, R20, R21, R23, R24 and IRO-002-5, R2 and R3 and R21 was developed and brought to the OC for endorsement. The guidance was developed to address requirements from TOP-001-4, R20, R21, R23, R24 and IRO-002-5, R2 and R3 and R21 as the requirements contain similar information. The TOP requirements apply to the Transmission Operator while the IRO requirements apply to the Reliability Coordinator. The OC endorsed the guidance for submission to the ERO for approval.

5. **PS** – Chair Rocky Williamson summarized the subcommittee’s status report which was included in the agenda package. Since June 2018, PS members have been meeting twice
a week (via Web Ex) to work on the new CE program manual. The members have completed two major sections of the manual. Both the audit requirements and the administrative requirements sections have been completed. The group is focusing on creating guidelines that will supplement the program manual. The PS will continue with the twice a week meeting until completion of the program manual. The PS also discussed the status of the level 2 course audits. Before the end of the quarter, the PS will ensure all members are equipped to conduct level 2 course audits.

6. **Reliability Assessments Subcommittee** – Chair Tim Fryfogle provided an update on RAS activities. He updated the OC on the 2019 Summer Reliability Assessment and noted that most assessment areas meet or exceed reference margin levels and have sufficient electricity supply resources for anticipated conditions and more extreme scenarios. Concerns were raised by some members of the OC regarding the drop of reserves in ERCOT. The planning reference margin level is 13.75% while the actual 2018 margin was 10.9% and the 2019 margin is expected to be 8.5%. A suggestion was also made to have someone from ERCOT come to a future OC meeting to discuss 2019 summer operations. John Warren will have someone from ERCOT come to a future meeting to discuss summer operations.

7. **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 June 2019 meeting. Al Schriver of the NAGF and Ken Keels of the NATF provided an overview of their respective industry activities.

8. **SOR Report - John Moura, NERC Staff** presented an overview of the SOR Report. John noted that the report was reformatted this year and reduced from 250 pages down to 83. This helps with better messaging to the target audience which is board level people, regulatory folks, etc. The OC endorsed the report.

9. **Lessons Learned – 2018-2019 Winter Performance** - Bill Graham, NERC Staff presented information on 2018-2019 Winter System Performance. In particular, the January 2019 cold snap. The BES remained stable and largely unaffected as a cold wave engulfed the Midwest and Eastern Canada during the final week of January 2019. No significant distribution customer outages occurred nor did any transmission issues arise throughout the period. Generation resources were somewhat affected.

10. **Stakeholder Effectiveness and Efficiency Initiative** - Chair Linke opened the floor for discussion of the presentation he made at the joint meeting. He noted that he and Vice Chair Zwergel will continue working on the Stakeholder Engagement Team. Concerns were raised regarding the combination of all three committees and that a better solution might be to leave CIPC as a standalone committee.

11. **WECC RC Updates** – The OC received information on WECC RC activities from WECC staff, California ISO, and SPP.

12. **NERC Standards** – The OC received information from industry participants regarding revisions to **PRC-024-2 – Generator Frequency and Voltage Protective Relay Settings** as well as **CIP-012-1 – Cyber Security – Communications between Control Centers** which was filed with regulatory authorities in September 2018.

14. **Real-time Assessment Quality of Analysis Compliance Implementation Guidance** - Doug Peterchuck, chair of the RTAQTF, presented background material on the development of the Compliance Implementation Guidance document. The guidance was developed to address data quality requirements in IRO-018-1(i). The OC endorsed the guidance for submission to the ERO for approval.

15. **Chair’s Closing Remarks and Chair Recognition** – The June OC meeting was the last as Chair for Chair Linke. He recalled the activities and accomplishments of the OC during his tenure and thanked the subcommittee leadership, the executive committee and NERC staff for their roles in the OC. Vice Chair Zwergel presented outgoing Chair Linke with a Resolution of Appreciation for his tenure on the OC.
Agenda Item 8b
Board of Trustees Meeting
August 15, 2019

Planning Committee Report

Action
Information

Forward Perspectives

- **Leadership and Member Elections**
  In June, the Planning Committee (PC) voted Brian Evans-Mongeon (Utility Services) as Chair and Joe Sowell (Georgia Transmission Corporation) as Vice-Chair. Sector nominations and elections for new members were conducted and completed on July 10, 2019. Board approval for newly appointed Chair and Vice Chair and newly elected PC members is being provided as a separate agenda item.

- **Fuel Assurance Planning Guidance and Electric/Gas Working Group**
  The Electric/Gas Working Group (EGWG) continues development of a reliability guideline and implementation of the tasks presented to the NERC Board at the November Board meeting. The EGWG will meet July 30 to review the initial draft reliability guideline and incorporate group input on principles of fuel assurance and the framework for fuel assurance planning analysis by planning entities. EGWG participants include subject matter experts from ISO/RTOs, electric utilities, generator owners of all fuel types, and natural gas industry experts, as well as various power and energy trade group representatives. The EGWG anticipates completing the draft reliability guideline in October for review by the PC.

- **Draft Standards Authorization Requests (SAR) for consideration by the PC**
  - **PRC-019-2 – Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection.** The NERC System Protection and Control Subcommittee (SPCS) prepared a Technical Analysis Report documenting comments on the lack of understanding of how inverter-based devices are covered in NERC Reliability Standard PRC-019-2, as well as identifying issues and potential improvements with respect to PRC-019-2. The requirement language in the standard, as well as the examples, are specific to conventional synchronous resources. The standard needs to clarify and provide examples for voltage regulating controls employed at dispersed power resource facilities. Additionally, the standard has a conflict with regards to the steady state stability limit for synchronous generation and needs to clarify the applicability of the steady state stability limit for other resource types. The SPCS has also identified a potential reliability gap with respect to the language requiring a voltage regulating control review. In late July, the PC will be conducting a vote to approve the Technical Analysis Report, as well as voting whether to endorse the SPCS’ SAR for PRC-019-2 to address the points in the Technical Analysis Report. The proposed SAR was coordinated with the NERC Inverter-Based Resources Performance Task Force (IRPTF) and Systems Analysis and Modeling Subcommittee (SAMS).
  - **MOD-032-1 – Data for Power System Modeling and Analysis.** The System Planning Impacts from Distributed Energy Resources Working Group (SPIDERWG) asked the
PC to review a draft SAR for changes to NERC Reliability Standard MOD-032-1. You may recall that certain needs of this standard were originally outlined in the 2017 Distributed Energy Resource Report (DER Report) approved by the NERC Board. The SPIDERWG proposal adopts those recommendations plus potentially addresses gaps in data collection for the purposes of modeling and interconnection-wide case creation that could result from inadequate aggregate DER modeling information in bulk power system (BPS) planning.

- **PC Work Plan and Activities**
  Through the PC Executive Committee, leaderships of the various subcommittees, working groups, task forces under the PC, and our NERC supporting staff, we continue to review our committee’s organization and seek ways to improve the handling and coordination of our slated assignments. We have developed new processes on prioritization of tasks, coordination within our teams, and are in the process of developing leadership training efforts within our PC subgroups. Our current work plan is openly available on the PC page of the NERC website.

- **Draft Reliability Guidelines in Development with Industry**
  The PC has posted the following draft guidelines for industry comment.
  - **DER-A Model Parameterization.** The guideline developed by SPIDERWG is intended to provide Transmission Planners with methods to determine parameters associated with frequency, voltage, and trip settings of DER for use in currently available planning software.
  - **Improvements to Interconnection Requirements for BPS-Connected Inverter-Based Resources.** The guideline developed by the IRPTF is intended to provide entities with approaches to incorporate recommendations from the IRPTF guideline BPS-Connected Inverter-Based Resource Performance through their interconnection requirements. Use of interconnection requirements provides entities with a flexible and practical way to specify performance, capability, or other characteristics that are needed from the connecting resources to maintain BPS reliability.

  The PC anticipates taking action on these reliability guidelines in 2019.

- **Battery and Storage Workshop Initiative**
  PC leadership has initiated development with NERC, the North American Generator Forum (NAGF), and ESIG, to hold a workshop on reliability implications for increasing battery and storage penetrations. Workshop topics could include current battery and storage implementation practices, battery and storage trends in interconnection queues, current planning practices and considerations for battery and storage installations. The team is looking for suitable dates in the September/October time period to hold this event.

**Recently Completed Committee Activities and Initiatives**

- **Endorsed Assessments and Reports**

- **Approved Reliability Guidelines**
  The PC approved the reliability guideline Application Guide for Modeling Turbine-Governor and Active Power-Frequency Controls in Stability Studies. The guideline was
developed by SAMS and the Power Plant Modeling and Verification Task Force (PPMVTF) to address issues in applying existing dynamic models.

**Future Meetings**

- September 10-11, 2019 – Minneapolis, MN
- December 10-11, 2019 – Atlanta, GA
- March 3-4, 2020 – Location TBD
Critical Infrastructure Protection Committee Report

Action
Information

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

June 2019 Meeting Summary:
The following summary of CIPC’s June 2019 meeting highlights the key activities of the committee and its associated workgroups in support of the NERC and CIPC mission and corporate goals. The June 2019 meeting minutes are under review and pending approval.

1. Supply Chain Security
   a. CIPC was asked to assist NERC with the development of a questionnaire for industry to respond to a Section 1600 data request for data about reliability risks from low impact facilities.
   b. The Supply Chain Working Group (SCWG) is developing seven security guidelines that cover topics such as vendor risk management, software integrity, and contract language. They will be posted at NERC’s website when they are approved by CIPC; which is expected to be complete by September 30.
   c. SCWG members provided overviews of the draft guidelines at a training event that was held adjacent to the June CIPC meeting. Over 60 attendees participated. The session was recorded and will be available to industry.

2. Guidance to Industry
   CIPC is pursuing several projects in 2019 to address security and compliance guidance for industry stakeholders
   a. The Compliance Input Working Group (CIWG) is continuing to study how cloud computing technology can be implemented by industry in a secure and compliant manner.
      i. The CIWG is collaborating with ERO Enterprise CIP auditors in this effort and provided feedback during the development of the recently published “ERO Enterprise CMEP Practice Guide: BES Cyber System Information.”
      ii. A CIWG-sponsored meeting in April brought together representatives from industry, government, cloud service providers, and ERO compliance staff to discuss approaches to evaluating and certifying cloud based applications.
         (1) Discussions at the April CIWG meeting led to plans to visit a Microsoft data center by members of the CIWG and ERO auditors. The visit would focus on observing and evaluating security controls.
b. A physical security guideline, “Assessments and Resiliency Measures for Extreme Events,” was approved by CIPC at the June, 2019 meeting and has been posted at NERC’s website.

c. Guidance that addresses the compliance implications of voice communications will not be developed at this time due to higher priority issues that the CIWG is addressing.

d. 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.

e. The Control System Security Working Group (CSSWG) has been replaced by task forces that will address specific topics. A guideline already in development has been assigned to the Remote Access Guideline Task Force (RAGTF).

3. Other Items of Interest
This was the second consecutive CIPC meeting with the conference room filled to capacity; total attendance was 143.

4. Key Activities and Initiatives for 2018 and 2019:

<table>
<thead>
<tr>
<th>Strategic Input</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERO Enterprise Long-Term Strategy Focus Area #5</td>
<td>Identification and reduction of cyber and physical security risks while improving resilience:</td>
</tr>
<tr>
<td></td>
<td>• Implementation guidance:</td>
</tr>
<tr>
<td></td>
<td>o Voice communications in environments that are subject to compliance with the CIP Reliability Standards</td>
</tr>
<tr>
<td></td>
<td>o Using cloud computing in a secure and compliant manner</td>
</tr>
<tr>
<td>ERO Reliability Risk Priority - Risk Profile #8 &amp; #9</td>
<td>• Security guidelines:</td>
</tr>
<tr>
<td></td>
<td>o Physical security considerations for high-impact control centers</td>
</tr>
<tr>
<td></td>
<td>o Security considerations during extreme events</td>
</tr>
<tr>
<td>FERC-Led Audits Compliance Report</td>
<td>Assess the cyber security risk of Fuel Handling SCADA systems for Generation:</td>
</tr>
<tr>
<td></td>
<td>• Reliability Guidelines to address risks associated with control system security for natural gas distribution systems</td>
</tr>
<tr>
<td>Remote Access Study Report</td>
<td>Address Remote Access Security Findings #1-#18</td>
</tr>
<tr>
<td>GridEx Planning &amp; Preparation</td>
<td>Collaborate with E-ISAC and industry stakeholders to plan for next GridEx and share lessons learned</td>
</tr>
<tr>
<td>Supply Chain Risk Management</td>
<td>Vendor Essential Security Practices Model</td>
</tr>
<tr>
<td>Supply Chain Risk Management</td>
<td>Legacy system testing coordination with National Labs</td>
</tr>
<tr>
<td>CIP-014 High Impact Control Center Report</td>
<td>Security practices for High Impact Control Centers</td>
</tr>
<tr>
<td>CIPC Priority Topic in coordination with PC</td>
<td>Reduction in asset criticality by developing design standards</td>
</tr>
<tr>
<td>CIPC Priority Topic</td>
<td>Key management security guideline</td>
</tr>
</tbody>
</table>
Personnel Certification Governance Committee Report

Action
Information

Background
This report summarizes the key activities of the Personnel Certification Governance Committee (PCGC) during 2019. The PCGC meets four times per year. Standing Task Force meetings via conference call and/or WebEx are held as needed between meetings. The May 2019 meeting minutes are under review and pending approval.

Exam Development Activities Scheduled for 2019
Write New Items Mar-Dec 2019
One Credential Implementation Plan May-Dec 2019

One Credential and Strategic Planning
The PCGC completed its responses to the industry comments on the One Credential Whitepaper. A notification of the responses was emailed to industry in May. The whitepaper and responses will be posted on the PCGC committee page. The PCGC has completed a SAR to address the changes to Standard PER-003. The SAR will be sent to the Standards Committee during Q2_2019. Alongside the SAR process, the committee is working with the appropriate System Operator Certification (SOC) program vendors to prepare for the transition to one credential.

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 the 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 PCGC continues to work with the SOCCED vendor to enhance the stakeholder experience. The following enhancements were deployed during Q2_2019:

- System Operator Perspective:
  - Filter transcripts based on current credential period; instead of entire transcript
  - Improved French Exam Authorization to Test (ATT) Process
  - Rollover Hours Display: Rollover hours calculation shown separately

- Continuing Education Providers
  - Level 2 Provider Renewal Requirements
  - Modified Review Packet Status language
  - Deactivated providers no longer receive system emails
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.

2019 Completed Tasks

- One Credential White Paper Published
- Respond to Industry Whitepaper Comments
- 2019 Item Writing Workshop
- SOCCED Enhancements:
  - Course Functionality Updates:
    - Course Tab Displays
    - Download button for Course Data Table
    - Ability to filter courses by status
  - Course Upload Validation: Checks for duplicate course upload on transcripts.
- In preparation for One Credential, SAR written for PER-003
Standards Committee Report

Action
Information

Background
This report highlights some of the key activities of the Standards Committee (SC) during the second quarter of 2019.

The SC held special elections in accordance with Appendix 3B of the Rules of Procedure to fill member vacancies. The Segment members elected Rebecca Moore Darrah of ACES Power for Segment 6 and Sean Cavote of Public Service Enterprise Group for Segment 1.

At its April 17, 2019 meeting, the SC:
1. Authorized initial posting for a 45-day formal comment period Project 2018-04 Modifications to PRC-024-2,
2. Appointed members to Project 2019-01 – Modifications to TPL-007-3 Standard Drafting Team (SDT), and

At its May 22, 2019 meeting, the SC:
1. Appointed supplemental members to Project 2016-02 Modifications to CIP Standards SDT,
2. Appointed members to Project 2019-02 BES Cyber System Information Access Management SDT,
3. Postponed action on Standards Authorization Request (SAR) for BAL-002-3 to receive technical input from the Operating Committee, and
4. Approved the revised Standards Grading Tool for the Standards Grading Team to use in future Reliability Standard evaluations.

At its June 26, 2019 meeting, the SC:
1. Accepted the SAR developed by the North American Generator Forum (NAGF) to modify PRC-005-6 and authorized a comment period and solicitation for nominees for a SAR drafting team,
2. Accepted a supplemental SAR to authorize the current SDT to further modify PRC-024-2 and authorized posting the supplemental SAR for a 30-day informal comment period,
3. Further postponed action on the SAR for BAL-002-3 until a later SC Meeting when the requested technical input material is available,
4. Accepted the SAR for Project 2019-03 Cyber Security Supply Chain Risks developed in response to the Federal Energy Regulatory Commission (FERC) Order No. 850 and the NERC published Cyber Security Supply Chain Risks report; authorized posting the SAR for
an informal comment period; and authorized solicitation of SAR Drafting Team members, and

5. Waived the SC Charter rule for agenda postings to correct the SAR in response to Committee member concerns.
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  Board Forecast for Standard Projects in Active Development ............................................................. 1
  ANSI Reaccreditation ......................................................................................................................... 1
  Projects with Regulatory Directives ............................................................................................... 1
  Trend in Number of Reliability Requirements ............................................................................... 2

Chapter 2 Regulatory Update ............................................................................................................ 4

Chapter 3 Standards Committee Report .......................................................................................... 8
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.
Chapter 1 Standards Development Forecast (Continent-wide)

Board Forecast for Standard Projects in Active Development

August 2019

- Project 2016-02: Modifications to CIP Standards (CIP-002)

November 2019

- Project 2017-01: Modifications to BAL-003-1.1 (phase 1)
- Project 2017-07: Standards Alignment with Registration
- Project 2018-04: Modifications to PRC-024-2

February 2020

- None at this time

May 2020 or after

- Project 2015-09: Establish and Communicate System Operating Limit
- Project 2016-02: Modifications to CIP Standards (virtualization)
- Project 2017-01: Modifications to BAL-003-1.1 (phase 2)
- Project 2019-01: Modifications to TPL-007-3
- Project 2019-02: BES Cyber System Information Access Management
- Project 2019-03: Cyber Security Supply Chain Risks

ANSI Reaccreditation

NERC filed for reaccreditation as a Standards Developer in accordance with the accreditation processes of the American National Standards Institute (ANSI) on July 1, 2019.

Projects with Regulatory Directives

Table 1 below, lists the current projects with regulatory directives. As of July 31, 2019, there are 4¹ standards-related directives to be resolved through standards development activities (not including non-standards related directives).

<table>
<thead>
<tr>
<th>Project</th>
<th>Regulatory Directives</th>
<th>Regulatory Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project 2015-09 Establish and Communicate System Operating Limits</td>
<td>1</td>
<td>N/A</td>
</tr>
<tr>
<td>Project 2019-01: Modifications to TPL-007-3</td>
<td>2</td>
<td>7/1/2020</td>
</tr>
<tr>
<td>Project 2019-03: Cyber Security Supply Chain Risks</td>
<td>1</td>
<td>12/26/2020</td>
</tr>
</tbody>
</table>

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 moderate reduction of Continent-wide standards, in part due to the Standards Efficiency Review, and a significant decline in total number of requirements from 2016 to 2017 for Regional Reliability standards. Figure 1 indicates a total of 434 continent-wide requirements; Figure 2 indicates a total of 73 Regional Reliability standards forecast for 2027.

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\(^2\) Available from the Standards section of the NERC website: [http://www.nerc.com/pa/Stand/Pages/default.aspx](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(ii))
Trend for Number of Requirements

- Non-Continent Wide Requirements Count

Number of Requirements: 73
## NERC Regulatory Update - Standards
### April 1, 2019 - June 30, 2019

### NERC Filings TO FERC

<table>
<thead>
<tr>
<th>FERC Docket No.</th>
<th>Filing Description</th>
<th>FERC Submittal Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>RD19-5-000</td>
<td>Petition of NERC for Approval of Proposed Reliability Standard CIP-003-8</td>
<td>5/21/2019</td>
</tr>
<tr>
<td></td>
<td>NERC submitted a petition for the approval of proposed Reliability Standard CIP-003-8 (Cyber Security – Security Management Controls). The proposed Reliability Standard addresses the Commission’s directive from Order No. 843 to develop modifications to mitigate the risk of malicious code that could result from third-party transient electronic devices for low impact BES Cyber Systems.</td>
<td></td>
</tr>
<tr>
<td>RM17-13-000</td>
<td>Supply Chain Report Filing</td>
<td>5/28/2019</td>
</tr>
<tr>
<td></td>
<td>NERC submitted the report titled “Cyber Security Supply Chain Risks: Staff Report and Recommended Actions.” NERC submitted this report to FERC in accordance with the Commission’s directive in paragraph 31 of Order No. 850.</td>
<td></td>
</tr>
<tr>
<td>RD19-6-000</td>
<td>Joint Petition of NERC and WECC for Approval of Proposed Reliability Standard IRO-002-6</td>
<td>5/30/2019</td>
</tr>
<tr>
<td></td>
<td>NERC and WECC submitted a joint petition for the approval of proposed Reliability Standard IRO-002-6. Proposed Reliability Standard IRO-002-6 reflects the addition of a regional Variance containing additional requirements applicable to Reliability Coordinators providing service to entities in the Western Interconnection.</td>
<td></td>
</tr>
<tr>
<td>RM19-16-000</td>
<td>Petition for Approval of Reliability Standards IRO-002-7, TOP-001-5, and VAR-001-6</td>
<td>6/7/2019</td>
</tr>
<tr>
<td></td>
<td>NERC submitted a petition for the approval of Reliability Standards IRO-002-7, TOP-001-5, and VAR-001-6 developed under the NERC Standards Efficiency Review initiative.</td>
<td></td>
</tr>
<tr>
<td>RM19-17-000</td>
<td>Petition for Approval of SER Retirements (INT, FAC, PRC, and MOD)</td>
<td>6/7/2019</td>
</tr>
<tr>
<td></td>
<td>NERC submitted a petition for the approval of Reliability Standards requirement retirements in the INT, FAC, PRC, and MOD Reliability</td>
<td></td>
</tr>
</tbody>
</table>
Standards families, developed under the NERC Standards Efficiency Review initiative.

**RM14-7-000**

**Notice of Withdrawal of NERC for Proposed Reliability Standard MOD-001-2**

NERC submitted a notice of withdrawal for its petition proposing Reliability Standard MOD-001-2 in Docket No. RM14-7-000. This proposed Reliability Standard was suggested for retirement by the Standards Efficiency Review initiative.  

6/7/2019

**RM18-20-000**

**Comments of NERC in Response to Notice of Proposed Rulemaking on CIP-012-1**

NERC provided comments on the FERC Notice of Proposed Rulemaking proposing to approve Reliability Standard CIP-012-1 (Cyber Security – Communications between Control Centers). NERC supports the Commission’s proposal to approve the proposed Reliability Standard. However, NERC does not support the Commission’s proposal to direct modifications to the CIP Reliability Standards to: (1) require protections regarding the availability of communication links and data between BES Control Centers; and (2) provide additional specificity on the types of data that must be protected. NERC proposed to conduct a study of the risks to availability of data and communication links between Control Centers to determine an appropriate course of action.  

6/24/2019
**FERC ISSUANCES**

<table>
<thead>
<tr>
<th>FERC Docket No.</th>
<th>Issuance Description</th>
<th>FERC Issuance Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM18-20-000</td>
<td>Notice of Proposed Rulemaking to Approve Reliability Standard CIP-012-1</td>
<td>4/18/2019</td>
</tr>
</tbody>
</table>

FERC issued a Notice of Proposed Rulemaking proposing to approve Reliability Standard CIP-012-1. The Commission also proposed to direct NERC to develop and submit modifications to the proposed Reliability Standard to: (1) require protections regarding the availability of communication links and data communicated between bulk electric system Control Centers; and (2) clearly identify the types of data that must be protected.

| RD19-4-000      | Letter Order Approving the Joint Petition of NERC and WECC for Approval of Proposed Regional Reliability Standard IRO-006-WECC-3 | 5/10/2019 |

FERC issued a letter order approving the joint petition of NERC and WECC for approval of proposed Regional Reliability Standard IRO-006-WECC-3. Regional Reliability Standard IRO-006-WECC-3 addresses the requests for transmission relief due to unscheduled flow on Qualified Paths in the Western Interconnection.

| RD19-3-000      | Order Approving the Petition for the Request for Approval of Proposed Reliability Standard CIP-008-6 | 6/20/2019 |

FERC issued an order approving Reliability Standard CIP-008-6 (Cyber Security – Incident Reporting and Response Planning) filed with the Commission on March 7, 2019. The order also approved the associated implementation plan, violation risk factors and violation severity levels, the inclusion of proposed revised definitions of “Cyber Security Incident” and “Reportable Cyber Security Incident” into the NERC Glossary, and the retirement of Reliability Standard CIP-008-5.

| RM19-10-000     | Notice of Proposed Rulemaking Proposing to Approve Reliability Standard TPL-001-5 | 6/20/2019 |

FERC issued a Notice of Proposed Rulemaking proposing to approve Reliability Standard TPL-001-5 (Transmission System Planning Performance Requirements). The Commission also proposed to direct NERC to develop modifications to the standard to require corrective
| action plans for protection system single points of failure in combination with three-phase faults if planning studies indicate potential cascading. |
Chapter 3 Standards Committee Report

Summary
The SC held special elections in accordance with Appendix 3B of the Rules of Procedure to fill member vacancies. The Segment members elected Rebecca Moore Darrah of ACES Power for Segment 6 and Sean Cavote of Public Service Enterprise Group for Segment 1.

At its April 17 meeting, the SC:
1. Authorized initial posting for a 45-day formal comment period Project 2018-04 Modifications to PRC-024-2,
2. Appointed members to Project 2019-01 – Modifications to TPL-007-3 Standard Drafting Team (SDT), and

At its May 22 meeting, the SC:
1. Appointed supplemental members to Project 2016-02 Modifications to CIP Standards SDT,
2. Appointed members to Project 2019-02 BES Cyber System Information Access Management SDT,
3. Postponed action on Standard Authorization Request (SAR) for BAL-002-3 to receive technical input from the Operating Committee, and
4. Approved the revised Standards Grading Tool for the Standards Grading Team to use in future Reliability Standard evaluations.

At its June 26 meeting, the SC:
1. Accepted the SAR developed by the North American Generator Forum (NAGF) to modify PRC-005-6 and authorized a comment period and solicitation for nominees for a SAR drafting team,
2. Accepted a supplemental SAR to authorize the current SDT to further modify PRC-024-2 and authorized posting the supplemental SAR for a 30-day informal comment period,
3. Further postponed action on the SAR for BAL-002-3 until a later SC Meeting when the requested technical input material is available,
4. Accepted the SAR for Project 2019-03 Cyber Security Supply Chain Risks developed in response to the Federal Energy Regulatory Commission (FERC) Order No. 850 and the NERC published Cyber Security Supply Chain Risks report; authorized posting the SAR for an informal comment period; and authorized solicitation of SAR Drafting Team members, and
5. Waived the SC Charter rule for agenda postings to correct the SAR in response to Committee member concerns.

There was also a variation for the CIP-002 additional ballot that commenced on July 8, 2019. Since the CIP drafting team removed items related to another project, the ballot pool was re-opened a second time to ensure industry could participate accordingly.
Reliability Issues Steering Committee Report

Action
Information

Summary
In forming the 2019 ERO Risk Priorities Report, the Reliability Issues Steering Committee (RISC) met on May 20 and June 14 via conference call and on July 15 in-person to review the Risk Profiles subgroups’ work on determining the proper prioritization of the key risks and their mitigation activities and determine if any of the activities can be consolidated, eliminated, or placed in a monitor state.

Mr. Nelson Peeler, RISC chair, will provide, at the August 14 Member Representatives Committee meeting, a formal presentation summarizing the work of the Committee, previewing the identified key risks, and reviewing the remaining schedule for finalizing the Risk Priorities report.
Compliance and Certification Committee Board Report

Action
Information and approval.

Items for Approval
The CCC is providing redline copies of two procedure documents for Board of Trustees approval. The CCC approved these procedure documents at their meeting on June 18, 2019.

- CCCPP-001, Monitoring Program for NERC’s Adherence to NERC’s Rules of Procedure for Compliance Monitoring and Enforcement.
  - Summary of changes: The CCC worked with NERC Staff to clarify the process for managing Complaints alleging NERC non-adherence with the Rules of Procedure for Compliance Monitoring and Enforcement.

- CCCPP-011, Procedure to Become a Prequalified Organization Eligible to Submit Implementation Guidance to the ERO.
  - Summary of changes: The CCC had previously voted to approve an entity as a prequalified organization and therefore, edits were needed to reflect that decision.

Highlights
The CCC and its associated subcommittees held meetings at the Exelon offices in Chicago, IL on June 18-19, 2019.

During the meeting, the CCC Nominating Subcommittee made recommendations to submit seven candidates to the NERC Board for appointment to serve a three-year term on the committee, now for the Board approval during the August 2019 meeting, Agenda item 2a.

Additionally, the CCC and/or its subcommittees completed the following key activities associated with its 2019 work plan:

- Conducted a CCC Alignment Working Group (AWG) meeting, where the AWG reviewed ongoing activities, provided input into the Align project and NERC website updates.

- Received a briefing from NERC Management on the CORES implementation and program updates.

- Reviewed communication strategies for further diversity in the CCC membership and collaboration with compliance focused industry groups.

- Conducted outreach with the CCC on behalf of the Standards Efficiency Review (SER) Phase II team and reviewed projects for collaboration with the SER team and Standards Committee.

- In support of the outreach deliverable, CCC leadership will present collaboratively with NERC on behalf of the CCC and AWG at the NERC 2019 Standards and Compliance Workshop.
• Initiated review of existing criteria contained within CCCPP-010, which is used by NERC to annually evaluate the effectiveness of Regional Entity Compliance Monitoring and Enforcement Program. Ongoing activities between NERC and the CCC will continue to identify enhancements to the criteria.

• Finalized the Self-Certification request for submission to NERC for completion regarding adherence to the Rules of Procedure for the Standards Process Manual.

• Completed observations of the 2019 audit of NERC’s adherence to the Rules of Procedure for the Compliance Monitoring and Enforcement Program and Organization Registration and Certification Program.

**Focused Discussion – Addressing Inherent and Residual Risk**

The CCC periodically conducts focused discussion sessions approximately twice per year on various topics related to the programs referenced in the CCC Charter. The concept of including focused discussion sessions during CCC meetings was initiated to solicit targeted industry feedback that could potentially improve the CMEP program as well as strengthen collaboration and understanding for both NERC and the industry.

The intent of these sessions is to provide an environment where candid conversations can occur between stakeholders, NERC senior management and CMEP staff, and ERO Enterprise representatives. These sessions have been very successful in identifying programmatic miscommunications or opportunities to improve.

At the June meeting, the CCC held a focused discussion addressing all facets of risk – both inherent and residual. The discussion covered a wide range of topics including risk elements such as evaluation, rationalization, mitigation, acceptance, types (reliability, security, compliance, etc.). On behalf of the CCC, we appreciate the opportunity for the dialogue and take away deep learnings from listening to both peers and regulators in the open discussions.

The next CCC meeting will be in Kansas City, Missouri on September 17-18, 2019, hosted by Kansas City Power & Light and Westar Energy, Evergy companies. The September meeting will be held concurrently and collaboratively with the NERC Standards Committee.
Monitoring Program for NERC’s Adherence to NERC’s Rules of Procedure for Compliance Monitoring and Enforcement

 CCC Monitoring Program – CCCPP-001

May 7, 2019
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The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to assure the reliability 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.

<table>
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<td>SERC</td>
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<td>WECC</td>
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<td>2.0</td>
<td>Revised by the ERO Monitoring Subcommittee (EROMS), and approved by the Certification Committee</td>
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1. Introduction

In the capacity of a NERC board-appointed stakeholder committee serving and reporting directly to the Board under a NERC board-approved charter, as approved by FERC, and as set forth in the Rules of Procedures (ROP), the CCC will engage with, support, and advise the Board and NERC Board of Trustees Compliance Committee (BOTCC) regarding all facets of the NERC Compliance Monitoring and Enforcement Program (CMEP), Registration program, and Certification program.

The CCC is responsible for establishing and implementing a program as specified in Section 405 of the ROP to monitor NERC’s adherence to the ROP for Compliance Monitoring and Enforcement, including, but not limited to, the uniform CMEP (Appendix 4C) and the Sanction Guidelines (Appendix 4B). This document describes the program and associated processes to be utilized by the CCC in carrying out this responsibility.

As noted in the NERC board-approved CCC Charter, monitoring by the CCC is ongoing and does not preclude, interfere with, or replace, in whole or in part, the Board’s responsibility to conduct and provide such reviews of these programs as required by FERC regulations, 18 C.F.R. § 39.3(c): “The Electric Reliability Organization shall submit an assessment of its performance three years from the date of certification by the Commission, and every five years thereafter.”

1.1 Terms

The terms defined below are applicable to this program only and are not intended to be applicable to or conflict with the same or similar terms used by NERC for other purposes.

1.1.1. Adverse Finding
A finding of a non-adherence to the ROP as a result of an Audit, a Self-Certification, a Self-Report, or a Spot Check.

1.1.2. Audit
A systematic, objective review and examination of records and activities to determine whether NERC has adhered to the ROP for Compliance Monitoring and Enforcement.

1.1.3. Complaint
An allegation that NERC has not adhered to the ROP for Compliance Monitoring and Enforcement

1.1.4. Mitigation Plan
An action plan developed by NERC to (1) correct an Adverse Finding and/or (2) prevent any recurrence of an Adverse Finding.

1.1.5. Self-Certification
Periodic reporting by NERC of adherence or non-adherence to the ROP for Compliance Monitoring and Enforcement.

1.1.6. Self-Report
A report by NERC of a non-adherence to the ROP for Compliance Monitoring and Enforcement, based on NERC’s own assessment, and of any actions taken or that are being taken to resolve the non-adherence.

---

1. Introduction

1.1.7. Spot Check
A process in which NERC is requested to provide information to assess whether NERC adheres to the ROP for Compliance Monitoring and Enforcement.
2. Monitoring Processes

The CCC will monitor and assess NERC’s adherence to its ROP for Compliance Monitoring and Enforcement using the processes described below to collect information and make assessments.

2.1 Audits

The CCC will work with the Enterprise-wide Risk Committee (EWRC) and the Head of NERC’s Senior Director of Internal Audit Department to schedule periodic external Audits of NERC’s implementation of the CMEP. The CCC will participate as observers in these Audits, as described in Section 2.1.1. Audits will be conducted at NERC’s facility(ies) in a manner consistent with Section 403.11 of the ROP. All Audits will be conducted in accordance with Audit guides, consistent with accepted auditing guidelines as approved by NERC.

2.1.1. Audit Steps

- The CCC will collaborate with the Head of NERC’s Internal Audit Department and the EWRC to schedule externally led Audits of the NERC CMEP.
- The CCC will participate, along with the Head of NERC’s Internal Audit Department, in the selection of the external auditing contractor to be approved by the Board pursuant to Section 406 of the ROP.
- Each Audit team will include NERC Internal Audit staff, assigned CCC observers, and the external auditing contractor.
- The assigned CCC observers must identify any applicable conflicts of interest (COI) and will be subject to NERC COI procedures in place at the time of the Audit, which includes the ability of NERC to request replacement of an observer who has a COI.
- The assigned CCC observers must have completed NERC Auditor Training.
- The assigned CCC observers must execute Confidentiality Agreements.
- The assigned CCC observers must abide by the NERC-provided observer guidelines.
- The assigned CCC observers will be included in Audit team pre- and post-Audit activities and actual auditing activities, including meeting with NERC personnel from the departments that are the subjects of the Audit.
- The assigned CCC observers may provide questions, comments, and advice to the external auditors during the course of the Audit.
- The assigned CCC observers will have access to non-confidential Audit documents (as determined by NERC) on the secure NERC site.
- The assigned CCC observers will review all daily, weekly, and final Audit reports.

2.1.2. Frequency of Audits

Audits of NERC will be conducted at least every three (3) years. Additionally, an unscheduled Audit of NERC may be initiated by the CCC, in consultation with the EWRC and the Head of NERC’s Internal Audit Department, if reasonably determined to be necessary to determine NERC’s adherence to the ROP for Compliance Monitoring and Enforcement.

2.1.3. Scope of Audits

An Audit will include elements of the CMEP selected by NERC, and elements of the CMEP selected by the CCC.
2. Monitoring Processes

2.1.4. Audit Reports
The Audit team will develop a draft Audit report that will include a description of the objective, scope, and methodology of the Audit; identify any Adverse Findings; identify any mitigation activities which have been completed or are pending; and identify the nature of any confidential information redacted. The draft Audit report may contain other recommendations of the Audit team related to the findings.

The draft Audit report will be provided to NERC, which will in turn provide the Audit team with comments and descriptions of Mitigation Plans for addressing any Adverse Findings for inclusion in the final Audit report. If NERC disputes any Adverse Findings, NERC will also provide language to the Audit team addressing such concerns for inclusion in the report.

The Audit team will consider comments provided by NERC and develop a final Audit report that includes any Mitigation Plan descriptions provided by NERC, as well as any language regarding disputed Adverse Findings. The Audit team will then provide the final Audit report to the Board through the EWRC.

2.2 Self-Certifications
NERC will certify its adherence to the ROP for Compliance Monitoring and Enforcement with respect to a subset of performance items selected by the CCC on a periodic basis. Such Self-Certifications will be achieved through reports to the CCC by a NERC officer or equivalent responsible for ensuring adherence to the ROP for Compliance Monitoring and Enforcement. Results of Self-Certifications will be communicated to the Board through the EWRC.

2.3 Spot Checks
The CCC, in consultation with the EWRC and the Head of NERC's Internal Audit Department, may from time to time request NERC to provide information to assess whether NERC adheres to the ROP for Compliance Monitoring and Enforcement. A review of this information will be conducted in a manner similar to an Audit. A Spot Check may also be initiated in response to events or a Complaint. Results of a Spot Check will be documented in a Spot Check report and provided to the Board in a manner consistent with reporting for an Audit.

2.4 Self-Reports
NERC is encouraged to self-report to the CCC at the time NERC becomes aware of (1) any NERC non-adherence to the ROP for Compliance Monitoring and Enforcement, or (2) a change in a previously identified Adverse Finding. Results of a Self-Report will be communicated to the Board through the EWRC.

2.5 Complaints
The CCC may receive Complaints alleging NERC non-adherence to the ROP for Compliance Monitoring and Enforcement. The CCC Chair is responsible for contacting the Head of NERC's Internal Audit Department to collaboratively review complaints, and receive advisory input and assistance. The CCC Chair will contact the CCC Executive Committee (CCCEC) to conduct a review of each Complaint to determine if the Complaint may be closed as a result of an initial review and assessment, or if the Complaint provides sufficient basis to warrant further action. The CCC Chair and Head of NERC's Internal Audit Department will inform NERC's General Counsel of the complaint and agreed upon course of action in order to receive guidance and advisory feedback. The CCC Chair is responsible for documenting the course of action.

All anonymous Complaints will be reviewed and resolved in a manner that will prevent disclosure of the
complainant’s identity. If the complaint is about NERC Internal Audit, NERC’s Board of Trustees or its Members, the CCC Chair is responsible for informing NERC’s CEO and/or General Counsel. The CCC Chair may notify the CCC Executive Committee (CCCEC) and EWRC may also be consulted, and the NERC Director of Internal Audits to determine if further action is needed. The CCCEC will consult with the CCC Executive Committee (CCCEC) and EWRC may also be consulted, and the NERC Director of Internal Audits to determine if further action is needed. The course of action on a complaint and related actions will be determined and reported to the CCCEC and EWRC no less than annually to inform and facilitate their oversight responsibilities. All Complaints submitted will be reviewed and resolved in a manner to protect against public disclosure of the complainant’s identity. All anonymous Complaints will be reviewed and resolved in a manner that will prevent disclosure of the complainant’s identity. If the complaint is about NERC Internal Audit, or the NERC’s Board of Trustees or its Members, the CCC will inform NERC’s CEO and/or General Counsel.
3. Annual Work Plan

The CCC will maintain and update an Annual Work Plan, to be carried out by the CCC in the performance of its responsibilities and duties in implementing this program. The plan will be provided to NERC each year and will specify reporting by NERC to the CCC that will be required to provide verification of adherence through any of the monitoring methods described in Section 2 of this document. The Work Plan will be posted on the NERC website.
4. Mitigation Plan

If an Adverse Finding is identified as a result of an Audit, a Self-Certification, a Self-Report, or a Spot Check, NERC will develop a corresponding Mitigation Plan.

4.1 Contents of a Mitigation Plan
A Mitigation Plan should include the following information:

- The non-adherence to the ROP for Compliance Monitoring and Enforcement that the Mitigation Plan will correct.
- The cause of the non-adherence.
- NERC's action plan to correct the non-adherence.
- NERC's action plan to prevent recurrence of the non-adherence.
- A timetable for completion of the Mitigation Plan.
- Any other information deemed necessary or appropriate.

4.2 Timetable for Completion of a Mitigation Plan
A Mitigation Plan should be completed in time to have a reasonable potential to correct the non-adherence prior to the next applicable reporting/assessment period after occurrence of the non-adherence for which the Mitigation Plan is provided. In all cases, the Mitigation Plan should be completed without delay. NERC will keep the CCC informed of the status of Mitigation Plan activities, and will notify the CCC when a Mitigation Plan has been completed.
5. Data Retention and Confidentiality

5.1 Records Management
All records associated with this program will be maintained by NERC. The associated records management policy will provide for a routine and orderly process for the retention and disposal of electronic and paper records related to this program, and ensure verification of compliance with appropriate business, regulatory, and legal requirements. The policy will allow for the maintenance of records as required to implement the CCC’s monitoring of NERC’s adherence to the ROP for Compliance Monitoring and Enforcement.

5.2 Retention Management
NERC’s records management policy will require that information and data generated or received pursuant to activities associated with this program be retained for a minimum of five (5) years. If the information or data is material to the resolution of a controversy, the retention period for such data will not commence until after the controversy is resolved.

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

6.1 Audit
The CCC will coordinate with NERC to post final Audit reports on its public website after the reports have been reviewed by the NERC Board. Such posting will be subject to the confidentiality provisions of the ROP.

6.2 Complaint
When the CCC determines that further action is needed regarding Complaints, it will report such Complaints to the NERC Board through the EWRC.

6.3 Mitigation Plan
NERC will keep the CCC informed of the status of Mitigation Plan activities, and will notify the CCC when a Mitigation Plan has been completed.

6.4 Other Monitoring Activities
The CCC will report to the NERC Board through the EWRC upon completion of other CCC monitoring activities described in this procedure in Section 2 of this procedure.
Procedure to Become a Prequalified Organization Eligible to Submit Implementation Guidance to the ERO

CCC Monitoring Program – CCCPP-011-

21 March 2016 June 2019
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Appendix A: Application to Become a Prequalified Organization Eligible to Submit Implementation Guidance for  
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Preface

NERC Compliance and Certification Committee

Title: Criteria for Annual Regional Entity Program Evaluation

Version: 1.5 | Revision Date: 4/07/2016 | Effective Date: 03/02/2016

Summary

The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to ensure 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 Compliance and Certification Committee (CCC) is a NERC Board-appointed stakeholder committee serving and reporting directly to the NERC Board of Trustees (Board) and is responsible for engaging with, supporting, and advising the NERC Board and NERC regarding all facets of the NERC Compliance Monitoring and Enforcement Program (CMEP), Organization Registration Program (Registration program), and Organization Certification Program (Certification program).

In accordance with action taken by the NERC Board on November 5, 2015, the CCC was asked to play a lead role in developing tools and/or procedures that will promote a common understanding among the industry and ERO Enterprise Staff regarding how compliance can be achieved and demonstrated. Key to this effort is the development of Implementation Guidance, a stakeholder-driven means to develop examples of approaches to illustrate how registered entities could comply with a Standard that are vetted by prequalified organizations and endorsed by the ERO Enterprise.

NERC will only consider requests for Implementation Guidance that have been vetted through one of several organizations that are “prequalified” to submit guidance for ERO Enterprise endorsement. Therefore, an organization that has not been prequalified can send a request to the CCC to be added to the prequalified list. This document outlines the process by which the CCC will receive and evaluate such requests.

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<td>1.1</td>
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1. Introduction

In the capacity of a NERC Board-appointed stakeholder committee serving and reporting directly to the Board under a NERC Board-approved charter, as approved by FERC, and as set forth in the Rules of Procedure (ROP); the CCC will engage with, support, and advise the Board and NERC Board of Trustees Compliance Committee (BOTCC) regarding all facets of the NERC CMEP, Registration program, and Certification program.

In accordance with action taken by the NERC Board on November 5, 2015, the CCC was asked to play a lead role in developing tools and procedures that will promote a common understanding among the industry and ERO Enterprise Staff regarding how compliance can be achieved and demonstrated. Key to this effort is the development of Implementation Guidance, a stakeholder-driven means for registered entities to develop examples of approaches to illustrate how registered entities could comply with a Standard that are vetted by prequalified organizations and endorsed by the ERO Enterprise.

As of May 2018, NERC requires that Implementation Guidance be vetted through one of the following prequalified organizations prior to being submitted to the ERO Enterprise for endorsement:

1. American Public Power Association (APPA);
2. Canadian Electricity Association (CEA);
3. Edison Electric Institute (EEI);
4. Electricity Consumers Resource Council (ELCON);
5. Electric Power Supply Association (EPSA);
6. EnergySec;
7. ISO/RTO Council;
8. Large Public Power Council (LPPC);
9. National Association of Regulatory Utility Commissioners (NARUC);
10. National Rural Electric Cooperative Association (NRECA);
11. North American Generator Forum (NAGF);
12. North American Transmission Forum (NATF);
13. Northwest Public Power Association (NWPPA);
14. Nuclear Energy Institute (NEI);
15. Transmission Access Policy Study Group (TAPS);
16. Western Interconnection Compliance Forum (WICF);
17. NERC Planning Committee (PC);
18. NERC Operating Committee (OC);
19. NERC Critical Infrastructure Protection Committee (CIPC); and
20. Regional Entity Stakeholder Committees.

NERC will post and maintain the list on the NERC website. In order to be added to the list of “prequalified” organizations that are eligible to serve as a potential submittee of Implementation Guidance, NERC requires an organization to submit a request to the CCC. Each of the prequalified organizations are comprised of stakeholders...
2  http://www.nerc.com/files/Order_on_Compr_Ting_06_07_2007_CCC_V5_Order.pdf
1. Introduction

that: 1) are actively involved in the various technical and policy operations of NERC, 2) have methods to assure technical rigor in the development process, and 3) possess the ability to vet content through its members.
2. Scope

The CCC is responsible for reviewing and considering applications for organizations who desire to become a prequalified organization eligible to submit Implementation Guidance to the ERO Enterprise. The CCC Compliance Processes and Procedures, The CCC EROMS Subcommittee (CPPS), will review and consider such applications.
3. Meetings

In the absence of specific provisions in this document or the CCC Charter, all EROMS CPPS sub-committee meetings will follow Robert’s Rules of Order, Newly Revised. Actions requiring a vote by the members of the CPPS EROMS will be approved upon receipt of the affirmative vote of the majority of the voting members of EROMS the CPPS present and voting, in person or by proxy at any meeting at which three (3) or more members are present.

Antitrust Guidelines

All persons attending or otherwise participating in EROMS the CPPS will act in accordance with NERC’s Antitrust Compliance Guidelines at all times during the meeting.

Open Meetings

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

Types of Meetings

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

Majority and Minority Views

All members of the working group will be afforded the opportunity to provide alternative views on an issue. The results of EROMS the CPPS actions, including recorded minutes, will reflect the majority as well as any minority views of the working group members. The Chair will communicate both the majority and any minority views in presenting results to the CCC.

Actions without a Meeting

Actions without a meeting are permitted in accordance with the provisions of the CCC Charter.

Quorum

A quorum for conducting business is 50% of the members listed on the current EROMS CPPS roster. If a quorum is not present, then the subcommittee may not take any actions requiring a vote of EROMS the CPPS; however, the Chair may, with the consent of the members present, allow discussion of agenda items.
4-3. Criteria for Approval

As noted above, any organization that is seeking to be prequalified to submit Implementation Guidance to the ERO Enterprise will be evaluated based on the following criteria:

- Is a known entity on the list of NERC registered entities, or in the alternative, represents a group of registered entities;
- Is actively involved in the various technical and policy operations of NERC;
- Has methods to assure technical rigor in the development process; and
- Possesses the ability to vet content through its organization, providing a high level of confidence to the CCC that the Guidance has been fully vetted.

The CCC will also take into consideration any characteristics and additional information of the applicant.

The CCC is ultimately responsible for reviewing and considering any applications for organizations to become a prequalified organization. The CCC reserves the right to periodically review the list of prequalified entities and recommend to the ERO Enterprise whether to have specific prequalified organizations removed. In doing so, the CCC will submit to the ERO Enterprise a request to remove an organization, explaining the circumstances behind the request. Upon concurrence of the recommendation by the ERO Enterprise, any such removals must be approved by the NERC Board of Trustees. Section 5 outlines the application and review process, which will be subject to periodic review and modification as determined by the CCC.
5.4. Application and Review Process

Submit Application
An applicant must submit a completed application form (shown in Appendix A) to the CPPS to begin the review process. The CPPS will acknowledge receipt of the application within five business days of receipt and notify the applicant by electronic mail.

Review Application
The CPPS will review applications at its regularly scheduled quarterly meetings. The CPPS will review an application at its next regularly scheduled meeting if the application is submitted to the CPPS more than 20 business days prior to the next regularly scheduled meeting. The CPPS will evaluate the applications in accord with the criteria outlined in Section 4.

Notifying Applicant and ERO Enterprise
The CCC Chair, or their designated representative, will notify the applicant of the CCC decision whether to add the applicant to the prequalified list. If the CCC approves the application, then the CCC will inform the ERO Enterprise and request the ERO Enterprise to modify the list of prequalified organizations and post on the ERO Enterprise website.
6.5. **Administrative**

**Review Period**
The Criteria for Approval in Section 4 will be reviewed by the CCC on an annual basis and modified as needed.

**Retention Management**
NERC’s records retention management policy will require that information and data generated or received under activities associated with this program be retained for a minimum of five years. If the information or data is material to the resolution of a controversy, the retention period for such data will not begin until after the controversy is resolved.

**Confidentiality Management**
NERC and the CCC will maintain confidentiality of all Confidential Information in accordance with Section 1500 of the ROP. Information deemed to be critical energy infrastructure information will be redacted and will not be released publicly.
Appendix A: Application to Become a Prequalified Organization Eligible to Submit Implementation Guidance for Potential Endorsement by NERC

The NERC Compliance and Certification Committee determines whether an organization will be prequalified to submit Implementation Guidance to NERC for endorsement.

Contact Person Details

<table>
<thead>
<tr>
<th>Title/Employer</th>
<th>First name</th>
<th>Last Name</th>
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</thead>
<tbody>
<tr>
<td>Address</td>
<td></td>
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<tr>
<td>City, State or Province</td>
<td>Zip Code or Postal Code</td>
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<td>Phone (daytime)</td>
<td>Mobile</td>
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<tr>
<td>Email</td>
<td></td>
<td>Name of Organization to be Applicant</td>
</tr>
</tbody>
</table>

Description of Organization

Use this space to provide profile information to describe general structure of the organization:

Member Details

Use this space to provide information about the organization’s members and why the members are impactful to NERC.
Appendix A: Application to Become a Prequalified Organization Eligible to Submit Implementation Guidance for Potential Endorsement by NERC

Application

Use this space to explain the reasons why NERC should consider this organization as a prequalified organization to submit Implementation Guidance to the ERO Enterprise.

Explain how this organization includes stakeholders that possess the following characteristics:

- Must be a known entity on the list of NERC registered entities, or in the alternative, represent a group of registered entities;
- Is actively involved in the various technical and policy operations of NERC;
- Has methods to assure technical rigor in the development process; and
- Possesses the ability to vet content through its members, providing a high level of confidence to the CCC that an issue has been fully vetted.

Explain the reasons the entity is unable to have one of the prequalified organizations vet its proposed Implementation Guidance:

Please send this form to the following location:
Email: ComplianceGuidance@nerc.net
To: NERC Board of Trustees (BOT)
From: Thomas J. Galloway, NATF President and CEO
Date: July 16, 2019
Subject: NATF Periodic Report to the NERC BOT (August 2019)

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 and in the attached July NATF external newsletter, which is also available on our public website at www.natf.net/news/newsletters.

Projects and Documents

Supply Chain Cyber Security
NATF work in this area is geared to establish overall guidance and a common set of cyber security parameters for supply chain products and services specific to the electric industry that entities can use for effective and efficient management of evolving cyber security supply chain risks to reliability.

Guidance
To-date, we have published two documents to our public website for industry use:

1. Cyber Security Supply Chain Risk Management Guidance
2. NATF CIP-013-1 Implementation Guidance (Version 2)

As noted in the attached newsletter, the “NATF CIP-013-1 Implementation Guidance” is now listed as “ERO Enterprise-Endorsed Implementation Guidance.” We appreciate the efforts of NERC staff to move this document through the review process.

Criteria and Reporting
NATF subject-matter experts have identified criteria applicable to supply chain cyber security controls for products and services provided to the electric industry and posted for NATF member review. These criteria and the guidance documents previously developed by NATF provide a foundation for good cyber security practices that entities can use to evaluate suppliers’ supply chain cyber security risks.

NATF’s next steps will build on this foundation by determining the methods by which a purchasing entity can be assured of a supplier’s adherence to the NATF criteria, including common reporting forms. NATF is beginning by working with a small number of key suppliers and third-party evaluators to gain greater understanding of their capabilities and challenges in meeting the industry’s need for verification and common reporting formats as data points in their supplier risk assessments. The NATF is striving to achieve these critical cyber security assurances in the most effective and efficient manner possible; to that end the NATF criteria are mapped to existing frameworks to facilitate the adoption of widely accepted and credible cyber security supply chain criteria for use in the electric utility industry. NATF staff and members plan to discuss these concepts with
suppliers and third-party auditors/assessors to confirm alignment on approaches and will keep NERC and trade association representatives informed on progress.

Grid Security Emergencies
As previously reported, an NATF team has been working on inputs to the U.S. Department of Energy related to a grid security emergency (GSE)—see box on right for background on GSEs. Topics include:

- Communication between the DOE and the electricity subsector after the declaration of a GSE
- Suggested criteria for declaring a GSE
- Emergency operations and waivers associated with issuance of a GSE order

In October 2018, the team completed a document to address the GMD threat noted in the FAST Act’s GSE definition.

In 2019, the NATF team—supplemented by representatives of the DOE, National Security Council, NERC E-ISAC, and the Edison Electric Institute—completed an update to the report incorporating other threats (physical security, cyber security, and EMP) and recommending additional work with Reliability Coordinators to craft detailed responses to various scenarios. The document was presented to the DOE and to the Electricity Subsector Coordinating Council (ESCC) on June 26 for discussion at the ESCC’s July meeting, and some content will likely be included in this year’s GridEx V tabletop.

Meetings and Workshops
In July, the NATF partnered with the Western Interconnection Compliance Forum to host a joint session during the NATF security workshop. Topics included CIP-013 and supply chain cyber security, consideration of BES cyber security information in the cloud, remote access, and patch authentication.

Please see the attached newsletter for more information on NATF involvement with other recent industry efforts:

- NERC- NATF-EPRI Joint Modeling and Planning Workshop (June 18-19)
- UTC Conference Panel
- EISC Summit Panel

Section 215A of the Federal Power Act, added via amendment by section 61003 of Public Law 114-94 (the Fixing America’s Surface Transportation Act or “FAST Act”), gives the Secretary of Energy certain authorities to issue an emergency order following the President’s written declaration of a “grid security emergency” (GSE) as defined in the statute:

The term ‘grid security emergency’ means the occurrence or imminent danger of—(A) . . . a malicious act using electronic communication or an electromagnetic pulse, or a geomagnetic storm event . . . and . . . disruption of the operation of such devices or networks, with significant adverse effects on the reliability of critical electric infrastructure or of defense critical electric infrastructure, as a result of such act or event; or (B) . . . a direct physical attack on critical electric infrastructure or on defense critical electric infrastructure; and . . . significant adverse effects on the reliability of critical electric infrastructure or of defense critical electric infrastructure as a result of such physical attack.
North American Transmission Forum External Newsletter
July 2019

NERC Endorses NATF Cyber Security Supply Chain Guidance

The document—which describes one way a registered entity could comply with CIP-013-1 Requirement R1 and, subsequently, CIP-013-1 Requirement R2—is posted on the NATF public documents and NERC compliance guidance pages.

NATF, NERC, and EPRI Host Joint Modeling and Planning Workshop
The NATF, NERC, and the Electric Power Research Institute (EPRI) held a joint workshop focusing on bulk power system (BPS) modeling and planning on June 18-19 in Novi, Michigan. NATF member ITC Holdings hosted the event, which included discussions on the following topics:

- Modeling and studies of the impacts of distributed energy resources on BPS reliability
- Modeling and studies of BPS-connected inverter-based resources
- Electromagnetic transient modeling and studies
- Node-breaker modeling improvements
- Cascading analysis techniques and studies
- Conventional transmission planning study improvements
- NERC standards updates relevant to transmission planning

Workshop presentation materials are available on the NERC website.

NATF CEO Participates in UTC Conference and EISC Summit Panels
NATF President and CEO Tom Galloway recently served on panels during the UTC Telecom & Technology 2019 conference and EIS Summit X, hosted by the Utilities Technology Council and the Electric Infrastructure Security (EIS) Council, respectively.

At the UTC Telecom & Technology 2019 conference, Galloway served on the “At the Crossroads: How Utility Telecommunications Networks Are Essential to the Grid Now, and the Future” panel, with other industry leaders to discuss telecommunications challenges and lessons learned during a time of utility industry transformation. Utility telecommunications during an extreme event is a current NATF focus area.

During the EIS summit’s “THE FUTURE OF RESILIENCE: Drivers, Discipline, Planning, and Investment for Multi-Sector Resilience in an Evolving World” panel, a moderator interviewed Galloway and other senior executives on
“Black Sky” resilience progress and gaps. Resilience has become an increasingly important industry topic and continues to be a key aspect of NATF work.

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

- Compliance Practices Workshop (May)
- Metrics Working Group Annual Face-to-Face Meeting (May)
- System Protection Workshop (May)
- Joint NATF/NERC/EPRI Planning and Modeling Workshop (June)
- Security Workshop (July)
- Operator Training (Train-the-Trainer) Workshop (August)

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.

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For more information about the NATF, please visit www.natf.net.
On Tuesday, June 18th, NAGF members participated in a FERC led conference call on the 2018 Cold Weather Event that occurred on January 15-17, 2018 in the mid-West and South West US. FERC identified and discussed at total of 13 findings; 1 generator and 12 transmission related. The generation finding was significant and FERC has recommended the development of a standards applicable to GO/GOPs for cold weather preparations. The NAGF is actively working with NERC to support the development of a cold weather SAR and associated Reliability Standard.

NAGF participated in the Electric-Gas Working Group (EGWG) webinar held on June 24th. The NAGF continues to actively support this working group by providing information regarding generator operation, economics, fuel procurement, and other supporting information as requested to help ensure that the generator perspective for fuel disruption risks as well as fuel resilience are understood and accounted for.

The NAGF is continuing to participate in the NPCC Distributed Energy Resources (DER) Forum. The DER Forum held its recent meeting at the NPCC Regional Standards Committee (RSC) meeting on August 8th. The NAGF presented on the continuing work activities of the IRPTF.
The **NERC/NAGF/ESIG Battery Storage, Hybrid Resources, Frequency Response, and Grid Services Workshop** will be held on Tuesday, September 17th & Wednesday, September 18th – 8:00 AM to 5:00 PM at the NERC Washington, D.C. and Atlanta Offices with teleconferencing between the offices. The workshop will discuss the growing technical, operational and economic concerns of the changing resource mix. Attendees and presenters will include governmental entities, system/market operators, equipment manufacturers, developers and generator owner/operators. Panel discussions will include:

**Panel 1** – Technical capabilities of battery energy storage systems  
**Panel 2** – Hybrid projects: motivations, drivers and challenges  
**Panel 3** – Planning, interconnection and modeling with storage and hybrids  
**Panel 4** – ISO/RTO market participation of storage and hybrids  
**Panel 5** – PFR and grid services considerations - conventional and inverter based  
**Panel 6** – Policymaker viewpoints on grid services and grid transformation

The **9th Annual NAGF Annual Meeting & Compliance Conference** will take place on October 15-17 at NERC’s Atlanta Office. Discussions will include the following:

- Keynote presentation from NERC President and CEO Jim Robb  
- PRC-027  
- PRC-019 and PRC-024 for Inverter Based Resources  
- Regulatory Relief for Generating Units Planning on Shutdown  
- PER-006-1  
- Q&A with Regional Entity Personnel  
- CIP-003-7: Transient Cyber Assets & Removable Media  
- Supply Chain - CIP-013  
- Internal Controls  
- Battery Integration Issues and/or Successes  
- Project 2016-02 CIP Modifications Update  
- Recent NERC Audit Experiences  
- Plant Life Cycle NERC Compliance  
- Inverter-Based Resource Performance Task Force  
- Cold Weather update  
- GO Survey of Response to Frequency Event