

## Agenda Board of Trustees

November 4, 2010 | 8:00 a.m.–Noon ET  
Grand Hyatt Atlanta  
3300 Peachtree Rd. NE  
Atlanta, GA 30305  
404-237-1234

### **Introductions and Chair's Remarks**

### **NERC Antitrust Compliance Guidelines and Public Meeting Notice**

### **Consent Agenda — Approve**

- 1. Minutes\***
  - a. October 15, 2010 conference call
  - b. August 5, 2010 meeting
- 2. Committee Membership Appointments and Charter Changes\***
  - a. Compliance and Certification Committee (CCC) Membership Change
- 3. Future Meetings\***

### **Regular Agenda**

- 4. Remarks by Tom Fanning, President, Southern Company**
- 5. Remarks by Jim Ellis, President and CEO, INPO**
- 6. Remarks by Commissioner Marc Spitzer, FERC**
- 7. Remarks by Commissioner Cheryl LaFleur, FERC**
- 8. President's Report**

**9. 2009/2010 Post-Winter Reliability Assessment\* — Approve**

**10. Compliance Performance Measure Recommendations Report\* — Approve**

**11. Reliability Standards\***

- a. *Reliability Standards Development Plan: 2011-2013* — **Approve**
- b. Report on CIP Standards Plan — **Review**
- c. IRO-006-5 and IRO-006-EAST-1 — Transmission Loading Relief — **Approve**
- d. PRC-006-1— Automatic Underfrequency Load Shedding and EOP-003-2 — Load Shedding Plans — **Approve**
- e. NPCC Regional Disturbance Monitoring Standard — **Approve**
- f. Available Transfer Capability Violation Risk Factors — **Approve**
- g. *Standard Processes Manual* — **Review**

**12. Interpretations of Reliability Standards\***

- a. Interpretation of EOP-001-0 — Emergency Operations Planning, Requirement R1 Requested by the Regional Entity Compliance Managers — **Approve**
- b. Interpretation of EOP-001-1 and EOP-001-2 – Emergency Operations Planning, Requirement R2.2 Requested by the Florida Municipal Power Pool — **Approve**
- c. Interpretation of TOP-002-2a – Normal Operations Planning, Requirement R10 Requested by the Florida Municipal Power Pool — **Approve**

**13. Modifications to the System Operator Certification Program Manual\* — Approve**

**14. Response to FERC Rehearing Order on the Standards Process\* — Approve**

**15. Critical Infrastructure\* — Approve**

- a. Electricity Sub-Sector Coordinating Council Critical Infrastructure Strategic Roadmap
- b. Critical Infrastructure Strategic Initiatives Coordinated Action Plan

**16. Report on Reliability Performance Initiatives — Information**

**Standing Committee Reports (Agenda Item 17)\***

[Compliance and Certification Committee](#)

[Critical Infrastructure Protection Committee](#)

[Operating Committee](#)

[Personnel Certification Governance Committee](#)

[Planning Committee](#)

[Standards Committee](#)

[Electricity Sub-Sector Coordinating Council](#)

## Forum and Group Reports (Agenda Item 18)

[Regional Entity Management Group](#)

[North American Transmission Forum](#)

## Board Committee Reports

### 19. Corporate Governance and Human Resources\*

- a. Update on Board Oversight of NERC Standing Committees, Possible Amendment to Technology Committee Mandate
- b. NERC Chair, Chair-Elect, and Vice Chair Selection and Succession Guidelines (possible) — **Approve**
- c. Savings and Investment Plan — **Approve**

### 20. Compliance

### 21. Finance and Audit\*

- a. Third Quarter Statement of Activities — **Review and Accept**
- b. Review Year End Projection
- c. Update on NERC 2011 Business Plan and Budget Filing with FERC
- d. Update on Office Relocation/DC Expansion

### 22. Technology

### 23. Nominating

\*Background materials are 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.



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

## Draft Minutes Board of Trustees Conference Call

October 15, 2010 | 2:00 p.m., EDT

Chairman John Q. Anderson convened a duly noticed open meeting by conference call of the Board of Trustees of the North American Electric Reliability Corporation on October 15, 2010 at 2:00 p.m., EDT. As required by the bylaws of the Corporation, dial-in listen-only access was provided to members of the Corporation and the public for the meeting. The meeting notice and agenda is attached as **Exhibit A**.

Trustees present on the call in addition to Chairman Anderson were Vicky Bailey, Paul Barber, Tom Berry, Janice Case, Gerry Cauley, Jim Goodrich, Fred Gorbet, David Goulding, Ken Peterson, Bruce Scherr, and Jan Schori. Additional attendees are listed in **Exhibit B**.

### **Antitrust Compliance Guidelines**

David Cook, senior vice president and general counsel, directed the participants' attention to the NERC Antitrust Compliance Guidelines.

### **Long-Term Reliability Assessment: 2010-2019**

Tom Burgess, chair of the NERC Planning Committee, and Mark Lauby and John Moura of the NERC staff presented the *Long-Term Reliability Assessment: 2010-2019* to the board for approval. A draft of the report had been distributed to board members prior to the meeting. Mr. Burgess informed the board the report is a joint effort of the Reliability Assessment Subcommittee, the Planning Committee, and NERC staff.

Chairman Anderson led the board through an extended discussion of general issues and observations. Various board members raised questions and suggested additional items to include in the draft. Chairman Anderson then led the board through the draft section-by-section, and board members raised particular questions and made observations at various points in the draft. On a motion by Paul Barber, the board approved the *Long-Term Reliability Assessment: 2010-2019*, subject to the revisions discussed during the course of the meeting.

**2010 Special Reliability Scenario Assessment**

Chairman Anderson next turned to a discussion of the *2010 Special Reliability Assessment: Potential Resource Adequacy Impacts of U.S. Environmental Regulations*. A draft of the report had been distributed to board members prior to the meeting.

Chairman Anderson led the board through a discussion of general issues and observations. Various board members raised questions and suggested additional items to include in the draft. The discussion focused particularly on the executive summary and the need to move some of the conclusions earlier in the report. On a motion by Ken Peterson, the board approved the *2010 Special Reliability Assessment: Potential Resource Adequacy Impacts of U.S. Environmental Regulations*, subject to the approval by the trustees via e-mail of a revised executive summary that addresses the issues raised during the course of the discussion. If any trustee believes that further discussion among the trustees is necessary prior to releasing the report, the board will re-convene by conference call.

**Closing Remarks**

Chairman Anderson commended the Planning Committee, the Reliability Assessment Subcommittee, the NERC staff, and all those involved in the 2010 Long-Term Reliability Assessment and the Special Reliability Assessment for jobs well done on two significant reports.

There being no further business, the call was terminated at 3:36 p.m.

Submitted by,



David N. Cook  
Secretary

## Draft Minutes Board of Trustees

August 5, 2010 | 8:00 a.m.-Noon EDT  
Toronto Marriot Eaton Centre  
525 Bay Street  
Toronto, Ontario M5G 2L2 Canada  
416-597-9200

Chairman John Q. Anderson called to order a duly noticed meeting of the North American Electric Reliability Corporation Board of Trustees on August 5, 2010 at 8 a.m., local time, and a quorum was declared present. The announcement, agenda, and list of attendees are attached as **Exhibits A, B, and C** respectively.

### **NERC Antitrust Compliance Guidelines**

David Cook, senior vice president and general counsel, directed participants' attention to the NERC Antitrust Compliance Guidelines included in the agenda.

### **Executive Session**

Chairman Anderson reported that, as is its custom, the board met in executive session before the open meeting, without the chief executive officer present, to review management activities.

### **Consent Agenda**

On motion of President and CEO Gerry Cauley, the board approved the consent agenda, as follows:

### **Minutes**

The board approved the following draft minutes (**Exhibit D**):

- a. [July 14, 2010 – Conference Call](#)
- b. [June 11, 2010 – Conference Call](#)
- c. [June 11, 2010 – Action Without a Meeting](#)
- d. [May 18, 2010 – Action Without a Meeting](#)
- e. [May 17, 2010 – Conference Call](#)
- f. [May 12, 2010 – Meeting](#)



### **Committee Membership Appointments and Charter Changes**

The board approved the proposed appointments and changes to the membership of the Operating and Planning committees (**Exhibit E**).

After discussion the board approved the Critical Infrastructure Protection Committee charter subject to the deletion of the parenthetical clause in section 3.b.iv of the charter.

### **Future Meetings**

The board approved August 3-4, 2011 (W–Th) in Vancouver, Canada as a future meeting date and location, as well as approved the change made to the May 2011 meeting dates from May 3-4, 2011 to May 10-11, 2011.

### **Status of Matters in Canada**

Mr. Cauley introduced Mr. Gaetan Caron, Chair and CEO of the National Energy Board of Canada. Mr. Caron’s presentation focused on the energy sector in Canada and addressed where the Canadian energy sector is currently and how it might evolve going forward. Mr. Caron also highlighted the key objectives of working to be sustainable in their energy systems and described the major trends, challenges, and the role of energy trade and the consumer. Mr. Caron concluded his presentation providing thoughts on the sector’s initiatives moving forward. Mr. Caron’s presentation is included as **Exhibit F**.

### **Remarks by Commissioner John Norris, FERC**

Chairman Anderson introduced Commissioner John Norris of FERC. Commissioner Norris first thanked the Canadian hosts for their hospitality and for providing him an opportunity to learn more about the overall relationship with Canadian counterparts. Commissioner Norris spoke about the value of the July 6 Technical Conference. He believes the onus is on FERC, the NERC Board of Trustees, and the executive level of the industry to establish and commit to priorities, resolve ambiguities, and have high-level policy discussions to coordinate one voice on reliability in North America. Further, Commissioner Norris believes to be successful there must be direction and the right tools available and that FERC, the NERC Board of Trustees, international counterparts, and the executive level of the industry need to provide that direction and those tools. This will allow the establishment of a sense of priorities so what is important is completed first. Further, he stated an executive level discussion provides a common purpose – resolving reliability issues and getting the job done and that this open process is needed for not only legal but also practicality reasons. An open process will allow the discussion of what elements should go into a decision so the best decision is made.

In conclusion, Commissioner Norris stated his desire is for a commitment to be made to follow up the July 6 Technical Conference in the near future and that a plan is put in place and followed through.

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

Chairman Anderson introduced Commissioner Cheryl LaFleur of FERC. Commissioner LaFleur opened her remarks offering appreciation to the Canadian hosts for their hospitality and for providing valuable insight on the Canadian relationship. Her remarks then centered on reliability and how important reliability is to customers. She stated with any energy issue, there are three dimensions: reliability, cost, and impact to the environment; but the most important is reliability.

Further, Commissioner LaFleur believes, from reading the documentation from the July 6 Technical Conference and observations from the Member Representatives Committee meeting, the overwhelming theme is prioritization: determine what needs to be accomplished first and then establish timelines. To accomplish this there must be mutual trust between the parties setting the shared priorities and the mutual trust needs to be founded by communication from the continuation of technical conferences and the Member Representatives Committee and Board of Trustees' meetings.

In conclusion, Commissioner LaFleur stated she looked forward to getting fully involved.

### **President's Report**

Mr. Cauley opened by thanking Mr. Caron and Commissioners Norris and LaFleur for participating in the board meeting. Mr. Cauley's report focused on three areas:

- Setting measures by yearend that will statistically and factually report on reliability showing the impact on performance both historically and moving forward.
- Identifying risks and addressing the risks in compliance by taking proactive measures to fix and learn from the issues through implementing compliance action notices and lessons learned.
- Provide adequate assurance of reliability in both the standards and compliance programs. Continue to meet the challenge of prioritizing the work and strengthening the standards process.

Mr. Cauley believes that the high standard of reports from the Reliability Assessment division, the implementation of the Strategic Roadmap developed by the ESCC, and continued focus on leveraging the ERO's expertise and resources will enable NERC to face new challenges that will arise: Smartgrid, global resources, new types of resources that will modify the control and characteristics of reliability performance.

In his concluding remarks, Mr. Cauley stated that the March 18 orders led to a significant positive, open communication and a strengthening relationship with FERC that will provide needed support in meeting the measures of success implemented by the ERO.

## **Reliability Standards**

Herb Schrayshuen, vice president and director of standards, gave a presentation on the Reliability Standards Program (**Exhibit G**) and presented the following items for board action.

### **Proposed Reliability Standard EOP-008-1 — Loss of Control Center Functionality**

On motion of Gerry Cauley, the board approved the following resolutions:

RESOLVED, that the board approves the proposed Reliability Standard EOP-008-1 — Loss of Control Center Functionality, along with the associated violation risk factors and violation severity levels, and approves the retirement of EOP-008-0 concurrent with the effectiveness of EOP-008-1;

FURTHER RESOLVED, that the board approves the following proposed Reliability Standards and associated violation risk factors and violation severity levels:

- (1) BAL-002-1 - Disturbance Control Performance;
- (2) EOP-002-3 - Capacity and Energy Emergencies;
- (3) FAC-002-1 - Coordination of Plans For New Generation, Transmission, and End-User Facilities;
- (4) MOD-021-2 - Documentation of the Accounting Methodology for the Effects of Demand-Side Management in Demand and Energy Forecasts;
- (5) PRC-004-2 - Analysis and Mitigation of Transmission and Generation Protection System Misoperations; and
- (6) VAR-001-2 - Voltage and Reactive Control;

FURTHER RESOLVED, that the board approves the retirement of the following Reliability Standards upon the effectiveness of the succeeding version of the respective standards:

- (1) BAL-002-0 - Disturbance Control Performance;
- (2) EOP-002-2 - Capacity and Energy Emergencies;
- (3) FAC-002-0 - Coordination of Plans For New Generation, Transmission, and End-User Facilities;
- (4) MOD-021-1 - Documentation of the Accounting Methodology for the Effects of Demand-Side Management in Demand and Energy Forecasts;
- (5) PRC-004-1 - Analysis and Mitigation of Transmission and Generation Protection System Misoperations; and
- (6) VAR-001-1 - Voltage and Reactive Control;

FURTHER RESOLVED, that the board approves the implementation plans for Versions 2 and 3 of Reliability Standards CIP-002 through CIP-009;

FURTHER RESOLVED, that management shall make the appropriate filings with ERO governmental authorities.

**Section 1600 Data Request – CIP-002-4**

On motion of Gerry Cauley, the board approved the following resolution:

WHEREAS, on July 6, 2010, the Board of Trustees approved, under Rule 1606 of NERC's Rules of Procedure, posting a proposed CIP-002 Critical Asset Methodology Data Request for an expedited comment period that closed on July 26, 2010; and

WHEREAS, NERC has prepared a response to the comments received and has revised the proposed data request in light of the comments; and

WHEREAS, the Board of Trustees finds that it is appropriate and of significant benefit to the standards drafting team preparing revisions to CIP-002 to obtain additional information from registered entities regarding the impact of potential categories to be used in the revised CIP-002 Reliability Standard;

RESOLVED, that the Board of Trustees approves the proposed CIP-002 Critical Asset Methodology Data Request as so revised (attached to these minutes as **Exhibit H**) as an authorized data request under Section 1600 of NERC's Rules of Procedure.

**Results-Based Standards Transition Plan**

On motion of Bruce Scherr, the board approved the following resolution:

RESOLVED, that the board accepts the report of the Ad Hoc Team on *Results-based Reliability Standards Transition Plan* and the recommendation that responsibility for implementing the recommendations in the *Results-based Reliability Standards Transition Plan* be transferred from the Ad Hoc Team for Results-based Reliability Standards to the NERC Standards Committee.

**Discussion of Executive Forum on Reliability**

Mr. Cauley raised for discussion a proposed executive forum on reliability. He stated that during the July 6, 2010 reliability standards development technical conference led by the FERC, there was wide agreement by most panelists regarding the importance of improving communications and working relations among senior leaders at FERC and its Canadian counterparts, NERC, and industry.

Mr. Cauley stated the forum would not be a decision-making or policymaking body, but would allow the airing of perspectives and foster a better understanding of roles and priorities. For instance, such a forum could be used to better understand the scope and meaning of reliability, tradeoffs between reliability and cost to customers, strategic objectives with regard to critical infrastructure security, reliability impacts of new technologies, and priorities for addressing risks to reliability. The forum could also clarify roles and expectations with regard to setting of reliability standards.

After extensive discussion by the Trustees and industry members, it was agreed that a new executive forum on reliability is not needed at this time but Mr. Cauley will work with the MRC members, FERC, and Canadian constituents to schedule periodic summits with an agenda of significant policy issues. Mr. Cauley also noted that it was critical for increased stakeholder executive-level involvement and he would work on creating an attractive forum that would entice senior officers going forward.

### **Board Oversight of NERC Standing Committees (Agenda Item 15b)**

Chairman Anderson asked Mr. Cauley to provide the overview of Agenda Item 15b - Board Oversight of NERC Standing Committees. Mr. Cauley's presentation focused on the six standing committees that report directly to the Board of Trustees (OC, PC, CIPC, PCGC, CCC, and SC) and that from a general perspective, each committee sets its priorities in annual work plans and reports progress periodically to the board. However, active interactions between the board and each committee are typically limited to review and approval of final products, changes to rules of procedure, or changes to scope documents.

Mr. Cauley further presented that the March 18, 2010 orders by the FERC and the July 6, 2010 FERC technical conference on reliability standards development provided an opportunity to reflect on the question whether there is presently sufficient oversight and direction from the Board of Trustees in the area of reliability standards development. Regulatory mandates, identification of significant risks to bulk power system reliability, and emerging issues and technologies often dictate action by the ERO. In some cases, failing to deliver critical results in a timely fashion could undermine the credibility of the ERO and jeopardize the overall effectiveness and reputation of the ERO.

Mr. Cauley presented discussion questions to the Trustees and attending audience and opened to the floor for input, comments, and/or additional questions. The result from the open discussion was a request for a draft scope of the responsibilities of the Standards Oversight Committee. Mr. Cauley stated NERC staff would work with the officers of the Standards Committee to draft a scope that would incorporate the meeting's discussion and bring forth to the board at its November or February meeting. Chairman Anderson asked that any additional input be provided to Gerry directly.

### **NERC and Regional Entity 2011 Business Plans and Budgets and Assessments**

Following discussion and on motion of Fred Gorbet, the board approved the following resolution:

RESOLVED,

- (1) that the Board of Trustees approves the following, substantially in the form presented:
  - (a) the proposed NERC 2011 business plan and budget;
  - (b) the proposed 2011 business plans and budgets of the eight regional entities;

- (c) the proposed 2011 budget request of the Western Interconnection Regional Advisory Body; and
  - (d) the proposed 2011 assessments to recover the costs of the approved 2011 budgets.
- (2) that management is directed to file the 2011 business plans, budgets and assessments with ERO governmental authorities, together with such additional explanatory material as is appropriate.

### **Bulk Power System Critical Infrastructure Strategic Roadmap**

Mr. Cauley provided a report on the Critical Infrastructure Strategic Roadmap (**Exhibit I**) as developed by the Electricity Sub-Sector Coordinating Council (ESCC). A key decision of the ESCC was to develop the Roadmap to identify the sub-sector's priorities, and provide a framework to address severe-impact risks, including those identified in the High Impact, Low Frequency (HILF) report. Taking a broad sub-sector-wide perspective, the Roadmap will provide the Board of Trustees with advice on what should be done to enhance electricity reliability and resilience from an all-threats, all-hazards perspective. The Roadmap will build on the draft Bulk Power System Critical Infrastructure Policy Statement discussed at recent Member Representatives Committee and Board of Trustee meetings, and provide guidance for the sub-sector and NERC's technical committees.

After considering public comments, the ESCC proposes to seek Board of Trustees endorsement of the Strategic Roadmap at its November meeting.

### **Mandatory Data Collection of Interconnection Reliability Operating Limits/System Operating Limits (IROL/SOL) Exceedance**

Mark Lauby, director of reliability assessment and performance analysis provided an overview of the Mandatory Data Collection of Interconnection Reliability Operating Limits/System Operating Limits. On motion of Ken Peterson, the board approved the following resolution:

WHEREAS, the NERC Planning Committee and the NERC Operating Committee have developed a series of metrics for measuring the reliability of the bulk power system; and

WHEREAS, one of the metrics required additional data; and

WHEREAS, to acquire that data, a proposed Data Collection of Interconnection Reliability Operating Limits/System Operating Limits (IROL/SOL) Exceedance was posted for public comment under Section 1600 of the NERC Rules of Procedure; and

WHEREAS, the Planning Committee and the Operating Committee have recommended that the NERC Board of Trustees approve the proposed data collection, modified as appropriate in light of the comments received;

RESOLVED, that the Board of Trustees approves the proposed Data Collection of Interconnection Reliability Operating Limits/System Operating Limits (IROL/SOL) Exceedance (attached to these minutes as **Exhibit J**) as an authorized data request under Section 1600 of NERC's Rules of Procedure

### **Status Report on Regional Delegation Agreements Metrics**

Dave Nevius, senior vice president gave an overview of the provision in the renegotiated Regional Delegation Agreements for NERC and the Regional Entities to develop a set of goals, metrics, measures, other parameters and reports to measure the performance of NERC and the Regional Entities in carrying out their respective functions and related activities under these agreements. Mr. Nevius stated to date, NERC and the Regional Entities have developed preliminary performance measures and more recently evaluated the benefits of also incorporating a performance management approach called the "Balanced Scorecard Management System" (BSC) that is designed to help corporate alliances achieve success. The first step of the BSC method is to identify the *strategic objectives* of the alliance, or in this case the ERO enterprise, and then to sort these objectives into several *strategic themes*. Mr. Nevius stated the BSC method might provide a useful framework to develop, track, and manage the goals, metrics, measures, other parameters and reports governing performance of NERC and the Regional Entities under the Regional Delegation Agreements. Trustees offered their perspectives and observations on the limits of such an approach.

Mr. Nevius concluded that NERC, working with the Regional Entity senior management, will more fully explore and develop the BSC approach, and will look to bring a recommended set of goals, metrics, measures, other parameters and reports to the Finance and Audit Committee for review at its October 2010 meeting and approval by the Board of Trustees at its November 2010 meeting.

### **Committee, Group, and Forum Reports**

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

Mr. Clay Smith, Chair provided the report for the CCC. The CCC met in Denver on June 9 and 10 and their next meeting is scheduled for September 9 and 10 in Vancouver, Canada. Mr. Smith reviewed that the CCC received approval on June 10 from FERC for the following: the CCC Hearing and Mediation Procedures and Appendix 5 of the Organization and Registration Manual. Mr. Smith stated that this was an intense two-year process that ended with the approvals.

Mr. Smith concluded his report noting some of the recent activities of the CCC: Reliability Standards Quality Review Workshop in Charlotte; completion of the Industry Stakeholders Perception Survey which is ready for distribution to the industry; working with the NERC standards team in reviewing standards deviations from the standards development process; reviewing and finalizing the compliance criteria that NERC uses in evaluating their audits or evaluations of the Regional Entities; and finally working with the Performance Measures Working Group on performance measures and analyzing the current whitepaper.

### **Critical Infrastructure Protection Committee**

Barry Lawson, Chair, provided a brief overview of the summary report presented to the board in advance of the meeting (attached as **Exhibit K**). Highlights of the CIPC activities are:

Summary Report on the November 2009 High-Impact, Low-Frequency Event Risk Workshop. The CIPC, Operating Committee (OC) and Planning Committee (PC) officers and NERC staff are developing a work plan to address the 19 proposals for action identified in the HILF report. See Member Representatives Committee Agenda Item 6.c (August 4, 2010) which describes the status of this effort.

Classified Briefing for CIPC and Other Industry Participants. The CIPC is currently working with DHS and DOE to have a classified briefing in conjunction with its December CIPC meeting in Tampa, FL. Last year DHS and DOE provided a classified briefing in Atlanta in conjunction with the CIPC meeting and it was well received. It also eliminates the need for attendees needing to schedule separate travel to Washington, DC, where most briefings are held. The efforts of DHS and DOE in this area are very much appreciated.

Need for Unclassified Information from Federal Government. The CIPC continues to work with DHS and DOE in an ongoing effort to encourage the federal government to convert classified information into unclassified information that can be more broadly shared within the industry. In addition, by converting certain information to an unclassified status, it can then be shared in a more timely manner, thereby providing utilities with important information that can be quickly acted upon.

### **Member Representatives Committee**

Chairman Ed Tymofichuk reported to the board a summary of the matters presented during the Member Representatives Committee (MRC).

### **Operating Committee**

Chairman Sam Holeman provided a summary report on the key activities of the Operating Committee (OC) and its associated subcommittees in support of the NERC or OC mission and corporate goals. The full report is attached as **Exhibit L**.

### **Personnel Certification Governance Committee**

The Personnel Certification Governance Committee written report is attached as **Exhibit M**.

### **Planning Committee**

Chairman Tom Burgess reported on the key activities of the Planning Committee (PC) and its associated subcommittees in support of the NERC or PC mission and corporate goals. The full report is attached as **Exhibit N**.



### **Regional Entity Management Group**

Vice Chair Tim Gallagher opened his report by welcoming Scott Henry to the Regional Entity Management Group. Mr. Gallagher addressed the item of Technical Feasibility Exceptions (TFEs). There have been 5,000 requests received for TFEs at this time and though some of these requests are redundant, Mr. Gallagher stated they far exceed budgeted TFEs. There are two aspect of the TFE reviews: quick screen and detailed review. Mr. Gallagher was pleased to report that all of the quick screens have been completed in the required timeframe and that the REMG believes the detailed reviews will be completed in the required timeframe as well, as long as the registered entities submit documentation to the REMG offsite and in advance of the reviews.

Mr. Gallagher further reported that the REMG is continuing to work on the compliance violations process and improving the process in both quality and efficiency and progress has been made in both areas but there is still work to be done. Finally, Mr. Gallagher stated that the REMG continues to work with NERC in support of the compliance action notices process and its transparency and refinements.

### **Standards Committee**

Chairman Allen Mosher briefly reported the Standards Committee had received comments regarding the Committee's efforts on expediting standards development but feels most of the comments will be addressed upon the approval of the Standard Processes Manual by FERC. Mr. Mosher felt the meetings over the past two days were very productive with regard to the proposal of a Standards Oversight Committee and appreciated the extensive discussion and comments and looks forward to the next steps. Finally, Mr. Mosher reported that the committee will be posting a new reliability development plan in mid-August with a full webinar to be held at the end of August.

### **North American Transmission Forum**

Ms. Sue Ivey reported for the Transmission Forum. Ms. Ivey reported that the Memorandum of Understanding has been executed by NERC and the Transmission Forum thus allowing the shared information on critical infrastructure, as well the addition of new topics moving forward. Further, the Transmission Forum has identified three technical areas to work with the practices group: relay settings, general modeling, and critical asset identification. The Transmission Forum is also considering a new program dedicated to human performance as most large events can be traced to human performance problems. In conclusion, Ms. Ivey reported that the Transmission Forum now has 1,100 participants and their next meeting will be their annual meeting in September in Vancouver, Canada. The annual meeting is an open meeting, the Transmission Forum welcomes the attendance of Mr. Cauley, and any other attendees that would like to participate.

### **Electricity Sub-Sector Steering Council**

Chairman Gerry Cauley reported to the board a summary of the matters presented during the Member Representatives Committee and Board of Trustees' meetings.

**Board Committee Reports**

**Corporate Governance and Human Resources**

Chair Janice Case provided a summary report of the meeting of the CGHRC on July 28, 2010.

On motion of Janice Case, the board approved the following resolution:

RESOLVED, that on the recommendation of the Corporate Governance and Human Resources Committee, the board approves the new compensation model for independent trustees (**Exhibit O**) to take effect January 1, 2011, and the annual levels of compensation beginning January 1, 2011, as follows:

Level 1:	\$ 75,000
Level 2:	\$ 85,000
Level 3:	\$ 95,000
Level 4:	\$110,000

**Compliance**

Chairman Paul Barber provided a brief report, stating that the committee is meeting each month to review their progress as per the committee mandate and the committee is getting through the cases.

**Finance and Audit**

Chairman Fred Gorbet provided a summary report of the meeting of the Finance and Audit committee on August 4.

On motion of Fred Gorbet, the board adopted the following resolution:

RESOLVED, that the board accepts the NERC Second Quarter 2010 Statement of Activities.

On motion of Fred Gorbet, the board approved the following resolutions:

**5.1 Loans and Extensions of Credit.** Resolved that any following officer(s) of the Corporation holding the titles set forth below, as verified by an incumbency certificate executed by a Secretary or Assistant Secretary of the Corporation:

NAME	TITLE	ACTUAL SIGNATURE
Gerry Cauley	Chief Executive Officer	x _____
Michael Walker	Chief Financial Officer	x _____

are hereby authorized, at any time and from time to time, execute that certain Third Amendment to Loan Documents between the Bank and the Corporation and to take any other action requested, required or deemed advisable by PNC in order to effectuate the

foregoing resolution, all such other actions being hereby approved, ratified and confirmed.

**5.2 Revolving Credits.** Resolved, that in connection with the Loan Documents referenced and authorized in Section 5.1 above, which permit the Corporation to effect multiple advances or draws there under, any of the persons listed in Section 5.1 (or any other person designated in writing by any of the persons listed in Section 5.1) shall be authorized to request such advances or draws.

**5.3 Ratification.** Resolved, that all past acts of officers of the Corporation in borrowing or obtaining the foregoing credit from the Bank and in executing documents or otherwise entering into agreements and giving security on behalf of the Corporation herein referenced are hereby ratified and confirmed.

**5.4 Telephonic and Other Requests.** Resolved, that the Bank is authorized to take any action authorized hereunder based upon: (i) the telephonic or electronic request of any person purporting to be a person authorized to act hereunder, (ii) the signature of any person authorized to act hereunder that is delivered to the Bank personally or by facsimile transmission, or (iii) the telex originated by any of such persons, tested in accordance with such testing procedures as may be established between the Corporation and the Bank from time to time.

**5.5 General.** Resolved, that a certified copy of these Resolutions be delivered to the Bank and that they and the authority vested in the persons specified herein will remain in full force and effect until a certified copy of a resolution of the Corporation revoking or modifying these resolutions and such authority has been delivered to the Bank.

### **Technology**

Chairman Ken Peterson reported the committee met via conference call on July 27, 2010 and were joined by Rae McQuade and Sam Holeman. Pleased to announce that the TCIN project will be adopted by NAESB and separately funded which is a significant milestone in moving tools out from NERC and to other funded areas. Also, during the call, the committee heard an update from NERC staff on recent synchrophasor initiatives, including the June 2010 NASPI meeting, the progress of Grid Protection Alliance -- NERC's contractor -- toward installation of data concentrators; and, a possible funding opportunity with DOE to develop communications gateways for the rapid sharing of phasor data. And finally, the committee received a progress report on SAFNR (Situation Awareness for FERC, NERC, and the Regions) Phase II development, which is expected to deploy in June 2011. NERC staff intends for this tool to play a key role in its situation awareness program.

### **Nominating**

Chairman Tom Berry reported that the Nominating Committee met in closed session the day prior. The search for possible new independent trustees is an ongoing process and the 2011 Nomination Process has begun. Mr. Berry advised that the MRC Chair, Ed Tymofichuk and Vice Chair Bill Gallagher would be available following the meeting for comments on possible candidates.

### **Closing**

Chairman Anderson opened to the floor any additional questions or comments. In closing, Chairman Anderson stated he and the entire board fully believe in and is committed to the ERO model and look forward to the continued collaboration with FERC and the Canadian authorities. Mr. Anderson encouraged stakeholders to submit their input and comments as the board reads all written submissions and listens to all comments received in open session.

### **Adjournment**

There being no further business, Chairman Anderson terminated the meeting at 12:15 p.m.

Submitted by,



David N. Cook  
Corporate Secretary

## **Compliance and Certification Committee Membership Change**

### **Action Required**

Approve the nomination to the Compliance and Certification Committee (CCC) of **Ms. Silvia Parada Mitchell** to represent the Merchant Electricity Generator sector for a three-year term beginning December 1, 2010.

### **Summary and Background**

The CCC, a stakeholder Committee of NERC comprising 35 members representing various industry sectors, serves and reports directly to the NERC Board of Trustees. The CCC is responsible for engaging with, supporting, and advising the NERC Board and NERC Compliance staff regarding all facets of the NERC Compliance Monitoring and Enforcement Program, the NERC Organization Registration Program, and the NERC Organization Certification Program.

## **Future Meetings**

### **Action Required**

Approve November 2-3, 2011 (W–Th) in Atlanta, Georgia as a future meeting date and location.

### **Information**

The board has approved the following future meeting dates and locations:

- February 16-17, 2011 — Phoenix, Arizona (W–Th)
- May 10-11, 2011 — Arlington, Virginia (Tu-W)
- August 3-4, 2011— Vancouver, Canada (W–Th)

## **2009/2010 Post-Winter Reliability Assessment**

### **Action Required**

Approve for public release the *2009/2010 Post-Winter Reliability Assessment* (available at the following link: [http://www.nerc.com/files/PWRA\\_091510\\_rev1.pdf](http://www.nerc.com/files/PWRA_091510_rev1.pdf)) as endorsed for approval by the Planning and Operating Committees.

### **Background**

This first-of-a-kind reliability assessment focuses on a post-seasonal review rather than the traditional forward-looking assessment of forecasted conditions. The goal of this assessment is to review planned operating/mitigation strategy implementation, document new strategies developed during the season, document actual operational experiences, and share lessons learned through the 2009/2010 winter season in North America. Data collection and self-assessment narratives have been completed by the Regional Entities and Reliability Coordinators, which provided assessments of performance during the 2009/2010 winter season. The Reliability Assessment Subcommittee, under the direction of the Operating and Planning Committees, produced the assessment.

### **Lessons Learned**

- Short-term Operational Strategies to Manage Extreme Weather Conditions
  - Improvements needed for short-term forecasts
  - Processes needed to update system models throughout the day to reflect new forecasts
- Monitor Wind Power Output
  - Day-ahead wind forecasts critical to commit resources for ancillary services
  - Without proper forecasts and tools, system operators will be required to maintain additional upward and downward flexibility on an ongoing basis

### **Other Highlights**

- All Regions/Subregions/Reliability Coordinators met required operating reserve margin requirements to support and maintain reliability.
- Colder than expected temperatures in Northwest and Southeast (including Texas, Florida, and the southeastern portions of SERC) resulted in actual peak demands greater than 110-130 percent of the seasonal forecasts. Operational procedures and mitigation strategies were implemented successfully, ensuring reliability through the winter season.

The Lessons Learned and Highlights of the *2009/2010 Post-Winter Reliability Assessment* are being used in evaluating Regional Self-Assessments submitted to NERC as part of the *2010/2011 Winter Reliability Assessment*. This approach provides a continual feedback loop between NERC and the Regions to appraise what has been done to address challenges experienced in the prior winter and to enhance future reliability assessments.

## Compliance Performance Measure Recommendations Report

### Action Required

Approve the Compliance and Certification Committee’s (CCC) [Compliance Performance Measure Recommendations](#) report.

### Background

The CCC initiated the development of compliance performance measures through the formation of the Performance Measures Task Force (PMTF).<sup>1</sup> The objective is to provide a set of industry validated metrics providing various trends from NERC’s Compliance and Enforcement Program (CMEP). The PMTF has broadly engaged the Operating, Planning, and Critical Infrastructure Protection Committees and the Reliability Metrics Working Group (RMWG), soliciting their ideas and contributions. The task force also adopted the RMWG’s open metric development process that embraces continuous improvement and applies industry expertise and technical judgment. At its September 2010 meeting, the CCC endorsed the following eight performance measures developed by the PMTF and documented in the CCC’s Compliance Performance Measure Recommendations report.

The CCC also approved establishing the Performance Metrics Working Group<sup>2</sup> (PMWG) to continue the long term monitoring and refinement of the recommended performance measures, and to develop new measures as necessary.

Recommended Performance Measures	
<b>Self Disclosure</b>	<b>Compare self disclosed versus discovered violations</b>
<b>Timeliness of CVI/CIQ Resolutions</b>	<b>Average duration of CVI/CIQ and number of lessons learned issued</b>
<b>Mitigation Plan</b>	<b>Average duration for mitigation plan implementation</b>
<b>Violation Risk</b>	<b>Risk factor and severity level weighted average based on unmitigated violations</b>
<b>Feedback Timeliness and Effectiveness</b>	<b>Actionable lessons learned guidance from audits, operating experience, violations, and disturbances</b>
<b>Feedback to Standards</b>	<b>Direct input to standards development, including results-based standards initiative</b>
<b>Audit Results Timeliness</b>	<b>Average duration for no-violation audit report completion</b>
<b>Enforcement Results Timeliness</b>	<b>Average duration for audit reports with possible violations</b>

<sup>1</sup> The PMTF scope is available at <http://www.nerc.com/docs/compliance/pmtf/PMTF%20Scope%20-%20Final%20December%202009.pdf>.

<sup>2</sup> The PMWG scope is available at: [http://www.nerc.com/docs/compliance/pmwg/PMWG\\_Scope-Final\\_09-08-2010.pdf](http://www.nerc.com/docs/compliance/pmwg/PMWG_Scope-Final_09-08-2010.pdf).



## Reliability Standards

### Action Required

Approve reliability standards and plans as follows:

- a. *Reliability Standards Development Plan: 2011-2013* — **Approve**
- b. Report on CIP Standards Plan — **Review**
- c. IRO-006-5 and IRO-006-EAST-1 — Transmission Loading Relief — **Approve**
- d. PRC-006-1— Automatic Underfrequency Load Shedding and EOP-003-2 — Load Shedding Plans — **Approve**
- e. NPCC Regional Disturbance Monitoring Standard — **Approve**
- f. Available Transfer Capability Violation Risk Factors — **Approve**
- g. *Standard Processes Manual* — **Review**

### Information

NERC's Reliability Standards Program works through the Standards Committee to develop and maintain continent-wide reliability standards, utilizing NERC's [\*Standard Processes Manual\*](#). NERC also is responsible for the review of proposed regional entity standards. The program also has primary responsibility for managing NERC's relationship with the North American Energy Standards Board, which develops business practice standards and communications protocols for electric and gas wholesale and retail market participants. The Reliability Standards Program depends on the active involvement of industry subject matter experts to both recommend and develop reliability standards.

## **a. Reliability Standards Development Plan: 2011-2013**

### **Action Required**

Approve the *Reliability Standards Development Plan: 2011-2013* and direct staff to file the plan with the Federal Energy Regulatory Commission (FERC) and applicable governmental authorities in Canada.

### **Background**

NERC developed an initial plan in 2006 for standards development, and has since revised the plan annually. The plan serves as the management tool that guides, prioritizes, and coordinates revision or retirement of existing reliability standards and the development of new reliability standards for the following three years. The plan also serves as a communications tool for engaging stakeholders in standards development and coordinating standards development work with applicable governmental agencies in the United States and Canada. The plan further provides a basis for developing annual work plans and budgets for the standards program. The *Reliability Standards Development Plan: 2011-2013* is the fifth installment of the plan and achieves these objectives.

As part of the process for developing the 2011-2013 plan, NERC staff sought input on the need for and prioritization of new or revised standards from the other program areas within NERC, from NERC's technical committees and industry groups, and from those governmental authorities with responsibility for approving reliability standards in the United States and Canada.

On July 6, 2010 FERC held a Commissioner-led Technical Conference to address industry perspectives on issues pertaining to the development and enforcement of mandatory Reliability Standards for the bulk power system. The conference focused on the Electric Reliability Organization's (ERO) standards development process, communication and interactions between FERC, the ERO, and Regional Entities, and ERO and Regional Entity monitoring and enforcement. The need to establish priorities for NERC's standards development projects was a recurring theme during the technical conference. This *Reliability Standards Development Plan: 2011-2013* advances a concept for prioritization of standards development projects with the expectation that NERC staff will continue to coordinate with the NERC Standards Committee, applicable regulatory authorities, and industry participants in further advancing the prioritization process.

### **Significant Work Plan Revisions**

The *Reliability Standards Development Plan: 2011-2013* identifies a total of 36 continent-wide standards development projects. While the number of projects proposed in this plan is one less than the 37 projects listed in the 2010-2012 version of the plan, the composition of these projects has changed significantly since approval of the 2010-2012 plan:

- The following projects not identified in the 2010-2012 plan were initiated and completed since last year's plan was approved:
  - Project 2009-08 Nuclear Plant Interface Coordination
  - Project 2010-09 NUC Implementation Plans for CIP Version 2 and Version 3 Standards

- The following projects identified in the 2010-2012 plan were completed:
  - Project 2006-04 Backup Facilities
  - Project 2009-06 Facility Ratings
  - Project 2009-18 Withdraw Three Midwest ISO Waivers
- Project 2010-06 Results-based Reliability Standards identified in the 2010-2012 plan was transitioned into an initiative, responsibility transferred to the Standards Committee to use as appropriate in the 2011-2013 plan, and the project declared completed.
- Project 2007-05 Balancing Authority Controls and Project 2007-18 Reliability-based Control were merged into Project 2010-14 Balancing Authority Reliability-based Control, which is an addition to this plan.
- The following five projects initiated in 2010 were not anticipated when the 2010-2012 plan was drafted and are additions to the 2011-2013 plan:
  - 2010-08 Functional Model Glossary Revisions
  - 2010-10 FAC Order 729
  - 2010-11 TPL Table 1 Order
  - 2010-12 Order 693 Directives
  - 2010-13 Relay Loadability Order

The *Reliability Standards Development Plan: 2011-2013* also embraces and was drafted consistent with the plan for transitioning the set of NERC standards to results-based as proposed by the Ad Hoc Group for the Results-based Reliability Standards Initiative.

A link to the development history and files is included here for reference:  
<http://www.nerc.com/page.php?cid=2|247|290>

## **b. Report on CIP Standards Plan**

### **Action Required**

None

### **Background**

NERC staff remains committed to providing updated “bright-line” criteria by the end of 2010 that replace the current risk-based methodology for determining Critical Assets.

NERC, as authorized by the board, conducted an industry-wide mandatory data request and compared entities’ existing Critical Asset lists with lists that might be created using certain bright-line criteria in place of entity-specific risk-based methodologies. Using the results of the data request analysis, the cyber security standard drafting team was able to finalize the types of assets that should be classified as Critical Assets. In some instances, certain criteria that were specified in the data request were modified for the draft standard based on the analysis results. For example, the data request proposed using Contingency Reserve as the basis for including specified generation as Critical Assets. The data request showed that there was too much regional variation in the determination of Contingency Reserve for it to be considered as a “bright-line.” However, an analysis of the generation in North America showed that about a third of all generation is located on common plant sites of 1,500 MW or more. In addition, 1,500 MW proved to be a representative number for Contingency Reserve specified for Reserve Sharing Groups in North America. Based on this analysis, the team determined that 1,500 MW is an appropriate one plant site size to use for inclusion in the “bright-line” criteria.

On September 20, the team posted the [CIP Version 4](#) standards and associated implementation plans for a 45-day formal comment period. During this time, the ballot body is being assembled, and during the last 10 days of the comment period the ballot body will vote on the standards and implementation plans. CIP-002 was modified to replace the previous entity-specific risk based methodology with bright line criteria listed in its Attachment 1. Also, the exclusion for nuclear generation in the applicability section was removed based on FERC Order 706-B. CIP-003 to CIP-009 were modified with conforming changes only (version numbers were updated and the nuclear exclusion was removed).

The drafting team continues its work to further modify the CIP standards to respond to the FERC 706 directives. The team is considering approaches that would apply a minimum level of cyber security to all cyber assets that control bulk power system elements. These concepts have been presented to industry for informal comment. The next few months will require the team to spend the majority of its time on Version 4. Once this body of standards has been approved by industry, the team will then return its attention to responding to the full body of FERC directives. The current schedule shows the team posting this next version for formal comment and ballot in July of 2011, with an expected presentation to the board and FERC by the end of 2011.

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

[http://www.nerc.com/filez/standards/Project\\_2008-06\\_Cyber\\_Security\\_PhaseII\\_Standards.html](http://www.nerc.com/filez/standards/Project_2008-06_Cyber_Security_PhaseII_Standards.html)

### **c. IRO-006-5 and IRO-006-EAST-1 — Transmission Loading Relief**

#### **Action Required**

Request that the board adopt the following reliability standards and associated documents:

- IRO-006-5 - Reliability Coordination — Transmission Loading Relief
- IRO-006-EAST-1 — TLR Procedure for the Eastern Interconnection
- The new definition “Market Flow” for inclusion in the NERC Glossary
- The associated implementation plan, which includes:
  - Retirement of the term “Reallocation”
  - Retirement of IRO-006-4 and IRO-006-4 Attachment 1
  - Retirement of the regional differences within IRO-006-4
  - An effective date of the first day of the first calendar quarter after the date the standards are approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standards become effective on the first day of the first calendar quarter after the date the standards are approved by the NERC board.

And endorse the following guideline:

- Implementation Guideline for Reliability Coordinators: Eastern Interconnection TLR Levels

And approve the following:

- Violation Risk Factors and Violation Severity Levels for IRO-006-5
- Violation Risk Factors and Violation Severity Levels for IRO-006-EAST-1

#### **Background**

These new versions of the IRO-006 standard are incremental improvements over the existing IRO-006-4 and its Attachment 1. IRO-006-5 has been revised to accommodate practices in all Interconnections, and relevant reliability details from IRO-006-4 Attachment 1 have now been incorporated into IRO-006-EAST-1, as have the regional differences. Additionally, the standards have been revised to reduce ambiguity and clearly indicate which entities are required to perform what actions.

The proposed standards do not address any specific regulator directives, other than continuing to address those that were addressed in the previous version of the standard. Following review of both staff and the industry, staff believes that the Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) as proposed meet with FERC’s associated Guidelines.

The standards were processed through the normal standards development process, including four postings for formal comment. The standards did undergo minor modifications between ballots to address issues identified during the balloting period. The standards were approved by their ballot pool, with a 93.93 percent weighted segment approval and 88.26 percent quorum.

The standards were generally not controversial. However, some commenters suggested that the standard should not limit the actions that can be performed concurrently with TLR in response to an actual IROL violation, instead preferring an open option for any other action that would aid in mitigating the IROL. The Standards Drafting Team believes that the list of actions is sufficiently broad and inclusive to allow for all current solutions, and if a new method to mitigate congestion is developed other than the five actions listed, it should be included in the standard only following the industry review that would be required to modify the standard.

The non-binding poll of VRFs and VSLs was conducted during the initial ballot of the associated standards. The non-binding poll achieved a quorum with 80 percent of those who registered to participate providing an opinion and 86 percent of those who provided an opinion indicating support for the VRFs and VSLs that were proposed. NERC staff is not recommending any modifications to the VRFs and VSLs that were posted for the non-binding poll.

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

<http://www.nerc.com/filez/standards/Reliability-Coordination-Transmission-Loading-Relief.html>

#### **d. PRC-006-1 — Automatic Underfrequency Load Shedding and EOP-003-2 — Load Shedding Plans**

##### **Action Required**

Request that the board adopt the following reliability standards and implementation plan:

- PRC-006-1 – Automatic Underfrequency Load Shedding
- EOP-003-2 – Load Shedding Plans
- Implementation Plan which recommends retirement of the following standards when PRC-006-1 and EOP-003-2 become effective:
  - PRC-006-0 – Development and Documentation of Regional UFLS Programs
  - PRC-007-0 – Assuring Consistency with Regional UFLS Program Requirements
  - PRC-009-0 – UFLS Performance Following an Underfrequency Event
  - EOP-003-1– Load Shedding Plans

##### **Background**

Proposed standard, PRC-006-1, establishes design and documentation requirements for automatic Under-frequency Load Shedding (UFLS) programs to arrest declining frequency, assist recovery of frequency following under-frequency events, and provide last resort system preservation measures. The proposed standard improves reliability by: establishing common performance characteristics that all UFLS programs must meet; eliminating the “fill in the blank” aspects of the Version 0 standard; and, assigning responsibility for the development and assessment of UFLS programs to the Planning Coordinator.

In Order No. 693, FERC did not approve or remand the proposed reliability standard, PRC-006-0, as it is a “fill-in-the-blank” standard requiring the then Regional Reliability Organizations to develop the details of their UFLS programs. However, FERC did direct NERC to eliminate the use of the Regional Reliability Organization as a responsible entity and transition these expectations to the Regional Entity. The proposed reliability standard, PRC-006-1, addresses this directive in an equally efficient and effective manner by assigning responsibility to the Planning Coordinator for establishing UFLS programs, consistent with the expectations in the NERC Functional Model Version 5. PRC-007-0 and PRC-009-0 were both approved by FERC in Order 693 and the requirements in these standards map to the proposed reliability standard, PRC-006-1.

The proposed standard was developed according to the NERC Reliability Standards Development Procedure. The standard drafting team developed five drafts of the reliability standard and developed VRFs and VSLs that meet NERC’s and FERC’s guidelines. During these opportunities, some commenters expressed concern over the inclusion of Transmission Owners as a responsible entity versus only Distribution Providers. The drafting team identified that in some areas the Transmission Owners are responsible for implementing UFLS and the approach is consistent with the current standard. Another concern centered on the limits placed on the generators required to support model development to those identified in NERC’s Statement of Compliance Registry criteria, indicating that frequency perturbations are potentially

impactful to all generators. The team did not identify a meaningful way to incorporate criteria that reaches beyond the bulk power system-connected generators for purposes of modeling.

At its June 2010 meeting, the Standards Committee approved a deviation to the regular development process to allow an expedited third posting with concurrent ballot in June 2010, with a target for NERC Board action at its August, 2010 meeting. NERC began the initial ballot on July 8, 2010. The standard was unable to achieve the required two-thirds approval. The standard drafting team conducted second and third ballots in August and September 2010, respectively, and a recirculation ballot in October 2010. NERC also conducted a non-binding poll of the proposed VRFs and VSLs concurrent with the standard ballot. Results pending.

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

[http://www.nerc.com/filez/standards/Underfrequency\\_Load\\_Shedding.html](http://www.nerc.com/filez/standards/Underfrequency_Load_Shedding.html)



## **e. NPCC Regional Disturbance Monitoring Standard**

### **Action Required**

Request that the board adopt the regional reliability standard and associated defined terms applicable only within the NPCC region.

- Regional Reliability Standard PRC-002-NPCC-01 — Disturbance Monitoring
- Regional definition for the term, “Current Zero Time”
- Regional definition for the term, “Generating Plant”

### **Background**

The proposed standard, PRC-002-NPCC-01 Disturbance Monitoring, mandated by NERC to be developed to support retirement of a continent-wide fill-in-the-blank standard, is more stringent than continent-wide reliability standards PRC-002-1 — Define Regional Disturbance Monitoring and Reporting Requirements, and PRC-018-1 — Disturbance Monitoring Equipment Installation and Data Reporting. The final report on the August 14, 2003 Blackout cited an industry-wide deficiency in time-synchronized disturbance recording devices (disturbance monitoring) which hampered the investigation of the event. This standard, and the existing NPCC Disturbance Monitoring Regional Criteria from which the standard was developed, addressed that inadequacy in the NPCC Region. There is a wide diversity of loads and load densities in the NPCC footprint, and the standard’s more stringent requirements address the need to capture those characteristics to ensure effective disturbance monitoring with consideration given to critical load centers (e.g., New York City and Boston). The proposed standards do not address any specific regulatory directives, other than continuing to address those that were addressed in the previous version of the standard.

NPCC, a Regional Entity not organized on an interconnection-wide basis, submitted a request to approve the regional reliability standard, PRC-002-NPCC-1 — Disturbance Monitoring on May 14, 2010. The basis of their request is that the proposed regional reliability standard is more stringent than the NERC continent-wide standard (meeting FERC criteria for approval of a Regional Reliability Standard according to Order 672). NERC posted the regional reliability standard according to the NERC Rules of Procedure for a 45-day public comment period from October 1, 2009 through November 16, 2009. This comment period was conducted concurrent with similar steps in the regional entity’s reliability standards development process as permitted in the NERC Rules of Procedure Section 312.4 Procedure for Developing Non-Interconnection-Wide Regional Reliability Standards. NERC conducted a second abbreviated 15-day public comment period from January 19, 2010 through February 3, 2010.

The standard was processed through the FERC-approved NPCC Regional Standards Development Procedure. The standard development included three postings for formal comment. The standards did undergo modifications between ballots to address issues identified during the balloting period. The standard achieved an 84.10 percent approval and quorum was achieved.

During the development of the standard the industry provided substantial feedback to the drafting team related to location of the Disturbance Monitoring Equipment. The Standard Drafting Team adequately addressed and revised the installation thresholds based on industry feedback. Minority comments indicated that the Reliability Coordinator is not the appropriate entity to establish the Dynamic Disturbance Recording locations because they are entities that

operate in the near to real-time horizon. The Standard Drafting Team asserted that the Reliability Coordinator is the appropriate entity to fulfill this role. As stated above, the standard was developed from existing NPCC regional criteria, which all NPCC Full Member organizations are presently following. This standard will expand the applicability of the requirements developed from the criteria beyond only Full NPCC Members to all applicable registered entities within the NPCC Region.

Following review of both NERC staff and the industry, NERC staff believes that the VRFs and VSLs as proposed meet with FERC's associated Guidelines. NERC recommends that NPCC consider NERC's additional comments on the standard submitted with the NERC evaluation of the standard during a subsequent revision of the regional standard. In addition, NERC's Event Analysis Working Group has reviewed the standard and finds it technically acceptable.

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

[http://www.nerc.com/filez/regional\\_standards/regional\\_reliability\\_standards\\_under\\_development.html](http://www.nerc.com/filez/regional_standards/regional_reliability_standards_under_development.html)

## **f. Available Transfer Capability Violation Risk Factors**

### **Action Required**

Request that the board adopt staff's proposed VRFs for the following standards:

- MOD-001-1 Available Transmission System Capability
- MOD-004-1 Capacity Benefit Margin
- MOD-008-1 Transmission Reliability Margin Calculation Methodology
- MOD-028-1 Area Interchange Methodology
- MOD-029-1 Rated System Path Methodology
- MOD-030-2 Flowgate Methodology

### **Background**

The VRFs and VSLs for the Available Transfer Capability (ATC)-related MOD standards were not filed with FERC when the standards were filed. At the time these standards were brought to the board, staff had identified several VRFs that seemed to be inconsistent with the VRF definitions contained within NERC's Rules of Procedure. In response, the board directed that additional work be done to determine whether or not the VRFs should be modified. Staff reviewed the VRFs and proposed modifications to several VRFs as identified in its [ATC VRF Analysis Report](#). The Standards Committee directed that NERC staff's proposed VRFs be posted for industry comment, that NERC staff and the members of the ATC Drafting Team develop responses to all comments received, and that any appropriate changes be made to the proposed VRFs.

This work was completed in April of 2009. However, given that the Standards Committee's Process Subcommittee was considering modifications to the VRF definitions, and given that FERC granted NERC additional time to ensure the VRFs and VSLs in the standards aligned with all appropriate FERC guidelines, the report back to the board was deferred.

The additional time granted by FERC to resolve this issue is drawing to a close. NERC is obligated to submit a compliance filing to FERC on or before December 1, 2010 that provides VRFs and VSLs for the ATC-related MOD standards. A review of the balloted and approved VSLs has determined that they all appear to align with the FERC guidelines. However, the balloted and approved VRFs still do not conform to the FERC guidelines or the VRF definitions contained in the Rules of Procedure. Having completed the actions directed by the board and the Standards Committee, NERC proposes to the board to approve raising 40 VRFs from Lower to Medium as described in the report "Recommendation to the Board of Trustees Regarding Violation Risk Factor Assignments for Six Board-approved Available Transfer Capability (ATC) Standards." Submitting these modified VRFs will allow NERC to meet its compliance filing obligation, as well as be consistent with FERC guidelines and NERC's VRF definitions.

Stakeholders and members of the ATC SDT do not agree with this recommendation, stating that it is unlikely that violations of the standards would result in a direct effect on the bulk power system. NERC's Standards Committee also shares this concern. While the Standards Committee agrees that NERC has met its responsibilities as assigned by the board, the Standards Committee's members also believe that the risk associated with the 40 elevated ATC VRFs is not equivalent to that of other Reliability Standards requirements that have been assigned

Medium VRFs. The Standards Committee believes this disagreement is being caused by the current VRF criteria, which limits low VRFs to only requirements that are administrative in nature. The Standards Committee believes that while the requirements associated with the 40 elevated VRFs may not be administrative in nature, they also do not have an associated risk that rises to the level of Medium.

NERC staff believes that given the current VRF definitions, if a violation of a requirement can lead to a direct effect on the bulk power system, no matter how unlikely, the requirement must be assigned a VRF of “Medium” or higher. While we concur with the Standards Committee that the risk associated with the 40 elevated ATC VRFs is not equivalent to that of other Reliability Standards requirements that have been assigned Medium VRFs, we do not believe that the associated requirements meet the criteria for Lower VRFs.

A link to the project history and files is included here for reference:  
<http://www.nerc.com/filez/standards/MOD-V0-Revision.html>

## **g. Standard Processes Manual**

### **Action Required**

None, however action is expected for the next board meeting November 19, 2010.

### **Modifications to Standard Processes Manual**

On June 10, 2010, NERC filed a petition requesting FERC to approve the new Standard Processes Manual that would, upon approval, replace the Reliability Standards Development Procedure Version 7 in its entirety. FERC issued an Order on September 3, 2010 approving the Standard Processes Manual, and directed that NERC address one modification in the Manual within 90 days of the Order.

### **Background**

In Order No. 693, FERC stated that the essential element of a Reliability Standard is its Requirements and that compliance with a standard will be determined by whether an entity complied with the Requirements. In its September 3 Order approving the Standard Processes Manual, FERC noted that NERC's Standard Processes Manual identifies elements beyond the Requirements that are proposed to be enforceable such as the title, number, purpose, effective dates, and measures. FERC expressed concern with the identification of these elements, noting that additional elements beyond the Requirements that are designated as enforceable could create confusion, uncertainty, and may go beyond FERC's direction in Order No. 693.

Therefore, FERC directed NERC to submit a compliance filing within 90 days (by December 1, 2010), addressing FERC's concerns with the "Elements of a Reliability Standard" section of the Standard Processes Manual. FERC noted that NERC may either revise the "Elements of a Reliability Standard" section or may remove the designation of particular elements of a Reliability Standard as enforceable if these designations are determined to be unnecessary.

NERC has made minor modifications to the Standard Processes Manual that are responsive to FERC's September 3 Order. In particular, the section of the Manual that FERC expressed concern with has been rephrased, and the headings and sequence of the items that were listed as elements of a Reliability Standard have been rearranged.

The revised Standard Processes Manual is currently posted for a shortened comment period with a concurrent ballot from October 18 to November 2 (21-day comment period with the initial ballot taking place during the last 10 days). A recirculation ballot will take place from November 9 until November 12. Upon the conclusion of the ballot and recirculation ballot periods, NERC staff will present the revised Standard Processes Manual to the board for approval during its November 19 conference call.

## Interpretations of Reliability Standards

### Action Required

Approve interpretations of Reliability Standards, as follows:

- a. Interpretation of EOP-001-0 — Emergency Operations Planning, Requirement R1 requested by the Regional Entity Compliance Managers — **Approve**
- b. Interpretation of EOP-001-1 and EOP-001-2 – Emergency Operations Planning, Requirement R2.2 requested by the Florida Municipal Power Pool — **Approve**
- c. Interpretation of TOP-002-2a – Normal Operations Planning, Requirement R10 requested by the Florida Municipal Power Pool — **Approve**

### Information

The three interpretations presented for approval underwent initial balloting under the process outlined in the Reliability Standard Development Procedure, and underwent recirculation balloting under the process outlined in the [\*Standard Processes Manual\*](#).

Under the *Reliability Standards Development Procedure* the threshold for accepting a request for an interpretation allowed requests for interpretation on any aspect of a standard. Under that process, interpretations were drafted and posted for a 30-day pre-ballot review period, with a ballot pool formed during that 30-day period. The process did not include any formal comment period; if a drafting team wanted to make a modification to an interpretation based on comments received with a ballot, the team was required to post the revised interpretation for a new 30-day review period, followed by another ballot.

Of the three interpretations provided for approval, none posted for their initial ballot was accepted by stakeholders without the need for revision. Two of the three interpretations were posted for multiple ballots, and two of the interpretations had minor wording changes for improved clarity between the initial and recirculation ballots.

## **a. Interpretation of EOP-001-0 — Emergency Operations Planning, Requirement R1 Requested by the Regional Entity Compliance Managers**

### **Action Required**

Request that the board adopt the interpretation of EOP-001-0 — Emergency Operations Planning, Requirement R1 Requested by the Regional Entity Compliance Managers.

### **Background**

The Regional Entity Compliance Managers group requested an Interpretation of EOP-001-0 — Emergency Operations Planning, Requirement R1. Under Requirement R1, the Balancing Authority must have operating agreements with adjacent Balancing Authorities that contain provisions for emergency assistance, including emergency assistance from remote Balancing Authorities. The request asked for clarification on specific terminology and the applicability of Reserve Sharing Group Agreements.

The interpretation provides the following clarifications:

*What is the definition of emergency assistance in the context of this standard? What scope and time horizons, if any, are considered necessary in this definition?*

- In the context of this standard, emergency assistance is emergency energy. Emergency energy would normally be arranged for during the current operating day. The agreement should describe the conditions under which the emergency energy will be delivered to the responsible Balancing Authority.

*What was intended by using the adjective “adjacent” in Requirement 1? Does “adjacent Balancing Authorities” mean “All” or something else? Is there qualifying criteria to determine if a very small adjacent Balancing Authority area has enough capacity to offer emergency assistance?*

- The intent is that all Balancing Authorities, interconnected by AC ties or DC (asynchronous) ties within the same Interconnection, have emergency energy assistance agreements with at least one Adjacent Balancing Authority and have sufficient emergency energy assistance agreements to mitigate reasonably anticipated energy emergencies. However, the standard does not require emergency energy assistance agreements with all Adjacent Balancing Authorities, nor does it preclude having an emergency assistance agreement across Interconnections.

*What is the definition of the word “remote” as stated in the last phrase of Requirement 1? Does remote mean every Balancing Authority whose area does not physically touch the Balancing Authority attempting to comply with this Requirement?*

- A remote Balancing Authority is a Balancing Authority other than an Adjacent Balancing Authority. A Balancing Authority is not required to have arrangements in place to obtain emergency energy assistance with any remote Balancing Authorities. A Balancing Authority’s agreement(s) with Adjacent Balancing Authorities does (do) not preclude the Adjacent Balancing Authority from purchasing emergency energy from remote Balancing Authorities.

*Would a Balancing Authority that participates in a Reserve Sharing Group Agreement, which meets the requirements of Reliability Standard BAL-002-0, Requirement 2, have to establish additional operating agreements to achieve compliance with Reliability Standard EOP-001-0, Requirement 1?*

- A Reserve Sharing Group agreement that contains provisions for emergency assistance may be used to meet Requirement R1 of EOP-001-0.

The interpretation was developed, balloted, revised, and posted for another review period three times before the interpretation achieved consensus without the need for additional changes.

The third “initial” ballot achieved a quorum and a weighted segment approval of 98.64 percent. The recirculation ballot was conducted from October 4-14 and achieved a weighted segment approval of 99.14 percent.

#### **Future Action**

A drafting team (Project 2009-03) has been formed and is working on revisions to EOP-001-0 that should provide greater clarity to Requirement R1.

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

[http://www.nerc.com/filez/standards/EOP-001-0\\_Interpretation\\_RECM.html](http://www.nerc.com/filez/standards/EOP-001-0_Interpretation_RECM.html)



## **b. Interpretation of EOP-001-1 and EOP-001-2 — Emergency Operations Planning, Requirement R2.2 Requested by the Florida Municipal Power Pool**

### **Action Required**

Request that the board adopt the interpretation of EOP-001-1 and EOP-001-2 — Emergency Operations Planning, Requirement R2.2 requested by the Florida Municipal Power Pool (FMPP). Note: EOP-001-1 and EOP-001-2 are both board approved but not FERC approved. R2.2 is the same in both EOP-001-1 and EOP-001-2 and would be identical to R3.2 in EOP-001-0.

### **Background**

The FMPP requested an interpretation of EOP-001-1 and EOP-001-2 — Emergency Operations Planning, Requirement R2.2. Under Requirement R2.2, the Balancing Authority must develop, maintain and implement a set of plans to mitigate operating emergencies on the transmission system.

FMPP asked for clarity on the emergency plans the Balancing Authority must have and asked specifically if the Balancing Authority needs to develop a plan to maintain a load-interchange-generation balance during operating emergencies and follow the directives of the Transmission Operator.

The interpretation provides the following clarifications:

*Does the Balancing Authority need to develop a plan to maintain a load-interchange-generation balance during operating emergencies and follow the directives of the Transmission Operator?*

- The answer to both parts of the question is yes. The Balancing Authority is required by the standard to develop, maintain, and implement a plan. The plan must consider the relationships and coordination with the Transmission Operator for actions directly taken by the Balancing Authority. The Balancing Authority must take actions either as directed by the Transmission Operator or the Reliability Coordinator (reference TOP-001-1, Requirement R3), or as previously agreed to with the Transmission Operator or the Reliability Coordinator to mitigate transmission emergencies. As stated in Requirement R4, the emergency plan shall include the applicable elements in “Attachment 1 –EOP-001-0.”

The initial ballot achieved a quorum and a weighted segment approval of 91.79 percent. The recirculation ballot was conducted from October 5-15 and achieved a weighted segment approval of 94.78 percent.

### **Future Action**

A drafting team (Project 2009-03) has been formed and is working on revisions to EOP-001-1 and EOP-001-2 that should provide greater clarity to the responsibility of the Balancing Authority with respect to emergency plans.

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

[http://www.nerc.com/filez/standards/Project2009-28\\_EOP-001-1-2\\_R2.2\\_FMPP.html](http://www.nerc.com/filez/standards/Project2009-28_EOP-001-1-2_R2.2_FMPP.html)

### **c. Interpretation of TOP-002-2a — Normal Operations Planning, Requirement R10 Requested by the Florida Municipal Power Pool**

#### **Action Required**

Request that the board adopt the interpretation of TOP-002-2a — Normal Operations Planning, Requirement R10 requested by the Florida Municipal Power Pool (FMPP).

#### **Background**

The FMPP requested an interpretation of TOP-002-2a — Normal Operations Planning, Requirement R10. Under Requirement R10, both the Transmission Operator and the Balancing Authority must plan to meet all System Operating Limits (SOLs) and Interconnection Reliability Operating Limits (IROLs).

FMPP asked for clarity with respect to the plans the Balancing Authority must have and asked if the Balancing Authority must plan to maintain load-interchange-generation balance under the direction of the Transmission Operators to meet SOLs and IROLs.

*In Requirement 10 is the requirement of the BA to plan to maintain load-interchange-generation balance under the direction of the TOPs meeting all SOLs and IROLs?*

- Yes. As stated in the NERC *Glossary of Terms used in Reliability Standards*, the Balancing Authority is responsible for integrating resource plans ahead of time, maintaining load-interchange-generation balance within a Balancing Authority Area, and supporting Interconnection frequency in real time. The Balancing Authority does not possess the Bulk Electric System information necessary to manage transmission flows (MW, MVAR or Ampere) or voltage. Therefore, the Balancing Authority must follow the directions of the Transmission Operator to meet all SOLs and IROLs.

The initial ballot achieved a quorum and a weighted segment approval of 90.82 percent. The recirculation ballot was conducted from October 6-16 and achieved a weighted segment approval of 93.44 percent.

#### **Future Action**

A drafting team (Project 2007-03 – Real-time Operations) has already proposed revisions to TOP-002 that provide greater clarity to the distinction between tasks performed by the Transmission Operator and the tasks performed by the Balancing Authority.

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

[http://www.nerc.com/filez/standards/Project2009-27\\_TOP-002-2a\\_R10\\_RFI\\_FMPP.html](http://www.nerc.com/filez/standards/Project2009-27_TOP-002-2a_R10_RFI_FMPP.html)

## **Modifications to the System Operator Certification Program Manual**

### **Action Required**

Approve

### **Background**

Maintaining the reliability of the bulk power system through implementation of the reliability standards requires skilled, trained, and qualified system operators. The System Operator Certification Program provides the mechanism to ensure system operators are afforded the opportunity to obtain the essential knowledge and skills to operate the bulk power system. The program provides the framework for the examinations used to obtain initial certification in one of four NERC specialty credentials: Transmission Operator; Balancing and Interchange Operator; Balancing, Interchange, and Transmission Operator; and Reliability Operator. A system operator credential is a personal credential issued to a person for successfully passing a NERC system operator certification exam. Each specialty credential is designed to focus on functional areas of system operations. Each credential is maintained by accumulating a specified number of continuing education hours within a specified period of time. The NERC Personnel Certification Governance Committee (PCGC) is the governing body that establishes the policies, sets fees, and monitors the performance of the System Operator Certification Program. As program administrator, NERC maintains databases, records, and applications, collects fees, maintains contracts with vendors, and provides reports on system operator certification related activities. The PCGC is responsible for ensuring the program is financially sound. The *System Operator Certification Program Manual*, last approved in May 2006, outlines the program rules and procedures for certification examinations and credential maintenance.

The changes proposed to the program manual, included as **Attachment 1**, reflect the compilation of various suggestions for added clarity offered by trainers and Continuing Education providers, and specifically removes language concerning the transition plan into the three-year credential whose period has passed. These changes do not change the program rules that are currently in place.

### **Changes in System Operator Certification Program Manual**

1. Executive Summary – clarified the intent of having four specialty credentials so that system operators understand that the credentials are not intended to be hierarchical in nature. The credentials were designed based on job functionalities. This does not change the fact that a system operator can have another credential and still work at the same position ( i.e., a Transmission operator can still perform transmission tasks holding a Balancing, Interchange, and Transmission credential, or a Reliability Operator credential).
2. Executive Summary – removed the statement about recertifying by retaking an examination. Since the transition into the three-year credential is completed, there should be no statements that imply another method to maintaining a credential other than through continuing education.
3. Section II – Credential Maintenance – Made the term “tabletop” consistent; there were times tabletop was hyphenated.
4. Section II – Credential Maintenance – Added the word Renewal to the Certificate header.
5. Section II – Credential Maintenance – Provided examples of credential expiration dates.
6. Section II – Credential Maintenance – Changed Carry Over to Rollover hours and added clarification that rollover hours apply when a credential type is changed from one type to another (old downgrade).
7. Section II – Credential Maintenance – Changing Certification Levels – changed wording from transition to change, lower to different. Added clarification to say that system operator must meet the requirements of the new credential before changing from one type of credential to another type (old downgrade). As in the executive summary our intent is to stay away from the appearance that credentials are hierarchical by nature.
8. Section II – Credential Maintenance – Procedure for applying for credential maintenance – added statement to clarify that continuing education (CE) hours earned can be applied to multiple credentials if an operator has two or more different credentials. This has always been the rule; we just did not spell it out clearly in the manual.
9. Section II – Credential Maintenance – Procedure for applying for credential maintenance – added clarification that the Transmission Operator and the Balancing and Interchange Operator credentials cannot be changed to another type without taking and passing the exam for the other type of credential. Since these two credentials require only 140 CE hours to maintain they cannot be changed to another credential type by earning more CE hours.

10. Section II – Credential Maintenance – Procedure for applying for credential maintenance – changed the word downgrade to change.
11. Section II – Credential Maintenance – Procedure for applying for credential maintenance – Removed the paragraph on the Transition Plan due to the fact that the transition period had been completed; the paragraph is no longer required.
12. Section II – Program Rules – moved the three bullet items under Learning Activity Credit from another section. No change to wording. These three bullets fit better in this section. The three bulleted items were not bulleted in the existing manual

Appendix A – Reorganized and added some additional topics to the main categories to provide better guidance to CE Providers.

# NERC

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Agenda Item 13  
Attachment 2  
Board of Trustees Meeting  
November 4, 2010

## System Operator Certification Program Manual

Approved by the NERC Board of Trustees  
May 2006

North American Electric Reliability Corporation  
Updated: [October](#) 2010

Deleted: August

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## Program Manual Changes

No.	Date	Section	Page	Description	Version
1	05/2005	All	All	Initial white paper expanded SOC Program to include CE hours	0
2	02/2006	All	All	Program Manual	1
3	06/2006	I and II	4, 17	Fees	1.1
4	06/2006	All	All	CEH to CE hours	1.1
5	08/2006	III	16	Training Providers retaining documentation	1
6	03/2007	I	9	Remove certificate numbering convention	1.2
7	03/2007	IV	18	General housekeeping and added a 45 day limit to Step 3 of DRP. Added comment about waiting for official score when available before taking action on a dispute filed with the PCGC chairman.	1.2
8	08/2007	All	All	Updated instructions to include instructions for the new database	1.3
9	10/2007	II	15	Category defined for Carry-over CE hours.	1.3
10	11/2009	All	All	Fee Increase for exams & Credential Maintenance	1.3
11	8/2011	Executive Summary, II and III	4, 16-23, 24, and 25	Review of Content for consistency with current requirements	<a href="#">1.4</a>

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## Executive Summary

Maintaining the reliability of the bulk electric system through implementation of the reliability standards requires skilled, trained and qualified system operators. The System Operator Certification Program provides the mechanism to ensure system operators are afforded the opportunity to obtain the essential knowledge and skills to operate the bulk electric system.

The System Operator Certification Program provides the framework for the examinations used to obtain initial certification in one of four NERC specialty credentials: Transmission Operator, Balancing and Interchange Operator, Balancing, Interchange and Transmission Operator, and Reliability Operator. A system operator credential is a personal credential issued to a person for successfully passing a NERC system operator certification exam. [Each specialty credential was designed to focus on functional areas of system operations. For instance the Transmission Operator credential was designed specifically for individuals whose job functions are in transmission operations.](#) Each credential is maintained by accumulating a specified number of continuing education hours within a specified period of time.

The NERC Personnel Certification Governance Committee (PCGC) is the governing body that establishes the policies, sets fees, and monitors the performance of the System Operator Certification Program. As program administrator, NERC maintains databases, records, and applications, collects fees, maintains contracts with vendors, and provides reports on system operator certification related activities. The PCGC is responsible for ensuring the program is financially sound.

**Comment [KS1]:** clarified the intent of having four specialty credentials so that system operators understand that the credentials are not intended to be hierarchical in nature. The credentials were designed based on job functionalities. This does not change the fact that a system operator can have another credential and still work at the same position. i.e. A Transmission operator can still perform transmission tasks holding an Balancing, Interchange, and Transmission credential, or a Reliability Operator credential

## Section I — Certification Examinations

### Overview

The System Operator Certification Program awards certification credentials to those individuals who demonstrate that they have attained sufficient knowledge relating to NERC reliability standards, as well as the basic principles of bulk power system operations by passing one of four specialty examinations. A certificate, valid for three years, is issued to a candidate who successfully completes an examination.

The members of the Examination Working Group (EWG) represent each of the specialty areas tested in the examinations. The EWG develops the examinations under the guidance of a psychometric consultant. The examinations are based on content outlines that were developed through a job analysis. Prior to being used as a 'scored' question, each question is placed in a 'pilot' (not scored) position on the examination for one full examination cycle (eighteen months). At the end of the analysis cycle the performance of the piloted question is reviewed. Only questions that meet minimum performance criteria can be placed in a scored position on an exam. The performance of every question used in a scored position is continually tracked and, if a question falls below the minimum performance criteria, it is removed. The direct involvement of system operators, supervisors, and trainers in the examination development process remains a primary requirement for future NERC system operator certification examinations.

### Earning a Credential

#### Examinations

There are four specialty examinations: Reliability Operator, Balancing and Interchange Operator, Transmission Operator, and Balancing, Interchange, and Transmission Operator. Each of the examinations has its own content outline that can be accessed from the Program's Web page. The specifics of the individual examinations can be obtained from the table below. The individual content outlines for each of the specialty examinations can be obtained by clicking on the name of the exam.

Examination Title	Total Questions	Scored Questions	Passing Score (# of answers correct)	Passing Score (% of answers correct)
<a href="#">Reliability Operator Certification Examination</a>	150	125	96	74.4
<a href="#">Balancing, Interchange, and Transmission Operator Certification Examination</a>	150	125	96	74.4
<a href="#">Transmission Operator Certification Examination</a>	125	100	77	76
<a href="#">Balancing and Interchange Operator Certification Examination</a>	125	100	77	76

## Applying for Certification Examinations

If you are not a registered user of the System Operator Certification database, you must first establish an account. If you already have a user account, sign-in to your account to access the on-line examination application.

- a. If you have forgotten your user name or password, contact the NERC office at phone number 609-452-8060 (Mon–Fri, 8:00 a.m.– 4:00 p.m. Eastern).

To access the registration and login screen:

1. Go to the System Operator Certification Web site (<http://www.nerc.com/page.php?cid=684>)
2. Click on the link to the registration and login screen
3. **Pop-ups must be allowed** on your computer for this site to work
  - a. If pop-ups are not allowed, check with your IT department
4. If you are a new user:
  - a. Click <operator registration> bar
  - b. Fill in form, starred fields are required fields
    - i. First name and last name must exactly match the first name and last name on your government issued picture ID (all correspondence will appear as you type it)
    - ii. User ID must be at least 5 characters long
    - iii. Passwords must be at least 6 characters and contain at least one alpha and one numeric character
  - c. Go to #6
5. If you are an existing user
  - a. Enter User ID and password
6. On the Welcome page, click on <Authorization To Test> button
  - a. Select an Exam (either NERC or PJM)
  - b. If paying by credit card, fill in the billing name and address of the credit card you are using
  - c. If paying by check or money order, click in the <Pay by check> box and print the page. Mail the check and the printed page to NERC at:

North American Electric Reliability Corporation  
Attn: System Operator Certification Program  
116-390 Village Boulevard  
Princeton, NJ 08540-5721

Applications are accepted year round (24x7x365). If you entered a valid e-mail address, after the application is approved, an e-mail will be sent to that address with your Authorization-to-Test (ATT) number. Processing by the administrator can take up to 72 hours. If you did not enter a

valid e-mail address, we will mail your Authorization-to-Test number to the address in your account. Please allow two weeks for us to mail your authorization number and receipt.

An application is considered complete only when all required information is provided and fees are received.

**Eligibility Period**

An eligibility to take an examination is valid for one year from the date the ATT number is issued and can be used only once. Candidates are encouraged to schedule an appointment to sit for the examination promptly. If a candidate fails to schedule and sit for the examination within the one-year eligibility period, the candidate shall forfeit all payments made to NERC. Candidates who fail to take the examination within the one-year eligibility must submit a new application and pay the full fee to be considered for eligibility again.

**Fees**

Fee Schedule	
Application to test	\$700
Application to retest	\$700
Application to withdraw	\$100
Bad check/credit	\$25

\*\*All funds shall be payable in U.S. dollars.

**Before scheduling an examination, please do the following:**

- Review all parts of this Program Manual.
- Complete and submit the application to NERC, along with the appropriate fee.
- Receive an ATT number from NERC declaring that you are eligible to take the examination. The message will also provide instructions on how you may arrange the location, date, and time of your examination. The ATT number will be needed when you contact Prometric to schedule your test appointment.

**Scheduling an Examination**

NERC will send you a message with your ATT number and instructions about the identification items to bring with you on the day of the examination. To select your examination location, date, and time go to the Prometric Web site at <http://secure3.prometric.com/Welcome.aspx>. All attempts should be made to schedule your examination as soon as possible because testing center appointments are in high demand by other professions. Waiting to schedule your appointment may significantly limit the locations, dates, and times available. Examinations may be administered on any Monday through Saturday. Examinations may be taken on any day that accommodates your schedule and where and when examination space is available.

During the scheduling process you will be required to confirm your ATT number and your first and last name. You will be advised of available testing locations, dates, and times.

*Note: When you schedule your test date, you will receive a **confirmation number** from Prometric. Please retain this number, as it will be useful should you have to use Prometric’s automated cancellation system or if there is a conflict with the test center appointment. Prometric will not mail you a confirmation notice.*

**Examination Content Outline**

The computer-based examination consists of objective, multiple-choice questions. The questions are based on the published [Content Outline](#) for each of the NERC system operator certification examinations.

**Day of the Examination**

**Time at Testing Center** — Plan to arrive at the testing center at least thirty minutes early to sign in. You should allocate at least four hours to accommodate the total time you might be at the testing center. This includes:

Examination Time Allocation	
Examination Stages	Time Allocation
Administration & Review of Candidate Identification	30 minutes
Computer-Based Tutorial	15 minutes
Examination	2 hours & 45 minutes
Post-Examination Survey	15 minutes
<b>Total Time to be Allocated</b>	<b>3 hours &amp; 45 minutes</b>

**Computer Familiarization** — A fifteen-minute tutorial on operating instructions for the computer-based examination will be provided before the start of each examination. The tutorial is self-explanatory, and no prior computer knowledge is needed. You may bypass this feature if you wish (not recommended).

Computer-based testing allows you to skip questions, mark, and return to them at a later time. During the examination, you may change your answer to any question. A clock is on the screen at all times indicating the time remaining. Before exiting the examination, the computer will indicate any question(s) you have marked for review or those that remain unanswered.

**Post-Examination Survey** — At the completion of the examination, you will be invited to complete a brief questionnaire on your reactions to the examination experience and the quality of the testing center staff and services. *This is also your opportunity to comment on the content of the examination and to challenge any particular examination questions or answers.*

**Comments** — Comments on the examination process or questions will be collected in the post-examination survey. All comments will be forwarded to NERC.

### Testing Center Requirements

**Required Methods of Identification** — You will be required to show **two forms** of identification before being admitted to the examination. You will be required to show at least one primary form of identification and either another primary or a secondary form of identification.

- Primary identification — Primary identification is a government-issued form of identification and must have **both** your picture **and** your signature on it. Some examples of primary identification are: a driver's license (if it has both your picture and your signature), a passport, a temporary visa, or a military ID.
- Secondary identification — Secondary identification must have **either** your picture **or** your signature **or** both. Acceptable forms of secondary ID are: a second primary identification as above, or an employment ID, or a credit card or debit card.

*Identification(s) that have been altered or damaged will not be accepted at the Prometric Test Center. If there is any discrepancy between the name on the identification presented to the test center staff and the NERC registration, the candidate will not be admitted to test and will be marked as a no-show. All no-shows forfeit all funds paid – no refunds are granted to no-shows.*

### Testing Center Regulations

- Candidates who arrive late for the examination might not be seated for the examination, depending on the criteria established by that testing center. Late arrivals that are not permitted to take the examination will be considered a no-show and must reapply and pay the full test fee to take the examination.
- No reference materials, calculators, cell phones, or recording equipment may be taken into the examination. Candidates will be provided a keyed locker to store personal items while taking the examination.
- No test materials, documents, notes, or scratch paper of any sort may be taken from the examination.
- Visitors are not permitted during the examination.
- Testing center staff is instructed to answer questions about testing procedures only. They cannot respond to inquiries regarding the examination's content.
- During the examination, candidates may use the rest rooms for a biological break; however, the examination clock will continue running during such times.
- Candidates may not leave the testing center until they have finished the examination.
- Smoking is not permitted in any testing center.
- Any candidate giving or receiving assistance, or making a disturbance, will be required to turn in their examination materials, exit the examination room, and leave the testing center. Your test will be scored as is whether you have completed it or not. The Disciplinary Action Procedure will be initiated upon notification to NERC that such activity had occurred.
- Any instances of cheating, or attempts to impersonate another candidate, will be dealt with through the Disciplinary Action Procedure.

### **Cancellations and No-shows**

You may cancel and reschedule an examination appointment either by calling Prometric at the toll free number listed in your ATT letter or through their Web site (<http://secureg3.prometric.com/Welcome.aspx>). Your request to cancel must be no later than noon, local test center time, two days (Monday–Saturday excluding local holidays) before the examination date. You may reschedule the examination date within your one-year period of eligibility without paying an additional fee. If you are late in canceling your examination appointment, do not appear for it, or arrive late, you will be considered a no-show. All no-shows will have to reapply to take the examination and pay the full test fee. Refunds will not be issued to no-shows.

### **Minimum Time Between Examinations**

Candidates who fail the examination must wait 42 days from the date of the failed examination to sit for the same exam. All other exams are available immediately once additional payment has been satisfied. Candidates who pass one of the NERC system operator certification examinations may not take that exam again until their credential expires (4 years from the date they passed the exam).

### **Special Accommodations/Disabilities**

Allowance will be made for all documented requests for special testing conditions. Applicants must notify NERC by [e-mail](#) or telephone. The certification coordinator will contact the applicant with further instructions. Disability requests must be supported by a letter (original copy) from a recognized health care provider and be signed by a health professional. All other requests must be similarly supported. NERC will review each request and provide appropriate accommodations. The decision will be included in the notice of eligibility/ registration approval sent to the applicant.

*Note: All testing centers are in compliance with the regulations governing the Americans with Disabilities Act (ADA).*

### **Withdrawal from Examination Process**

As described in the *Eligibility Period* section of this Administrative Manual, the eligibility period is one year from the date the ATT number is issued. If a candidate wishes to withdraw from the process within the one-year period for any reason, they must request a Withdrawal on or before the last eligibility day. Candidates who submit the request within the time period will be reimbursed for the fees submitted to NERC less the Withdrawal Fee in effect at the time of the withdrawal. Failure to properly withdraw will result in the candidate forfeiting all submitted fees.

If you have already scheduled an appointment with Prometric to take the exam, you must first cancel that Prometric appointment or you will be charged a no-show fee.



### Exam Withdrawal Procedure

To access the registration and login screen:

- Go to the System Operator Certification web site (<http://www.nerc.com/page.php?cid=6184>)
- Click on the link to the registration and login screen
- Pop-ups must be allowed on your computer for this site to work
  - If pop-ups are not allowed, check with your IT department
- Enter **User ID** and **Password**
- Click **Login**
- Select **Exam Authorization**
- Select **Authorization To Test List**
- Click **Withdrawal/Change**
- Select **Withdraw**
- click **Save**

### Examination Change Request

If a candidate wishes to change the examination (i.e., from BI to TO, or from RC to BT, etc.) that they are registered to take, they must use the Program's Web site. An examination change request will not change the candidate's eligibility period. The eligibility period will remain valid for one year from the date that the original ATT number was issued. This change request must be submitted at least thirty days prior to the expiration of the candidate's eligibility period.

### Examination Change Procedure

To access the registration and login screen:

- Go to the System Operator Certification Web site (<https://socced.nerc.mcgware.com>)
- Click on the link to the registration and login screen
- Pop-ups must be allowed on your computer for this site to work
  - If pop-ups are not allowed, check with your IT department
- Enter **User ID** and **Password**
- Click **Login**
- Select **Exam Authorization**
- Select **Authorization To Test List**
- Click **Withdrawal/Change**
- Select **Change Exam to: (choose the exam from drop down selection)**
- click **Save**

You will be issued a new ATT number with the original expiration date. After receiving your new ATT you must schedule/reschedule an appointment with Prometric to take the exam.

### **Results and Awarding of Certificates**

Candidates can view pass/fail results on the computer screen when the examination is terminated. Before exiting the Prometric Testing Center, a copy of this display will be provided. This is an unofficial summary of the examination.

After grading and analysis of the examination results, NERC will mail an official summary. This will take about ten to twelve weeks. The official summary will include the grade achieved and the percentage of correctly answered questions in each Content Outline category.

Candidates who pass the examination will receive the appropriate NERC-certified system operator certificate signed by the President of NERC. The date on the certificate will be the date the candidate passed the examination.

### **Credential Designations**

N/RA/RC	Reliability Operator
BT	Combined Balancing and Interchange/Transmission Operator
BI	Balancing and Interchange Operator
TO	Transmission Operator

### **Confirmation of Credential to Third Parties**

NERC will confirm to an employer that an individual holds a valid NERC system operator certificate (including releasing the certificate number and the issuance date) in response to a written request, on the employer's letterhead (or e-mail), providing the name of the individual. NERC will release the certificate numbers and issuance dates for individuals holding a current NERC system operator certificate to the Regional Compliance staff or designated agents of those Regions in which an individual's employer operates in response to a written request, submitted on organization letterhead (or e-mail), that provides the names of the individuals for whom information is sought. No further information will be provided.

NERC will confirm to an employment search firm, or a potential employer, whether an individual holds a valid NERC system operator certificate (including releasing the certificate number and the issuance date) if the search firm has a release from the individual. No further information will be provided.

## Section II — Credential Maintenance

**Effective Date: October 1, 2006**

### Overview

The System Operator Certification Program incorporates a requirement to use continuing education hours (CE hours) to maintain a credential that is valid for three years. Successfully passing an examination earns a credential and a certificate that is valid for three years. Accumulation of the proper number and type of CE hours from NERC-approved learning activities within that three-year period maintains the validity of that credential for the next three years. A new certificate is issued indicating the new expiration date.

The program provides that:

1. System operators seeking to obtain a credential must pass an examination to earn the credential.
2. A certificate, valid for three years, will be issued to successful candidates.
3. A certified system operator must accumulate a minimum number of CE hours in specific training topics (listed in Appendix A) before their certificate expires to maintain their credential. The minimum number of CE hours is based on each credential:
  - a. 200 CE hours for Reliability Operator
  - b. 160 CE hours for Balancing, Interchange, and Transmission Operator
  - c. 140 CE hours for Balancing and Interchange Operator
  - d. 140 CE hours for Transmission Operator
4. For all credentials, a minimum of 30 of the CE hours in #3 must focus on content and/or implementation of NERC standards.
5. For all credentials, a minimum of 30 of the CE hours in #3 must be in simulations (i.e., table-top exercises, training simulators, emergency drills, practice emergency procedures, restoration, black start, etc.).
6. CE hours can concurrently count for the total number required, the NERC standards required, and the simulations but will only be counted once for the total CE hours requirement.
  - a. For example: A 3 hour learning activity that includes 1 hour of instruction and a 2-hour simulation on the implementation of NERC Standards will be accounted in this manner: 3 hours towards the total requirement, 2 hours towards the Standards requirement, and 2 hours towards the simulation requirement.
7. For those certified system operators whose certificate expires after October 1, 2009, retaking the examination is not an option for credential maintenance.
8. If a certified system operator does not accumulate enough CE hours to maintain their current credential prior to the certificate expiration date, their credential will be suspended

for a maximum of one year. At the end of the suspension period, their credential will be revoked.

9. If, prior to the end of the one-year suspension, the certified system operator accumulates the proper number and type of CE hours, their credential will be reinstated with the original expiration date (three years after the previous expiration date).
10. A system operator with a revoked credential will have to pass an examination to become re-certified.

### Providers Upload CE Hours

Various industries use different methods to track CE Hours and credit people with those they have earned. NERC has chosen to have the providers tell NERC who participated and how many CE Hours they earned. After delivering an approved learning activity, the provider will upload the CE Hours earned into the NERC database for those certified system operators that participated. It is incumbent upon the certified system operators to ensure that the providers credit them with the CE Hours they have earned by checking their transcripts on a regular basis.

### When to Start Accumulating CE Hours

For credential maintenance, NERC will recognize only CE hours earned (date of learning activity) after April 1, 2006. Each learning activity must be approved for use for credential maintenance prior to the CE hours being issued. For each certified system operator, only CE hours earned within three years of their certificate expiration date will be recognized for maintaining their NERC credential.

### Specifics of the Credential Maintenance Program

Certified system operators are required to accumulate CE hours through the NERC Continuing Education Program in recognized training topics for credential maintenance. See *Appendix A* for the list of recognized training topics. Described below are the requirements for each of the four credentials:

#### Transmission Operator Certification

To maintain a valid Transmission Operator credential, system operators must earn **140 CE hours** within the 3-year period preceding the expiration date of their certificate.

The 140 CE hours must include:

- A minimum of 30 CE hours must focus on content and/or implementation of NERC Standards.
- A minimum of 30 CE hours must utilize simulations (i.e., tabletop exercises, dispatcher/operator training simulators, emergency drills, or practice emergency procedures, restoration, blackstart or other reliability-based scenarios).

**Comment [KS2]:** 1.Made the term Tabletop consistent, there were times tabletop was hyphenated.

#### Balancing and Interchange Operator Certification

To maintain a valid Balancing and Interchange Operator credential, system operators must earn **140 CE hours** within the 3-year period preceding the expiration date of their certificate.

The 140 CE hours must include:

- A minimum of 30 CE hours must focus on content and/or implementation of NERC Standards.
- A minimum of 30 CE hours must utilize simulations (i.e., tabletop exercises, dispatcher/operator training simulators, emergency drills, or practice emergency procedures, restoration, blackstart or other reliability-based scenarios).

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### **Balancing, Interchange, and Transmission Operator Certification**

To maintain a valid Balancing, Interchange, and Transmission Operator credential, system operators must earn **160 CE hours** within the 3-year period preceding the expiration date of their certificate.

The 160 CE hours must include:

- A minimum of 30 CE hours must focus on content and/or implementation of NERC standards.
- A minimum of 30 CE hours must utilize simulations (i.e., tabletop exercises, dispatcher/operator training simulators, emergency drills, or practice emergency procedures, restoration, blackstart or other reliability-based scenarios).

### **Reliability Operator Certification**

To maintain a valid Reliability Operator credential, system operators must earn **200 CE hours** within the three-year period preceding the expiration date of their certificate.

The 200 CE hours must include:

- A minimum of 30 CE hours must focus on content and/or implementation of NERC standards.
- A minimum of 30 CE hours must utilize simulations (i.e., tabletop exercises, dispatcher/operator training simulators, emergency drills, or practice emergency procedures, restoration, blackstart or other reliability-based scenarios).

### **Certificate Renewal**

System operators that have: 1) completed the credential maintenance application, 2) satisfied the CE hours requirements, and 3) paid the required fee will be issued a certificate valid for three years from the previous expiration date.

Comment [KS3]: Added the word Renewal to the Certificate header

### **Deficits of CE Hours for Credential Holders**

The credential of a certified system operator who does not accumulate the required number and balance of CE hours within the three-year period will be suspended. A system operator with a suspended certificate cannot perform any task that requires an operator to be NERC-certified.

The system operator with a suspended credential will have up Section II – Credential Maintenance necessary CE hours.

During the time of suspension, the original anniversary date will be maintained. Therefore, a certificate, valid for three years from the previous expiration date, will be issued to a system operator who accumulates the required number of CE hours within the twelve-month suspension period. The system operator will still be required to accumulate the required number of CE hours prior to the next expiration date.

The credential will be revoked and all CE hours earned will be forfeited at the end of the twelve-month suspension period if the system operator does not accumulate the required number of CE hours. After a credential is revoked, the system operator will be required to pass an examination to become recertified.

For example, a system operator who has an expiration date of July 31, 2011, the credential will expire on July 31, 2011 at 00:00 if the system operator does not renew or change the credential.:

1. If the system operator then accumulates and submits the required number of hours by March 1, 2010, the credential will be reinstated on March 1, 2010, and will be valid until July 31, 2012.
2. The system operator will have to accumulate the required number of hours prior to July 31, 2012 00:00 or the credential will be suspended again.
3. CE hours previously used to maintain the credential cannot be reused for credential maintenance.
4. A record of the suspension between August 1, 2009 and March 1, 2010 will be maintained.

**Comment [KS4]:** Provided examples of credential expiration dates

**Deleted:** who has an expiration of July 31, 2009 00:00 does not accumulate the required number of hours prior to that date

**Deleted:** The credential will be suspended on August 1, 2009 00:00.

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### **Rollover Hours**

For all credentials, up to 30 (Operating Topic) CE hours accumulated in the six months prior to the certificate expiration date and not used for credential maintenance and change of credential type may be carried over to the next three-year period. The course originally associated with those hours will not carry over – just the CE hours. Excess CE Hours in the Standards category or the Simulation category will not be carried over into the next period.

**Deleted:** Carry-Over

CE hours will be allocated on a first-in, first-out basis. In other words, CE hours from a learning activity occurring first according to the calendar will be used to satisfy the CE hour requirement first and continuing sequentially by the date of the learning activities.

### **Reporting of CE Hours Earned by Certified System Operators**

The learning activity providers are required to electronically submit the CE hours earned by certified system operators into the NERC System Operator Certification and Continuing

Education Database (SOCCED). Learning activity providers are also required to give the certified system operators paper proof of having earned the CE hours. If a conflict occurs, the certified system operator will be able to submit the paper copy at Section II – Credential Maintenance necessary CE hours from the Continuing Education Program’s approved learning activities.

System operators are able to track their status/progress towards maintaining their credential through the NERC system operator certification web site. Certified system operators should review their CE hours records at least 90 days before their certificate expiration date to allow sufficient time to acquire CE hours prior to the system operator’s certificate expiration date should there be a conflict.

If a Provider does not submit the CE hours, the certified system operator must submit proof of sufficient CE hours to the NERC Manager of Personnel Certification no less than 30 days before the system operator’s certificate expiration date. NERC staff may be able to process/resolve discrepancies in credential holder CE hours records in less than 30 days; however, submissions received at NERC within the 30-day window may not be credited to the system operator’s account in time to prevent the credential from being suspended. Suspended credentials based on incomplete data will be reinstated retroactively once proof of completion is verified.

For system operators who meet the CE hours requirements, and upon receipt of an application and necessary fees, NERC will issue a new certificate with an expiration date three years from the previous expiration date (a new certificate will be mailed to the address on record).

### Changing Certification Levels

Certified system operators that want to change to a different credential can do so. Many system operators hold a Reliability Operator credential but are not working in a reliability operator capacity. Those certified system operators could easily change to a credential that more closely matches the work they perform without taking an examination. However, system operators currently holding a Transmission Operator or Balancing and Interchange Operator credential will have to pass an examination to move to a different credential such as the combined Balancing, Interchange, and Transmission Operator credential or the Reliability Operator credential. To change to a different credential the system operator must first meet the proper number and type of hours for the new credential

A certified system operator can change the type of their credential by indicating their desire in SOCCED when they request to maintain their credential. A system operator has the following options:

*To change a credential from:*

- Balancing and Interchange Operator to any other NERC credential: the system operator must pass the examination for that credential.
- Transmission Operator to any other NERC credential: the system operator must pass the examination for that credential.

**Deleted:** Certified system operators that want to to a credential can do so. Many system operators hold a Reliability Operator credential but are not working in a reliability operator capacity. Those certified system operators could easily to a credential that more closely matches the work they perform without taking an examination. However, system operators currently holding a Transmission Operator or Balancing and Interchange Operator credential will have to pass an examination to move to a different credential such as the combined Balancing, Interchange, and Transmission Operator credential or the Reliability Operator credential. To change to a different credential the system operator must first meet the proper number and type of hours for the new credential.¶

**Deleted:** .



- Balancing, Interchange, and Transmission Operator to Reliability Operator: the system operator must pass the examination for that credential. Section II – Credential Maintenance  
NERC credential: the system operator must submit the proper number and type of hours for the new credential.
- Balancing, Interchange, and Transmission Operator to Transmission Operator or Balancing and Interchange Operator: the system operator must submit proper number and type of hours for the new credential.

### Application for Credential Maintenance

#### Procedure for applying for credential maintenance

A certified system operator can apply to maintain their credential [through SOCCED](#):  
To access the registration and login screen:

1. Go to the System Operator Certification Web site  
(<http://www.nerc.com/page.php?cid=6|84|194>)
2. Click on the link to the registration and login screen
3. **Pop-ups must be allowed** on your computer for this site to work
  - a. If pop-ups are not allowed, check with your IT department
4. Enter your USERID and password, click <submit>
5. On the Welcome page click on the <Operators> button
6. Select <View Transcripts>
7. In the upper left corner select the certificate number for the credential you wish to maintain (for many of you, there will be only one certificate number. For others, there will be two or more certificate numbers. **CE hours are credited to only one certificate number unless you inform a CE Provider to apply the hours you earned to each of your certificates**).
8. Review the CE hours associated with that certificate
9. Credential maintenance and Change Credential Type buttons will appear as you attain the required milestones. For certified system operators with the following credentials:
  - a. Transmission Operator:
    - i. The Credential Maintenance button will appear when you reach the 140 CE hour requirement. Clicking this button will bring up a screen to confirm your desire to maintain your credential as well as payment of the fee. **You do not have the option to change to another credential without taking the exam for the new credential.**
  - b. Balancing and Interchange Operator
    - i. The Credential Maintenance button will appear when you reach the 140 CE hour requirement. Clicking this button will bring up a screen to confirm your desire to maintain your credential as well as payment of the fee. **[You do not have the option to change to another credential without taking the exam for the new credential.](#)**
  - c. Balancing/Interchange and Transmission Operator

**Comment [KS5]:** added statement to clarify that CE hours earned can be applied to multiple credentials if an operator has two or more different credentials

**Comment [KS6]:** added clarification that the Transmission Operator and the Balancing and Interchange Operator credentials cannot be changed to another type without taking and passing the exam for the other type of credential. Since these two credential only require 140 CE hours to maintain they cannot be changed to another credential type by earning more CE hours

- i. A [Change Credential Type](#) button will appear when you reach the 140 CE hour requirement allowing you to change to either a Transmission Operator credential or a Balancing and Interchange Section II – Credential Maintenance this button will bring up a screen to confirm your desire to change your credential, to which credential you wish to change, as well as payment of the fee. Up to 30 additional hours above the amount required to obtain the changed credential will be rolled over to the next three year period.
  - ii. The Credential Maintenance button will appear when you reach the 160 CE hour requirement. Clicking this button will bring up a screen to confirm your desire to maintain your credential as well as payment of the fee.
- d. Reliability Operator
- i. A Change Credential Type button will appear when you reach the 140 CE hour requirement allowing you to [change](#) to either a Transmission Operator credential or a Balancing and Interchange credential. Clicking this button will bring up a screen to confirm your desire to change your credential, to which credential you wish to change, as well as payment of the fee. Up to 30 additional hours above the amount required to obtain the changed credential will be rolled over to the next three year period.
  - ii. When you reach the 160 CE hour milestone, a selection will be added allowing you to change to the Balancing/Interchange and Transmission Operator credential. Clicking this button will bring up a screen to confirm your desire to change your credential, to which credential you wish to change, as well as payment of the fee. Up to 30 additional hours above the amount required to obtain the changed credential will be rolled over to the next three year period.
  - iii. The Credential Maintenance button will appear when you reach the 200 CE hour requirement. Clicking this button will bring up a screen to confirm your desire to maintain your credential as well as payment of the fee.
- e. Hardship Clause
- It is understood that due to unforeseen events and extenuating circumstances, a certified system operator may be unable to accumulate the necessary CE hours in the time frame required by the Program to maintain the credential. In such an event, an individual must submit a written request containing a thorough explanation of the circumstance and supporting information to:

North American Electric Reliability Corporation  
Attn: Manager–Personnel Certification  
116 Village Boulevard Suite 390  
Princeton, NJ 08540-5721

The PCGC retains the right to invoke this Hardship Clause and deviate from the Program rules as it deems appropriate to address such events or circumstances.

**Comment [KS7]:** changed the word downgrade to change

Examples of extenuating circumstances would include, but not limited to, military service, illness of the system operator or within the system operator’s immediate family, or system operator temporary disability that results in an extended period of time away from work.

## Section III — Program Rules

### Rules for NERC-Certified System Operator

#### Recognized Learning Activities

CE hours will be recognized for credential maintenance only for training topics/learning activities listed in *Appendix A* and where Providers have complied with the Continuing Education Program rules.

#### Learning Activity Credit

##### 1. Emergency Operations Training Topics

CE hours for emergency operations will not be recognized for credential maintenance more than **twice** a year **based on the credential anniversary** (i.e., during the twelve-month period preceding the system operator’s credential anniversary). CE courses can be counted as an Emergency Operation courses if the training is related to emergency preparedness, operational communications and situational awareness, analysis and troubleshooting, or response to any emergency as defined by NERC as:

*“Any abnormal system condition that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.”*

##### 2. Other Training Topics

CE hours for a particular course or learning activity other than emergency operations training will not be recognized for credential maintenance more than once a year **based on**

**the credential anniversary** (i.e., during the twelve-month period preceding the system operator’s credential anniversary) .

##### 3. Instructor Training

For those instructors who are also certified system operators, 1.0 CE hour for each CE hour of a learning activity delivered will be recognized towards the instructor’s system operator credential maintenance. Emergency Operations topics can be counted twice per year **based**

#### Deleted: Transition Plan — 5-year Program to 3-year Program¶

Only those certified system operators whose certificate expires prior to October 1, 2009 have the option to either 1) accumulate the required number of CE hours according to the rules stated previously or 2) pass the examination for the desired credential. Certified system operators who accumulate the required number and balance of CE hours will receive a certificate that will be valid for three years from the expiration date on their current certificate. System operators who pass an examination will receive a certificate valid for three years from the date they pass the examination.¶

¶ Certified system operators whose certificate expires on or after October 1, 2009 must accumulate the required number CE hours prior to the expiration date of their certificate regardless of the issuance date of their certificate. These operators do not have the option to pass the exam for that credential.¶

**Comment [KS8]:** moved the three bullet items under Learning Activity Credit from another section. No change to wording

Section III — Program Rules

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on the credential anniversary (i.e., during the twelve-month period preceding the system operator's credential anniversary).

#### **Provider Access to Database**

Providers will be able to access the database to upload certified system operator CE hours activity. The process for doing this is included in the CE Program Manual.

#### **System Operator Access to Database**

Certified system operators will be able to access the database to track their CE hour activity. The process for doing this is listed above.

Retain Documentation. The certified system operator is responsible for Section III – Program Rules documentation for proof of credential maintenance. Documentation includes:

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- Name and contact information of the Provider
- Title and identification number of the learning activity and description of its content
- Date(s) of the learning activity
- Location (if applicable)
- Number and type of CE hours
- System operator's NERC certificate number

Training Providers shall retain comparable documentation. Electronic forms of documentation are acceptable.

#### **Learning Activity Approved Status Revoked after CE Hours Granted**

CE hours granted for a course or learning activity that had been approved for credential maintenance will still be recognized if, subsequent to the system operator attending the course or learning activity, the approved status is revoked.

#### **Treatment of Disputes Between Certified System Operator and Providers**

Disputes between a Provider and a certified system operator must be resolved between the Provider and the certified system operator. NERC will not become involved in resolving the dispute. Additionally, it is the obligation of the certified system operator to periodically review their CE hours' records in the NERC system operator certification database and to maintain their own training records to provide proof that CE hour requirements have been achieved.

#### **Fees**

<b>Fee Schedule**</b>	
Application to test	\$700
Application to maintain or change	\$600

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credential using CE hours	
Application to retest	\$700
Application to withdraw	\$100
Bad check/credit application	\$25

\*\*All funds must be payable in U.S. dollars.

[Section III– Program Rules](#)

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The System Operator Certification Program must be financially independent. The on-going expenses to develop and maintain the examinations and the management and administrative costs associated with both the examination process and credential maintenance must be paid using these fees. These fees will be periodically reviewed and adjusted accordingly.

## Section IV — Dispute Resolution

### Applicability

Any dispute arising under the NERC agreement establishing the *NERC System Operator Certification Program*, or from the establishment of any NERC rules, policies, or procedures dealing with any segment of the certification process, or as a result of Disciplinary Action shall be subject to the NERC System Operator Certification Dispute Resolution Process (hereafter called the “Process”). The Process is for the use of persons who hold an NERC system operator certification or persons wishing to be certified to dispute the validity of the examination, the content of the test, the content outlines, or the registration process. The Process is not for trainers or certified persons disputing CE hours.

Disputes regarding the scoring of an exam should be delayed until the official score results are known. The instant scoring at the test center is an unofficial score. An official score will be issued only after the exam results have been reviewed by the psychometric consultant. The chairman of the PCGC may choose to wait until an official score is available before taking action on a dispute.

#### 1. Dispute Resolution Process

The dispute resolution process consists of three steps.

a. **NERC System Operator Certification Program Staff**

The first step in the process is for the person with a dispute to contact the NERC System Operator Certification Program staff. Contact may be made by a phone call or e-mail to the program staff. This first step can usually resolve the issues without further actions. It is expected that most disputes will be resolved at this step.

If the issue(s) is not resolved to the satisfaction of the parties involved in the first step, the issue can be brought to the Personnel Certification Governance Committee (PCGC) Dispute Resolution Task Force.

b. **Personnel Certification Governance Dispute Resolution Task Force**

If the NERC staff did not resolve the issue(s) to the satisfaction of the parties involved, a written request must be submitted to the chairman of the PCGC through NERC staff within 45 days of the conversation with the NERC staff explaining the issue(s) and requesting further action. Upon receipt of the letter, the PCGC chairman will present the request to the PCGC Dispute Resolution Task Force for action. This task force consists of three current members of the PCGC. The PCGC Dispute Resolution Task Force will investigate and consider the issue(s) presented and make a decision. This decision will then be communicated to the submitting party, the PCGC chairman, and the NERC staff within 45 calendar days of receipt of the request.

If a French-Canadian or Mexican party raises a dispute, the PCGC shall appoint a French-Canadian speaking or Spanish-speaking interpreter, respectively, as requested.

c. **Personnel Certification Governance Committee**

If the PCGC Dispute Resolution Task Force’s decision did not resolve the issue(s) to the satisfaction of the parties involved, the final step in the process is for the issue(s) to be brought before the PCGC. Within 45 days of the date of the Task Force’s decision, the disputing party shall submit a written request to the PCGC chairman through NERC staff requesting that the issue(s) be brought before the PCGC for resolution. The chairman shall see that the necessary documents and related data are provided to the PCGC members as soon as practicable. The PCGC will then meet or conference to discuss the issue(s) and make their decision within 60 calendar days of the chairman’s receipt of the request. The decision will be provided to the person bringing the issue(s) and the NERC staff. The PCGC is the governing body of the certification program and its decision is final.

**2. Process Expenses**

All individual expenses associated with the Process, including salaries, meetings, or consultant fees, shall be the responsibility of the individual parties incurring the expense.

**3. Decision Process**

Robert’s Rules of Order shall be used as a standard of conduct for the Process. A simple majority vote of the members present will decide all issues. The vote will be taken in a closed session. No one on the PCGC may participate in the dispute resolution process, other than as a party or witness, if he or she has an interest in the particular matter.

A stipulation of invoking the appeals process is that the entity requesting the appeal agrees that neither NERC (its members, Board of Trustees, committees, subcommittees, and staff), any person assisting in the appeals process, nor any company employing a person assisting in the appeals process, shall be liable, and they shall be held harmless against the consequences of or any action or inaction or of any agreement reached in resolution of the dispute or any failure to reach agreement as a result of the appeals proceeding. This “hold harmless” clause does not extend to matters constituting gross negligence, intentional misconduct, or a breach of confidentiality.

## Section V — Disciplinary Action

### 1. Purpose

This disciplinary action procedure is necessary to protect the integrity of the system operator credential. Should an individual act in a manner that is inconsistent with expectations, this procedure describes the process to investigate and take action necessary to protect the credential.

### 2. Grounds for Action

The following shall serve as grounds for disciplinary action:

- a. Willful, gross, and/or repeated violation of the NERC standards as determined by a NERC investigation.
  - i. Both the organization and the certified system operator are bound by the NERC reliability standards. If a certified system operator, either in concert with the organization or on his or her own initiative, performs a willful, gross, and/or repeated violation of the NERC standards, he or she is liable for those actions and disciplinary actions may be taken against him or her.
- b. Willful, gross, and/or repeated negligence in performing the duties of a certified system operator as determined by a NERC investigation.
- c. Intentional misrepresentation of information provided on a NERC application for a system operator certification exam or to maintain a system operator credential using CE hours.
- d. Intentional misrepresentation of identification in the exam process.
  - i. This includes, but is not limited to, a person identifying himself or herself as another person to obtain certification for the other person.
- e. Any form of cheating during a certification exam.
  - i. This includes, but is not limited to, bringing unauthorized reference material in the form of notes, crib sheets, or other methods of cheating into the testing center.
- f. A certified system operator's admission to or conviction of any felony or misdemeanor directly related to their duties as a system operator.

### 3. Hearing and Appeals Process

Upon report to NERC of a candidate's or certified system operator's alleged misconduct, the NERC Personnel Certification Governance Committee (PCGC) Credential Review Task Force will convene for the determination of facts. An individual, government agency, or other investigating authority can file reports.

Unless the task force initially determines that the report of alleged misconduct is without merit, the candidate or certified system operator will be given the right to notice of the allegation. A hearing will be held and the charged candidate or certified system operator will be given an



opportunity to be heard and present further relevant information. The task force may seek out information from other involved parties. The hearing will not be open to the public, but it will be open to the charged candidate or certified system operator and his or her representative. The task force will deliberate in a closed session, but the task force cannot receive any evidence during the closed session that was not developed during the course of the hearing. The task force's decision will be unanimous and will be in writing with inclusion of the facts and reasons for the decision. The task force's written decision will be delivered to the PCGC and by certified post to the charged candidate or certified system operator. In the event that the task force is unable to reach a unanimous decision, the matter shall be brought to the full committee for a decision.

The task force's decision will be one of the below:

**a. No Action**

Allegation of misconduct was determined to be unsubstantiated or inconsequential to the credential.

**b. Probation**

A letter will be sent from NERC to the offender specifying:

- i. The length of time of the probationary period (to be determined by the PCGC).
  - (a) Credential will remain valid during the probationary period.
  - (b) The probationary period does not affect the expiration date of the current certificate.
- ii. During the probationary period, a subsequent offense of misconduct, as determined through the same process as described above, may be cause for more serious consequences.
  - (a) Extension of probation,
  - (b) Revocation for cause, or
  - (c) Termination of credential.

**c. Revoke for Cause**

A letter will be sent from NERC to the offender specifying:

- i. The length of time of the revocation period (to be determined by the PCGC).
  - (a) Credential is no longer valid.
  - (b) Successfully passing an exam will be required to become recertified.
  - (c) An exam will not be authorized until the revocation period expires.

**d. Termination of Credential**

A letter will be sent from NERC to the offender specifying:

- i. Permanent revocation of credential.
- ii. Offending party will not be approved to sit for a future examination.

#### **4. Appeal Process**

The decision of the task force may be appealed using the NERC [System Operator Certification Dispute Resolution](#) process.

#### **5. Credential Review Task Force**

The Credential Review Task Force shall be comprised of three active members of the PCGC assigned by the Chairman of the PCGC on an ad hoc basis. No one on the credential review task force may have an interest in the particular matter.

The task force will meet in a venue determined by the task force chairman.

If a French-Canadian or Mexican party raises a dispute, the PCGC shall appoint a French-Canadian speaking or Spanish-speaking interpreter, respectively, as requested.

## Glossary

- G01. **CE Hour:** Sixty minutes of participation in a group, independent study, or self-study learning activity as approved by the NERC Continuing Education Program.
- G02. **Continuing Education Program Provider:** The individual or organization offering a learning activity to participants and maintaining documentation required by these criteria.
- G03. **Certification:** An official recognition that indicates the recipient has passed a NERC exam or completed a specified number of continuing education hours.
- G04. **Credential:** NERC designation that indicates the level of qualification achieved (i.e., Reliability Operator; Balancing, Interchange, and Transmission Operator; Balancing and Interchange Operator; and Transmission Operator).
- G05. **Credential Maintenance:** Meet NERC CE hours' requirements to maintain a valid NERC-issued system operator credential.
- G06. **NERC-Approved Learning Activity:** Training that maintains or improves professional competence and has been approved by NERC for use in its Continuing Education Program.
- G07. **Probation:** A step in the disciplinary process during which the certificate is still valid. During the probationary period, a subsequent offense of misconduct, as determined through the same process as described above, may be cause for more serious consequences.
- G08. **Revoked:** A NERC certificate which has been suspended for more than twelve months. While in this state, a certificate holder cannot perform any task that requires an operator to be NERC-certified. The certificate holder will be required to pass an exam to be certified again. Any CE hours accumulated prior to or during the revocation period will not be counted towards certificate maintenance.
- G09. **Revoke for Cause:** A step in the disciplinary process during which the certificate is no longer valid and requiring successfully passing an exam to become certified. However, an exam will not be authorized until the revocation period expires. CE hours earned before or during this revocation period will not be counted for maintaining a credential.
- G10. **Suspended:** Certificate status due to an insufficient number of CE hours being submitted prior to the expiration of a certificate. While in this state, a certificate holder cannot perform any task that requires an operator to be NERC-certified.
- G11. **Termination of Credential:** A step in the disciplinary process whereby a credential is permanently revoked.
- G12. **Type of CE Hours:** NERC-approved learning activity covering topics from Appendix A, NERC standards, and/or simulations for which there is a minimum requirement for credential maintenance.

## Appendix A — Recognized Operator Training Topics

### 1. Basic Concepts

#### A. Basic AC/DC Electricity

- i. Capacitance
- ii. Inductance
- iii. Impedance
- iv. Real and reactive power
- v. Electrical circuits
- vi. Magnetism

#### B. Basic Power System Mathematic Concepts

- i. Basic trigonometry
- ii. Ratios
- iii. Per unit values
- iv. Pythagorean Theorem
- v. Ohm's Law
- vi. Kirchhoff's Laws

#### C. Characteristics of the Bulk Electric System.

- i. Transmission lines
- ii. Transformers
- iii. Substations
- iv. Power plants
- v. Protection
- vi. Introduction to power system operations and Interconnected operations
- vii. Frequency

### 2. System Protection principles

- viii. Transmission lines
- ix. Transformers
- x. Busses
- xi. Generators
- xii. relays and protection schemes
- xiii. Power system faults
- xiv. Synchronizing equipment Under-frequency load shedding
- xv. Under-voltage load shedding
- xvi. Communication systems utilized

### 3. Interconnected Power System Operations

- xvii. Voltage control

Deleted: <#>Basic Concepts ¶ <#>Basic electricity including capacitance, inductance, impedance, real and reactive power ¶ <#>Single phase & three phase power systems ¶	...
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<a href="#">xviii. Frequency control</a>		Formatted
<a href="#">xix. Power system stability</a>		Formatted
<a href="#">xx. Facility outage both planned and unplanned</a>		Formatted
<a href="#">xxi. Energy accounting</a>		Formatted
<a href="#">xxii. Inadvertent energy</a>		Formatted
<a href="#">xxiii. Time error control</a>		Formatted
<a href="#">xxiv. Balancing of load and resources</a>		Formatted
<b>4. Emergency Operations</b>		Formatted: Line spacing: single
<a href="#">xxv. Loss of generation resource(s)</a>		Formatted
<a href="#">xxvi. Loss of transmission element(s)</a>	<a href="#">Appendix A</a>	Formatted
<a href="#">xxvii. Operating reserves</a>		Formatted: Font: (Default) Tahoma, 10 pt
<a href="#">xxviii. Contingency reserves</a>		Formatted
<a href="#">xxix. Line loading relief</a>		Formatted
<a href="#">xxx. Load shedding</a>		Formatted
<a href="#">xxxi. Voltage and reactive flows during emergencies</a>		Formatted
<a href="#">xxxii. Loss of EMS</a>		Formatted
<a href="#">xxxiii. Loss of primary control center</a>		Formatted
<b>5. Power System Restoration</b>		Formatted: Line spacing: single
<a href="#">xxxiv. Restoration philosophies</a>		Formatted
<a href="#">xxxv. Facility restoration priorities</a>		Formatted
<a href="#">xxxvi. Black start restoration</a>		Formatted
<a href="#">xxxvii. Stability (Angle and voltage)</a>		Formatted
<a href="#">xxxviii. Islanding and Synchronizing</a>		Formatted
<b>6. Market Operations</b>		Formatted: Line spacing: single
<a href="#">xxxix. NAESB standards</a>		Formatted
<a href="#">xl. Standards of Conduct</a>		Formatted
<a href="#">xli. Tariffs</a>		Formatted
<a href="#">xlii. OASIS applications (Transmission Reservations)</a>		Formatted
<a href="#">xlili. E-Tag application</a>		Formatted
<a href="#">xliv. Transaction Scheduling</a>		Formatted
<a href="#">xlv. Market applications</a>		Formatted
<a href="#">xlvi. Interchange</a>		Formatted
<b>7. Tools</b>		Formatted: Line spacing: single
<a href="#">xlvii. Supervisory Control and Data Acquisition (SCADA)</a>		Formatted
<a href="#">xlviii. Automatic Generation Control application (AGC)</a>		Formatted
<a href="#">xlix. Power flow application</a>		Formatted
<a href="#">l. State Estimator application</a>		Formatted
<a href="#">li. Contingency analysis application</a>		Formatted
<a href="#">lii. P-V Curves</a>		Formatted

- liii. Load forecasting application
- liv. Energy accounting application
- lv. Voice and data communication systems
- lvi. Demand side management programs

**8. Operator Awareness**

- lviii. Identifying loss of facilities
- lviii. Recognizing loss of communication facilities
- lix. Recognizing telemetry problems
- lx. Recognizing and identifying contingency problems Appendix A
- lxi. Proper Communications (3-part or way)
- lxii. Communication with appropriate entities including the Reliability Coordinator
- lxiii. Cyber and physical security and threats

**9. Policies & Procedures**

- lxiv. ISO/RTO operational and emergency policies and procedures
- lxv. Regional operational and emergency policies and procedures
- lxvi. Company specific operational and emergency policies and procedures

**10. NERC Reliability Standards**

- a. application and/or implementation of NERC reliability standards

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## **Order Denying Rehearing of March 18 Order Directing Changes in NERC's Standards Development Procedure**

### **Action Required**

Approve

### **Summary**

On September 16, 2010, FERC issued an order denying rehearing, denying clarification, denying reconsideration, and denying a request for stay of FERC's March 18, 2010 order directing revisions to the NERC Rules of Procedure pertaining to the development of Reliability Standards ("September 16 Order"). NERC and stakeholders will have decisions to make in the following areas:

1. Whether to seek judicial review of the order denying rehearing (a notice of appeal must be filed by November 15, 2010);
2. What changes to the Rules of Procedure on standards development NERC should include in the compliance filing that it must make on December 13, 2010; and
3. What should be included in a modified Reliability Standard dealing with the remaining FAC-008 directive that must be filed 90 days after a FERC order on NERC's December 13 compliance filing? (Note: this item will not be ready for NERC Board of Trustees action until the FAC-008 standard is modified through the Reliability Standards development process.)

### **Background**

On March 18, FERC issued an order directing NERC to file proposed modifications to the NERC Rules of Procedure to address what FERC stated is a conflict between NERC's Reliability Standards Development Procedure and NERC's obligation to comply with FERC directives pursuant to Section 215(d)(5) of the Federal Power Act (FPA). FERC stated that the basis of the directive is a "growing concern that the current voting process in the ERO Rules of Procedure can be used to prevent compliance with FERC directives to address particular reliability matters."

In the March 18 Order, FERC pointed to the circumstances surrounding the FERC-directed modifications to FAC-008-1 as a basis for its concern that the current Reliability Standards Development Procedure allows a drafting team to circumvent compliance with a FERC directive. In Order No. 693, FERC had directed three changes to FAC-008. The standard drafting team prepared a revised standard to address all of the directives, but the revised standard received only 57 percent affirmative vote. Negative voters indicated that the presence of the response to one of the directives — to identify the second-most limiting element and the resulting increase in capacity if the first-limiting element is removed — was a principal reason for their negative vote.

To deal with FERC's process concerns, FERC directed NERC to file revisions to its standards development procedures that would prevent a negative vote of the ballot pool or the actions of the drafting team from preventing NERC from filing a proposed reliability standard that addresses a Commission directive. FERC also stated that any such revisions must be consistent with the requirements of FPA section 215 that NERC's standards development process provide for reasonable notice and opportunity for comment, due process, openness, and balance of interests in developing Reliability Standards. FERC also directed NERC to file a revised FAC-008 standard responding to the directive within 90 days of issuance of a future order on NERC's proposed revisions to the Rules of Procedure pertaining to the Reliability Standards development process.

On April 19, 2010, NERC requested clarification, rehearing, and a stay of the FERC's March 18 order on the basis that the order conflicts with multiple provisions of Section 215 of the FPA. Additionally, NERC requested reconsideration of the directive to comply with FERC's directed modification to FAC-008 on the basis that this directive serves commercial rather than reliability goals. NERC also requested a stay of the directive and requested FERC to convene a public conference to discuss general issues related to how FERC intends to prospectively implement Section 215 and technical issues specific to Reliability Standard FAC-008-1.

In the September 16 Order denying all of NERC's requests, FERC determined that its directives do not conflict with Section 215(d)(5) of the FPA. FERC stated that it ordered NERC to develop and propose for FERC review an affirmative mechanism designed to prevent the Reliability Standards Development Process from negating a FERC directive to submit a new or modified Standard. FERC further stated that when a directive offers a specific approach, NERC has the flexibility to develop an equally efficient and effective alternative. FERC restated its position that the ERO has discretion in how it responds to a FERC directive to submit a new or modified Reliability Standard, but the discretion exists in *how* NERC chooses to respond, not in *whether* NERC will affirmatively respond. That is, NERC does *not* have the discretion to disregard a final FERC directive because the FPA provides that FERC may direct the ERO to submit a new or modified Reliability Standard that addresses a specific matter if FERC considers such a new or modified Reliability Standard appropriate to carry out Section 215 of the FPA. FERC noted, however, that "when the Commission issues a specific directive pursuant to Section 215(d)(5), it should be supported by a clear technical rationale that explains how the directive is related to Bulk Power System reliability."

FERC also denied NERC's request for reconsideration of the directive to modify the FAC-008 standard as having no reliability purpose. FERC stated in the September 16 Order that the FAC-008 directive serves a reliability goal, and that simply because a directive has a market-improving component does not preclude it from also having a reliability component. FERC went on to offer additional guidance regarding its directive on FAC-008 to demonstrate that the directive does, in fact, serve a reliability goal.



## **Issues for Consideration and Next Steps**

### **1. Judicial Review**

Because the September 16 Order is a final order, any appeal would be required to be filed with the United States Court of Appeals within sixty (60) days after FERC's final order, or by November 15, 2010. NERC will be interested in hearing from stakeholders whether they believe seeking judicial review would be appropriate in these circumstances, whether stakeholders themselves are considering seeking judicial review, and what issues should be raised.

### **2. December 13 Compliance Filing**

Regardless of whether NERC files a notice of appeal of the September 16 Order, NERC must make a compliance filing responding to FERC's March 18 directive to modify the standards process no later than December 13, 2010.

In preparation for the discussion of the December 13, 2010 compliance filing, NERC has developed two alternative approaches.

#### **Alternative A**

The first approach, designated Alternative A (attached), involves a proposed new Rule 321 of the Rules of Procedure. Alternative A was posted for comment in May 2010 and approved by the NERC Board of Trustees on June 11, 2010. NERC withheld filing proposed Rule 321 at the request of senior Commission staff in conjunction with the extension of the compliance deadline and the anticipated discussions to be held at the July 6 technical conference. Alternative A has these features:

- The proposed rule states it is the Standards Committee's responsibility to ensure that regulatory directives are addressed in the standards developed or modified through the standards development procedure.
- The proposed rule gives the NERC Board of Trustees the authority to remand a standard back to the industry via the Standards Committee, with instructions, if a proposed standard fails to address a regulatory directive.
- Section 2 of the rule states that if a ballot pool fails to approve a proposed reliability standard that contains a provision addressing a regulatory directive, the board may direct the Standards Committee to prepare a memorandum describing the issues surrounding the regulatory directive and conduct one additional re-ballot, with that re-ballot to be completed within 45 days. In any such re-ballot, negative votes without comment would be considered for purposes of establishing a quorum, but only affirmative votes and negative votes with comments would be counted in determining the approval percentage for the ballot.
- Section 3 states that if the re-balloted standard achieves a two-thirds affirmative vote, then the standard shall be deemed approved by the registered ballot pool and shall be submitted to the board for approval.

- Section 4 states that if the standard fails to achieve a two-thirds affirmative vote, but does achieve at least a 60 percent affirmative vote, then the board may proceed to consider the standard for approval.
- Section 5 states that if the re-balloted standard fails to achieve at least a 60 percent affirmative vote, then NERC shall file a report of the entire circumstances with the ERO regulatory authority issuing the directive.
- Section 6 provides that NERC will file an annual report with all ERO governmental authorities giving the status of all regulatory directives.

### **Alternative B**

Alternative B (attached) would involve a new, but different, Rule 321. Under Alternative B, if the Board of Trustees finds that a ballot pool has failed to approve a standard that addresses a specific regulatory directive, then the board itself could direct that a draft standard addressing the directive be prepared. The board would solicit comment on the draft standard. Thereafter, the board itself would decide whether or not to approve the standard and submit it to ERO governmental authorities. Alternative B would have the following features:

- Like Alternative A, Alternative B would state it is the Standards Committee's responsibility to ensure that regulatory directives are addressed in the standards developed or modified through the standards development procedure. The proposed rule would also give the NERC Board of Trustees the authority to remand a standard back to the industry via the Standards Committee, with instructions, if a standard fails to address a regulatory directive.
- Under Alternative B, upon a written determination by the NERC Board that a ballot pool has failed to approve a standard that addresses a specific regulatory directive, the board would direct the Standards Committee (in the first instance) or NERC management (in the alternative) to develop a proposed standard that does address the regulatory directive, taking account of the entire developmental record.
  - The draft reliability standard would thereafter be posted for a 45-day public comment period.
  - If, after considering the entire developmental record, the Board of Trustees finds that the draft reliability standard, with such modifications as the Board of Trustees determines are appropriate in light of the comments received, is just, reasonable, in the public interest, practical, technically sound, technically feasible, cost-justified and serves the best interests of reliability of the bulk power system, then the Board of Trustees could approve the draft standard and direct that the draft standard be filed with ERO governmental authorities with a request that the draft standard be made effective.
  - If, after considering the entire developmental record, the Board of Trustees is unable to find that the draft reliability standard, even with modifications, is just, reasonable, in the public interest, practical, technically sound, technically feasible, cost-justified and serves the best interests of reliability of the bulk power system, then the Board of Trustees could approve the draft standard as a compliance filing in response to the regulatory directive and direct that the standard be filed with the

ERO governmental authority issuing the regulatory directive with a recommendation that the draft standard not be made effective.

- The filing of the draft reliability standard under either paragraph would include an explanation of the basis for the decision by the Board of Trustees. Section 3 would provide that NERC will file an annual report with all ERO governmental authorities giving the status of all regulatory directives.

Alternative B of Rule 321 is currently posted for public comment for a 45-day comment period, ending on December 2, 2010. NERC is interested in comments from stakeholders on both Alternative A and Alternative B. The NERC Board of Trustees will need to make a decision prior to December 13, 2010 on whether to file Alternative A or Alternative B (or some variant of either) as the compliance filing is due on that date. FERC has stated it will post NERC's proposed modifications for public comment and thereafter issue an order.

One variant on this approach would be for the NERC board to make a decision to file the draft standard with ERO governmental authorities accompanied by a recommendation for what the governmental authorities should do with the draft standard, but not have the board vote to approve the standard itself. That variant is described as Option 2 in the posting.

### **3. Revised Reliability Standard for Directive Regarding FAC-008**

As noted above, NERC must submit a modified Reliability Standard to address the remaining FAC-008 directive no later than 90 days after FERC issues an order on the modifications to the standards development process that NERC must file on December 13, 2010. Filing a notice of appeal does not change that obligation. NERC notes that FERC provided additional guidance in the September 16 Order on the basis for the remaining FAC-008 directive. NERC will work with the Standards Committee and the FAC-008 Standard Drafting Team to consider how a modified reliability standard that is responsive to the FAC-008 directive might be fashioned.

# **ALTERNATIVE A**

A. **Revise Rule 309 in the following manner (new language is underscored):**

**309. Filing of Reliability Standards for Approval by ERO Governmental Authorities**

1. **Filing of Reliability Standards for Approval** — Where authorized by applicable legislation or agreement, NERC shall file with the applicable ERO governmental authorities each reliability standard, modification to a reliability standard, or withdrawal of a standard that is approved by the board. Each filing shall be in the format required by the ERO governmental authority and shall include: a concise statement of the basis and purpose of the standard; the text of the standard; the implementation plan for the reliability standard; a demonstration that the standard meets the essential attributes of reliability standards as stated in Section 302; the drafting team roster; the ballot pool and final ballot results; and a discussion of public comments received during the development of the reliability standard and the consideration of those comments.
2. **Remanded Reliability Standards and Directives to Develop Standards** — If an ERO governmental authority remands a reliability standard to NERC or directs NERC to develop a reliability standard, NERC shall within five (5) business days notify all other applicable ERO governmental authorities, and shall within thirty (30) calendar days report to all ERO governmental authorities a plan and timetable for modification or development of the reliability standard. Standards that are remanded or directed by an ERO governmental authority shall be modified or developed using the *Reliability Standards Development Procedure*. NERC shall, during the development of a modification for the remanded standard or directed standard, consult with other ERO governmental authorities to coordinate any impacts of the proposed standards in those other jurisdictions. The urgent approval action procedure may be applied if necessary to meet a timetable for action required by the ERO governmental authorities, respecting to the extent possible the provisions in the standards development process for reasonable notice and opportunity for public comment, due process, openness, and a balance of interest in developing reliability standards. If the standards process does not result in a standard that addresses a specific matter that is identified in a directive issued by an applicable ERO governmental authority, then Rule 321 of these Rules of Procedure shall apply.
3. **Directives to Develop Standards under Extraordinary Circumstances** — An ERO governmental authority may, on its own initiative, determine that extraordinary circumstances exist requiring expedited development of a reliability standard. In such a case, the applicable agency may direct the development of a standard within a certain deadline. NERC staff shall prepare the standards authorization request and seek a stakeholder sponsor for the request. If NERC is unable to find a sponsor for the proposed standard, NERC will be designated as the requestor. The proposed standard will then proceed through the standards development process, using the urgent and emergency action procedures

described in the *Reliability Standards Development Procedure* as necessary to meet the specified deadline. The timeline will be developed to respect, to the extent possible, the provisions in the standards development process for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in developing reliability standards. If the standards process does not result in a standard that addresses a specific matter that is identified in a directive issued by an applicable ERO governmental authority, then Rule 321 of these Rules of Procedure shall apply, with appropriate modification of the timeline.

- 3.1 Consistent with all reliability standards developed under the urgent or emergency action process, each of the three possible follow-up actions as documented in the *Reliability Standards Development Procedure* are to be completed through the standards development process and are subject to approval by the ERO governmental authorities in the U.S. and Canada.

**B. Add a new rule to Section 300 of the Rules of Procedure, as follows (new language is underscored):**

**321. Special Rule to Address Certain Regulatory Directives**

1. The Standards Committee shall have the responsibility to ensure that standards drafting teams address specific matters that are identified in directives issued by applicable ERO governmental authorities, including equivalent alternatives. If the Board of Trustees is presented with a proposed standard that fails to address such directives, the Board of Trustees may remand, with instructions, the proposed reliability standard to the Standards Committee.
2. Upon a written finding by the Board of Trustees that a ballot pool has failed to approve a proposed reliability standard that contains a provision to address a specific matter identified in a directive issued by an ERO governmental authority, the Board of Trustees shall remand the proposed reliability standard to the Standards Committee, with instructions to (i) convene a public technical conference to discuss the issues surrounding the regulatory directive, including whether or not the proposed standard is just, reasonable, in the public interest, helpful to reliability, practical, technically sound, technically feasible, and cost-justified; (ii) working with NERC staff, prepare a memorandum discussing the issues, an analysis of the alternatives considered and other appropriate matters; and (iii) re-ballot the proposed reliability standard one additional time, with such adjustments in the schedule as are necessary to meet the deadline contained in paragraph 2.1 of this Rule.

- 2.1 Such a re-ballot shall be completed within forty-five (45) days of the remand. The Standards Committee memorandum shall be included in the materials made available to the ballot pool in connection with the re-ballot.
- 2.2 In any such re-ballot, negative votes without comments related to the proposal shall be counted for purposes of establishing a quorum, but only affirmative votes, and negative votes with comments related to the proposal, shall be counted for purposes of determining the number of votes cast and whether the proposed standard has been approved.
3. If the re-balloted proposed reliability standard achieves at least an affirmative two-thirds majority vote of the weighted segment votes cast, with a quorum established, then the proposed reliability standard shall be deemed approved by the ballot pool and shall be considered by the Board of Trustees for approval.
4. If the re-balloted proposed reliability standard fails to achieve at least an affirmative two-thirds majority vote of the weighted segment votes cast, but does achieve at least a sixty percent affirmative majority of the weighted segment votes cast, with a quorum established, then the Board of Trustees may consider the proposed reliability standard for approval under the following procedures:
  - 4.1 The Board of Trustees shall issue notice of its intent to consider the proposed reliability standard and shall solicit written public comment particularly focused on the technical aspects of the provisions of the proposed reliability standard that address the specific matter identified in the regulatory directive, including whether or not the proposed standard is just, reasonable, in the public interest, helpful to reliability, practical, technically sound, technically feasible, and cost-justified.
  - 4.2 The Board of Trustees may, in its discretion, convene a public technical conference to receive additional input on the matter.
  - 4.3 After considering the developmental record, the comments received during balloting and the additional input received under subsections 4.1 and 4.2 of this rule, the Board of Trustees may act on the proposed reliability standard.
    - 4.3.1 If the Board of Trustees concludes that the proposed reliability standard should be adopted, then it shall approve the proposed reliability standard and direct that it be filed with applicable ERO governmental authorities with a request that it be made effective.

- 4.3.2 If the Board of Trustees concludes that the proposed reliability standard should not be adopted, then it shall direct that the proposed reliability standard and complete developmental record, including the additional input received under subsections 4.1 and 4.2 of this rule, be filed with the applicable ERO governmental authorities in response to the order giving rise to the regulatory directive, along with a recommendation that the standard not be made effective and an explanation of the basis for the recommendation.
5. If the re-balloted proposed reliability standard that contains a provision to address a specific matter identified in a directive issued by an ERO governmental authority fails to achieve at least a sixty percent affirmative majority of the weighted segment votes cast, or the re-ballot fails to achieve a quorum, then NERC shall, within thirty days of the failed re-ballot, file a report with the applicable ERO governmental authority regarding the circumstances of the matter and, if applicable, request appropriate relief.
6. NERC shall on March 31<sup>st</sup> of each year file a report with applicable ERO governmental authorities on the status and timetable for addressing each outstanding directive to address a specific matter received from an applicable ERO governmental authority.



# **ALTERNATIVE B**

# PROPOSED ALTERNATIVE B IN RESPONSE TO MARCH 18 ORDER ON STANDARDS, WITH OPTIONS

DISCUSSION DRAFT October 13, 2010

CHANGES FROM ALTERNATIVE A ARE MARKED IN **RED UNDERSCORING AND ~~STRIKE-OUT~~**

## A. Revise Rule 309 in the following manner (new language is underscored):

### 309. Filing of Reliability Standards for Approval by ERO Governmental Authorities

1. **Filing of Reliability Standards for Approval** — Where authorized by applicable legislation or agreement, NERC shall file with the applicable ERO governmental authorities each reliability standard, modification to a reliability standard, or withdrawal of a standard that is approved by the board. Each filing shall be in the format required by the ERO governmental authority and shall include: a concise statement of the basis and purpose of the standard; the text of the standard; the implementation plan for the reliability standard; a demonstration that the standard meets the essential attributes of reliability standards as stated in Section 302; the drafting team roster; the ballot pool and final ballot results; and a discussion of public comments received during the development of the reliability standard and the consideration of those comments.
2. **Remanded Reliability Standards and Directives to Develop Standards** — If an ERO governmental authority remands a reliability standard to NERC or directs NERC to develop a reliability standard, NERC shall within five (5) business days notify all other applicable ERO governmental authorities, and shall within thirty (30) calendar days report to all ERO governmental authorities a plan and timetable for modification or development of the reliability standard. Standards that are remanded or directed by an ERO governmental authority shall be modified or developed using the *Reliability Standards Development Procedure*. NERC shall, during the development of a modification for the remanded standard or directed standard, consult with other ERO governmental authorities to coordinate any impacts of the proposed standards in those other jurisdictions. The urgent approval action procedure may be applied if necessary to meet a timetable for action required by the ERO governmental authorities, respecting to the extent possible the provisions in the standards development process for reasonable notice and opportunity for public comment, due process, openness, and a balance of interest in developing reliability standards. If the Board of Trustees determines that the standards process ~~does did~~ not result in a standard that addresses a specific matter that is identified in a directive issued by an applicable ERO governmental authority, then Rule 321 of these Rules of Procedure shall apply.

3. **Directives to Develop Standards under Extraordinary Circumstances** — An ERO governmental authority may, on its own initiative, determine that extraordinary circumstances exist requiring expedited development of a reliability standard. In such a case, the applicable agency may direct the development of a standard within a certain deadline. NERC staff shall prepare the standards authorization request and seek a stakeholder sponsor for the request. If NERC is unable to find a sponsor for the proposed standard, NERC will be designated as the requestor. The proposed standard will then proceed through the standards development process, using the urgent and emergency action procedures described in the *Reliability Standards Development Procedure* as necessary to meet the specified deadline. The timeline will be developed to respect, to the extent possible, the provisions in the standards development process for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in developing reliability standards. If the Board of Trustees determines that the standards process ~~does did~~ not result in a standard that addresses a specific matter that is identified in a directive issued by an applicable ERO governmental authority, then Rule 321 of these Rules of Procedure shall apply, with appropriate modification of the timeline.

- 3.1 Consistent with all reliability standards developed under the urgent or emergency action process, each of the three possible follow-up actions as documented in the *Reliability Standards Development Procedure* are to be completed through the standards development process and are subject to approval by the ERO governmental authorities in the U.S. and Canada.

**B. Add a new rule to Section 300 of the Rules of Procedure, as follows (new language is underscored):**

**321. Special Rule to Address Certain Regulatory Directives**

1. The Standards Committee shall have the responsibility to ensure that standards drafting teams address specific matters that are identified in directives issued by applicable ERO governmental authorities, including equivalent alternatives. If the Board of Trustees is presented with a proposed standard that fails to address such directives, the Board of Trustees may remand, with instructions, the proposed reliability standard to the Standards Committee.

**[OPTION 1 FOR SECTION 2; ALSO SEE OPTION 2, BEGINNING ON PAGE 3.]**

2. Upon a written finding by the Board of Trustees that a ballot pool has failed to approve a proposed reliability standard that contains a provision to address a specific matter identified in a directive issued by an ERO governmental authority, the Board of Trustees shall **direct the Standards Committee (in the first instance) or NERC management (in the alternative) to prepare a draft reliability standard**

that addresses the regulatory directive, taking account of the entire developmental record pertaining to the matter. remand the proposed reliability standard to the Standards Committee, with instructions to (i) convene a public technical conference to discuss the issues surrounding the regulatory directive, including whether or not the proposed standard is just, reasonable, in the public interest, helpful to reliability, practical, technically sound, technically feasible, and cost-justified; (ii) working with NERC staff, prepare a memorandum discussing the issues, an analysis of the alternatives considered and other appropriate matters; and (iii) re-ballot the proposed reliability standard one additional time, with such adjustments in the schedule as are necessary to meet the deadline contained in paragraph 2.1 of this Rule.

- 2.1 The draft reliability standard shall thereafter be posted for a 45-day public comment period.
- 2.2 If, after considering the entire developmental record (including the comments received under paragraph 2.1 of this Rule), the Board of Trustees finds that the draft reliability standard, with such modifications as the Board of Trustees determines are appropriate in light of the comments received, is just, reasonable, in the public interest, practical, technically sound, technically feasible, cost-justified and serves the best interests of reliability of the bulk power system, then the Board of Trustees shall approve the draft standard and direct that the draft standard be filed with ERO governmental authorities with a request that the draft standard be made effective.
- 2.3 If, after considering the entire developmental record (including the comments received under paragraph 2.1 of this Rule), the Board of Trustees is unable to find that the draft reliability standard, even with modifications, is just, reasonable, in the public interest, practical, technically sound, technically feasible, cost-justified and serves the best interests of reliability of the bulk power system, then the Board of Trustees shall approve the draft standard as a compliance filing in response to the regulatory directive and direct that the standard be filed with the ERO governmental authority issuing the regulatory directive with a recommendation that the draft standard not be made effective.
- 2.4 The filing of the draft reliability standard under either paragraph 2.2 or paragraph 2.3 of this Rule shall include an explanation of the basis for the decision by the Board of Trustees.

3. NERC shall on March 31<sup>st</sup> of each year file a report with applicable ERO governmental authorities on the status and timetable for addressing each outstanding directive to address a specific matter received from an applicable ERO governmental authority.

**OPTION 2 FOR SECTION 2; THIS SECTION WOULD REPLACE SECTION 2, ABOVE**

2. Upon a written finding by the Board of Trustees that a ballot pool has failed to approve a proposed reliability standard that contains a provision to address a specific matter identified in a directive issued by an ERO governmental authority, the Board of Trustees shall ~~direct the Standards Committee (in the first instance) or NERC management (in the alternative) to prepare a draft reliability standard that addresses the regulatory directive, taking account of the entire developmental record pertaining to the matter. remand the proposed reliability standard to the Standards Committee, with instructions to (i) convene a public technical conference to discuss the issues surrounding the regulatory directive, including whether or not the proposed standard is just, reasonable, in the public interest, helpful to reliability, practical, technically sound, technically feasible, and cost-justified; (ii) working with NERC staff, prepare a memorandum discussing the issues, an analysis of the alternatives considered and other appropriate matters; and (iii) re-ballot the proposed reliability standard one additional time, with such adjustments in the schedule as are necessary to meet the deadline contained in paragraph 2.1 of this Rule.~~
- 2.1 The draft reliability standard shall thereafter be posted for a 45-day public comment period.
- 2.2 After considering the entire developmental record (including the comments received under paragraph 2.1 of this Rule), the Board of Trustees may direct that the draft standard be filed with ERO governmental authorities with a recommendation that the draft standard be made effective.
- 2.3 After considering the entire developmental record (including the comments received under paragraph 2.1 of this Rule), the Board of Trustees may direct that the standard be filed with the ERO governmental authority issuing the regulatory directive with a recommendation that the draft standard not be made effective.

- 2.4 The filing of the draft reliability standard under either paragraph 2.2 or paragraph 2.3 of this Rule shall include a discussion of the basis for the recommendation of the Board of Trustees, including whether the draft reliability standard is just, reasonable, in the public interest, practical, technically sound, technically feasible, cost-justified and serves the best interests of reliability of the bulk power system.
- ~~2.5 — Such a re-ballot shall be completed within forty five (45) days of the remand. The Standards Committee memorandum shall be included in the materials made available to the ballot pool in connection with the re-ballot.~~
- ~~2.6 — In any such re-ballot, negative votes without comments related to the proposal shall be counted for purposes of establishing a quorum, but only affirmative votes, and negative votes with comments related to the proposal, shall be counted for purposes of determining the number of votes cast and whether the proposed standard has been approved.~~
- ~~3. — If the re-balloted proposed reliability standard achieves at least an affirmative two-thirds majority vote of the weighted segment votes cast, with a quorum established, then the proposed reliability standard shall be deemed approved by the ballot pool and shall be considered by the Board of Trustees for approval.~~
- ~~4. — If the re-balloted proposed reliability standard fails to achieve at least an affirmative two-thirds majority vote of the weighted segment votes cast, but does achieve at least a sixty percent affirmative majority of the weighted segment votes cast, with a quorum established, then the Board of Trustees may consider the proposed reliability standard for approval under the following procedures:~~
- ~~4.1 — The Board of Trustees shall issue notice of its intent to consider the proposed reliability standard and shall solicit written public comment particularly focused on the technical aspects of the provisions of the proposed reliability standard that address the specific matter identified in the regulatory directive, including whether or not the proposed standard is just, reasonable, in the public interest, helpful to reliability, practical, technically sound, technically feasible, and cost-justified.~~
- ~~4.2 — The Board of Trustees may, in its discretion, convene a public technical conference to receive additional input on the matter.~~
- ~~4.3 — After considering the developmental record, the comments received during balloting and the additional input received under subsections 4.1~~

~~and 4.2 of this rule, the Board of Trustees may act on the proposed reliability standard.~~

~~4.3.1 If the Board of Trustees concludes that the proposed reliability standard should be adopted, then it shall approve the proposed reliability standard and direct that it be filed with applicable ERO governmental authorities with a request that it be made effective.~~

~~4.3.2 If the Board of Trustees concludes that the proposed reliability standard should not be adopted, then it shall direct that the proposed reliability standard and complete developmental record, including the additional input received under subsections 4.1 and 4.2 of this rule, be filed with the applicable ERO governmental authorities in response to the order giving rise to the regulatory directive, along with a recommendation that the standard not be made effective and an explanation of the basis for the recommendation.~~

~~5. If the re-balloted proposed reliability standard that contains a provision to address a specific matter identified in a directive issued by an ERO governmental authority fails to achieve at least a sixty percent affirmative majority of the weighted segment votes cast, or the re-ballot fails to achieve a quorum, then NERC shall, within thirty days of the failed re-ballot, file a report with the applicable ERO governmental authority regarding the circumstances of the matter and, if applicable, request appropriate relief.~~

~~6. NERC shall on March 31<sup>st</sup> of each year file a report with applicable ERO governmental authorities on the status and timetable for addressing each outstanding directive to address a specific matter received from an applicable ERO governmental authority.~~

## **Electricity Sub-Sector Coordinating Council Critical Infrastructure Strategic Roadmap**

### **Action Required**

Approve the Electricity Sub-Sector Coordinating Council's (ESCC) *Critical Infrastructure Strategic Roadmap*.

### **Background**

At its August 4–5, 2010 meeting, NERC's Member Representatives Committee and Board of Trustees discussed the ESCC's draft *Critical Infrastructure Strategic Roadmap* (Strategic Roadmap). The Strategic Roadmap provides the framework to identify those severe-impact risks that have the potential to seriously disrupt the supply of electricity to customers, and promotes the actions necessary to enhance reliability and resilience.

Following these discussions, the ESCC revised the Strategic Roadmap to clarify and strengthen it a number of areas. In particular;

- A new section has been added, "Building on Existing Capabilities".
- A new "Appendix – Strategic Initiatives Plan" prioritizes sixteen (16) specific initiatives and target dates.
- A new "Appendix – Bibliography" provides contextual links to industry and government documents.

At its August 30, 2010 meeting, the ESCC accepted these enhancements and suggested NERC post the Strategic Roadmap to seek broader public input. The document was posted on September 2, 2010 for a 30-day comment period.

As a result, NERC received 12 sets for a total of 94 individual comments, all of which were of a clarifying or editorial nature, and the Strategic Roadmap has been revised to reflect many of these comments. The ESCC will review this revised version at its October 20, 2010 meeting. The revised document is located on the NERC web site via the following link:

[http://www.nerc.com/docs/escc/ESCC\\_Strat\\_Roadmap\\_V4\\_7\\_Oct2010\\_clean.pdf](http://www.nerc.com/docs/escc/ESCC_Strat_Roadmap_V4_7_Oct2010_clean.pdf).

Implementation of the initiatives proposed in the Strategic Roadmap will be accomplished through the leadership of NERC and its technical committees, in particular, the Planning, Operating, and Critical Infrastructure Protection Committees. The implementation plan is described in the Critical Infrastructure Strategic Initiatives Coordinated Action Plan (Agenda Item 16.b).



## Critical Infrastructure Strategic Initiatives Coordinated Action Plan

### Action Required

Approve

### Background

On May 17, 2010, NERC's Board of Trustees approved the report, entitled [\*High Impact, Low Frequency Event Risk to the North American Bulk Power System\*](#) (HILF Report). Subsequently:

- Board Chair, John Q. Anderson, requested that the technical committees develop a plan addressing the **Proposals for Action** identified in the report.
- The Electricity Sub-sector Coordinating Council (ESCC) developed a high-level strategic plan requiring technical committee support, entitled "[\*Critical Infrastructure Strategic Roadmap\*](#)."

In response to the release of the HILF Report and to address these additional considerations, the chairs and vice chairs of the Planning, Operating, and Critical Infrastructure Protection Committees (technical committees) met with NERC staff and jointly drafted a plan. In parallel, the re-formation of the ESCC was approved and implemented, with an initial strategic plan that identified three key priorities for focused attention: 1) coordinated physical attack, 2) coordinated cyber attack, and 3) Geomagnetic Disturbance (GMD) incident. These priorities were reflected in the preliminary action plan, and on September 14–16, 2010 the Planning, Operating, and Critical Infrastructure Protection Committees approved the direction and supported the technical committee leadership's completion of the draft plan, entitled, *Critical Infrastructure Strategic Initiatives Coordinated Action Plan*.

The revised document is located on the NERC web site via the following link:

[http://www.nerc.com/docs/ciscap/Critical\\_Infrastructure\\_Strategic\\_Initiatives\\_Coordinated\\_Action\\_Plan\\_101210.pdf](http://www.nerc.com/docs/ciscap/Critical_Infrastructure_Strategic_Initiatives_Coordinated_Action_Plan_101210.pdf).

To provide oversight, guidance, and coordination of activities supporting the action plan, the technical committees and their leadership have formed a Joint Technical Steering Group comprising leadership from the technical committees. Consistent with the ESCC's Critical Infrastructure Strategic Roadmap and the Action Plan priorities, the Planning Committee, with the support and endorsement of the Operating Committee, approved the formation of two task forces:

- The Geomagnetic Disturbance Task Force (GMDTF), to investigate the risk to bulk power system reliability in North America from severe-impact GMD events, develop industry approaches to mitigate this risk, make recommendations on industry practices, and provide input to the NERC Standards process.
- The Spare Equipment Task Force (SETF), to make recommendations to uniformly collect information on long-lead time electric transmission system critical spare equipment, a means for obtaining and communicating this information to industry, and enhancements to NERC's Spare Equipment Database.

## **Compliance and Certification Committee Report**

### **Action Required**

None

### **Background**

This report summarizes the key activities of the Compliance and Certification Committee (CCC) and its associated subgroups in support of the NERC mission and goals and the CCC charter. These activities have been performed since the last NERC Board of Trustees meeting in Toronto, Canada.

### **Stakeholder Perception Survey**

The CCC is finalizing a report on the Stakeholder Perception Survey that it conducted in August. The survey gathered comments with respect to stakeholders' perceptions of NERC's policies, practices and effectiveness of the Compliance and Enforcement Program (CMEP), Registration program, and Certification program. The survey addressed the respondents' experiences in relation to NERC's handling of the: CMEP; Sanction Guidelines; Entity Registration and Certification. A report will be forwarded to the board for review and acceptance in the near future.

### **Spot Check by CCC of NERC Reliability Standards Development and Organization Registration and Certification Programs**

To fulfill its obligations to monitor NERC's compliance with the Rules of Procedure regarding the Reliability Standards and the CMEP, CCC staff will be conducting an on-site spot check at the NERC's office in Princeton, New Jersey, on November 9-11, 2010.

### **NERC Self Certifications**

CCC has finalized its report on NERC's 2009 Self Certifications. NERC's Self Certification statements were submitted for the following four programs/areas:

1. Reliability Standards Development Procedure
2. Compliance Monitoring and Enforcement Program
3. Organization Registration and Certification Procedure
4. Reliability Standards Applicable to NERC

A separate report will be forwarded to the board for its review and direction.

### **NERC Regional Entity Audit Criteria**

The CCC is finalizing its annual review of the audit criteria used by NERC when it conducts Regional Entity Audits. These criteria are used by NERC when developing its Regional Entity Audit materials.

### **CCC Performance Metrics Working Group**

Under the direction of the CCC, the Performance Metrics Working Group's objectives are to develop reliability and compliance process metrics to provide input and support of NERC's Compliance Monitoring and Enforcement Program (CMEP). The working group also provides high level performance assessments based on the following principles:

1. CMEP Process Efficiency and Certainty
2. Direct Results/Guidance Feedback to Standards/Registered Entities
3. Material Timeliness for Compliance 'Stages'
4. Reliability Attribute Enhancements
5. Focus on Material Reliability and Compliance Attributes

The working group's scope document can be found at: <http://www.nerc.com/filez/pmwg.html>  
A report on the PMWG activities will be made to this November board meeting.

### **Other Activities**

The CCC is working with NERC staff to resolve differences between the Compliance Application Notice (CAN) and Standard Interpretation Processes.

The CCC issued comments to NERC regarding the Multi-Regional Registered Entity (MRRE) process. The CCC believes that the MRRE process is needed and it has provided editorial comments and identified additional areas that need to be considered. The CCC is awaiting the next draft of the MRRE process for further review.

### **Issues**

For the next NERC budget cycle, an item is needed for future independent audits of the ERO for those functions under the CCC's purview.

### **CCC Meetings**

The CCC held its quarterly meeting on September 8-9 in Vancouver, Canada. NERC Board Member Ken Peterson attended the meeting. The June CCC Denver meeting minutes are posted at: <http://www.nerc.com/filez/ccmin.html>

## Critical Infrastructure Protection Committee Report

### Action Required

None

### Background

This report provides a summary of the key activities of the Critical Infrastructure Protection Committee (CIPC) and its associated subgroups in support of the NERC mission and goals and the CIPC charter. The CIPC meeting minutes for the September 15-16 meeting are not yet posted on NERC's web site.

Critical Infrastructure Strategic Initiatives Coordinated Action Plan. The CIPC, Operating Committee (OC) and Planning Committee (PC) officers and NERC staff participated on a number of conference calls to develop the referenced plan report for the board's consideration for approval.

Classified Briefing for CIPC and Other Industry Participants. The CIPC continues to work with DHS and DOE to finalize the details of a classified briefing in conjunction with its December CIPC meeting in Tampa, FL. Last year DHS and DOE provided a classified briefing in Atlanta in conjunction with the CIPC meeting and it was well received. Scheduling briefings in conjunction with committee meetings eliminates the need for attendees to schedule separate travel to Washington, DC, where most briefings are held. The efforts of DHS and DOE in this area are very much appreciated and further the goal of increasing the value of the public-private partnership.

CIPC Continues to Provide a Venue for All Sectors to Discuss CIP Matters. The CIPC meetings provide opportunity for significant and needed discuss on various critical infrastructure protection matters, including those related to the CIP standards, copper theft, recent NERC alerts, communications with government partners, and other current areas of concern.

### CIPC Subgroup Highlights

The CIPC has five subgroups and highlights of their work assignments are shown below.

1. Business Continuity Guideline Task Force (BCGTF). The BCGTF is currently assigned the task of updating and combining three CIPC business continuity-related guidelines into one guideline specific to the electricity sub-sector for industry use.
2. Control Systems Security Working Group (CSSWG). The CSSWG is currently assigned the task of updating and combining nine CIPC control system-related guidelines into one guideline specific to the electricity sub-sector for industry use. The CSSWG anticipates possible future assignments for the development of new guidelines and other reference materials related to the CIP standards that are currently being revised. In addition, the CSSWG will likely be assigned work from the Coordinated Action Plan Report mentioned above.
3. Protecting Sensitive Information Guideline Task Force (PSIGTF). The PSIGTF is currently assigned the task of updating the CIPC Protecting Sensitive Information Guideline to take into consideration recent developments and to make it more specific to the electricity sub-sector.

4. Substation Guideline Task Force (SGTF). The SGTF is currently assigned the task of updating the CIPC Physical Security Substation Guideline to take into consideration recent developments and to make it more specific to the electricity sub-sector.
5. Future working groups or task forces will be created as needed to address other guidelines that need to be updated, to complete work related to the Coordinated Action Plan Report and to provide support to new or ongoing standards development work as requested by the Standards Committee.

## Operating Committee Report

### Action Required

None

### Background

This report provides a summary of the key activities of the Operating Committee (OC) and its associated subcommittees in support of the NERC or OC mission and corporate goals. The September 2010 OC meeting minutes are posted at:

<http://www.nerc.com/docs/docs/oc/OC%20Minutes%20-14-15Sep10.pdf>.

### Critical Infrastructure Strategic Initiatives: Coordinated Action Plan

1. The technical committees approved the direction of the draft [Critical Infrastructure Strategic Initiatives Coordinated Action Plan](#) (Action Plan) developed by the technical committee officers and NERC staff to address:
  - The proposals for action presented in the [High-Impact, Low-Frequency Event Risk to the North American Bulk Power System](#) report;
  - The direction provided by the Chair of NERC's Board of Trustees; and
  - Alignment with the strategic initiatives identified in the Electricity Sub-Sector Coordinating Council's [Critical Infrastructure Strategic Roadmap](#).
2. Comments on the *Action Plan* were requested from the technical committees, who authorized their officers to consider the comments in formulating the final Action Plan for presentation to the NERC Board of Trustees at this meeting.

In support of the Action Plan:

3. The OC and the Planning Committee (PC) approved the scope of a joint Geo-Magnetic Disturbance Task Force (GMDTF) that will develop a technical white paper describing the evaluation of scenarios of potential GMD impacts, identifying key bulk power system parameters under those scenario conditions, and evaluating potential reliability implications of these incidents. Based on these technical foundation elements, the white paper will identify potential mitigation, recovery, planning, and operational approaches that mitigate this risk

### Event Analysis and Investigation Process

The PC and OC, through the Event Analysis Working Group (EAWG), as well as the Regional Entities and NERC operations and engineering staffs, posted two draft documents for comments: an *Electric Reliability Organization Event Analysis Process* document and an approach for field testing the process. The comments were incorporated into a revised draft that was discussed on a webcast on October 12, 2010.

## Subgroup Highlights

The OC now has 16 subgroups, five of which jointly report to the PC and the OC.

### Joint OC/PC Subgroup Highlights

1. Event Analysis Working Group (EAWG) – The OC and PC approved proceeding with the field trial for the new event analysis process using the revised event analysis process document discussed above.
2. Reliability Metrics Working Group (RMWG) – The OC approved the RMWG's white paper *Integrated Bulk Power Risk Assessment Concepts* and eight 2010 reliability metric proposals.
3. Reliability Fundamentals Working Group (RFGW) – At the June 2010 meetings, the activities of the RFGW were temporarily suspended until the March 2011 meeting, when its status will be re-evaluated. The RFGW is charged with oversight of the *Reliability Concepts Document*.
4. Geo-Magnetic Disturbance Task Force (GMDTF) – As discussed above, the OC and PC approved the scope of the GMDTF.

### Other Subgroup Highlights

- Reliability Assessment Subcommittee (RAS) – The OC approved three RAS documents for presentation to the NERC board for approval to release publicly:
  1. 2010 Scenario Reliability Assessment Report: *Potential Impacts of Environmental Regulations: Early Fossil-Fired Unit Retirements; Phase I: Impact on Planning Reserve Margins*
  2. *2009/2010 Post-Winter Operational Reliability Assessment*
  3. *2010 Long-Term Reliability Assessment*
- Reliability Impacts on Climate Change Initiatives Task Force – The OC and PC disbanded this task force, since it has fulfilled the tasks set forth in its scope.
- Smart Grid Task Force (SGTF) – The OC approved the report *Reliability Consideration from Integration of Smart Grid*. The SGTF's scope will be updated to incorporate the work plan included in the report.
- Real-time Applications of Phasor Measurement Units to Improve Reliability Task Force – The OC approved the report *Real-Time Application of Synchrophasors for Improving Reliability*.
- Application of EAWG Field Trial Process – Two transmission operators, by use of the proposed Event Analysis Process, analyzed a bulk power system event within eight weeks of the event to determine lessons learned. The OC encouraged sharing of similar examples, especially given NERC's desire to be a learning organization.

## Personnel Certification Governance Committee Report

### Action Required

None

### Information

#### 2010 Examination Passing Rate

End of year certification exam pass rate rose from 61.8 percent in 2009 to 69.4 percent in 2010 as of August 31, 2010. The overall pass rate since 1998 is 78.0 percent. A total of 1,005 certification exams were taken in 2009, which is normal. As of August 31, 2010 a total of 582 exams were taken. This decrease is due to the fact that all older five-year certificates have transitioned into three-year certificates.

#### Credential Maintenance Using Continuing Education (CE) Hours

The certification program began allowing operators to use CE Hours to maintain their credentials on October 1, 2006. In that year no one had accumulated enough CE Hours to renew their credential using CE Hours. The table below will show the number of credentials maintained annually since 2006.

Year	Credentials Maintained	New Certificates
2006	0	943
2007	109	729
2008	833	634
2009	1,200	621
2010 <sup>1</sup>	1,007	404
Totals	3,149	3,331

This table shows that the number of new certificates issued annual is declining. However, this decline is due to the increase in the number of operators now maintaining their credentials using CE Hours instead of retaking an exam to renew their credential.

#### Increasing Certified Operator Population

In 2009 the total number of certified system operators with active credentials rose from around 5,600 to 6,060. As of August 31, 2010 there are 6,116 certified system operators. The population is expected to remain at this level or even grow over the next two to three years as more registered entities are required to register as Transmission Operators, which involves staffing their real-time control centers with certified system operators.

#### Development of New Certification Exams

The Examination Working Group (EWG) is in the process of preparing the new certification exams for each of the four credentials. Exam release is scheduled for the first quarter of 2011. As with previous exam releases, there will be a one-month period when no exams will be administered while the new exams are being uploaded and tested. An announcement will be

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<sup>1</sup> As of August 31, 2010.



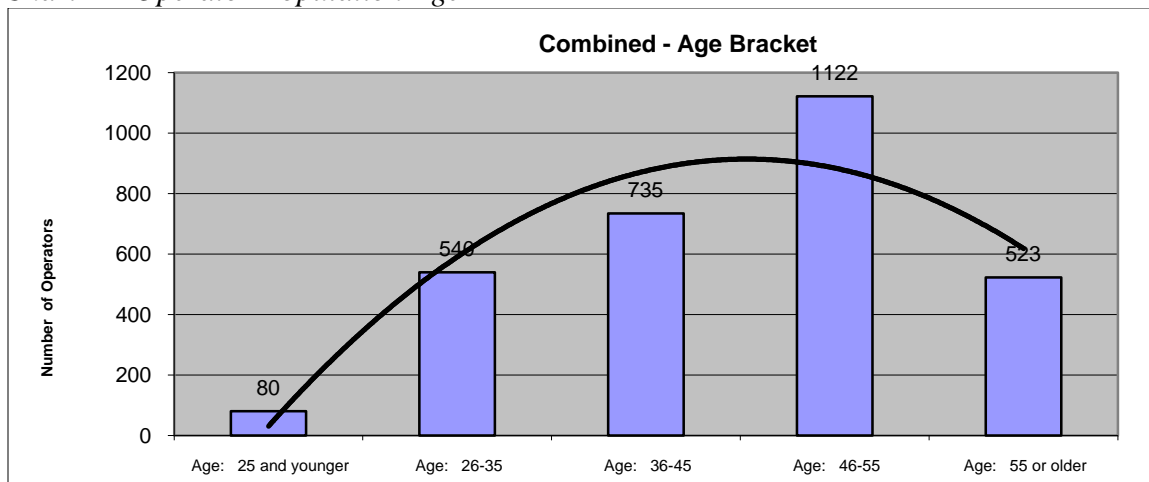
made in October or November 2010 to announce the exam “blackout” period to allow prospective test-takers time to plan accordingly.

### System Operator Demographics

Demographic information has been collected from about 3,000 system operators since early 2009. The information combines system operators taking their initial exams with those who renewed their credentials through continuing education. Three full years are needed to survey the entire system operator population, so this is incomplete information. While it is premature to draw conclusions with these data, an initial picture of the certified system operator population is emerging.

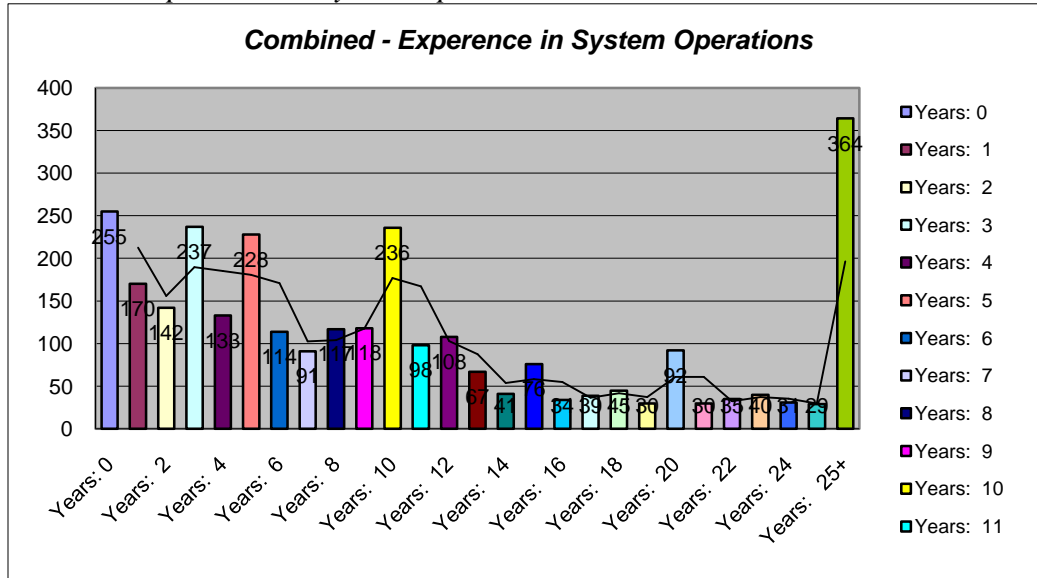
NERC is creating a Dashboard display that will be updated quarterly to show current trends that are obtained from the demographics collected.

*Chart 1 – Operator Population Age*



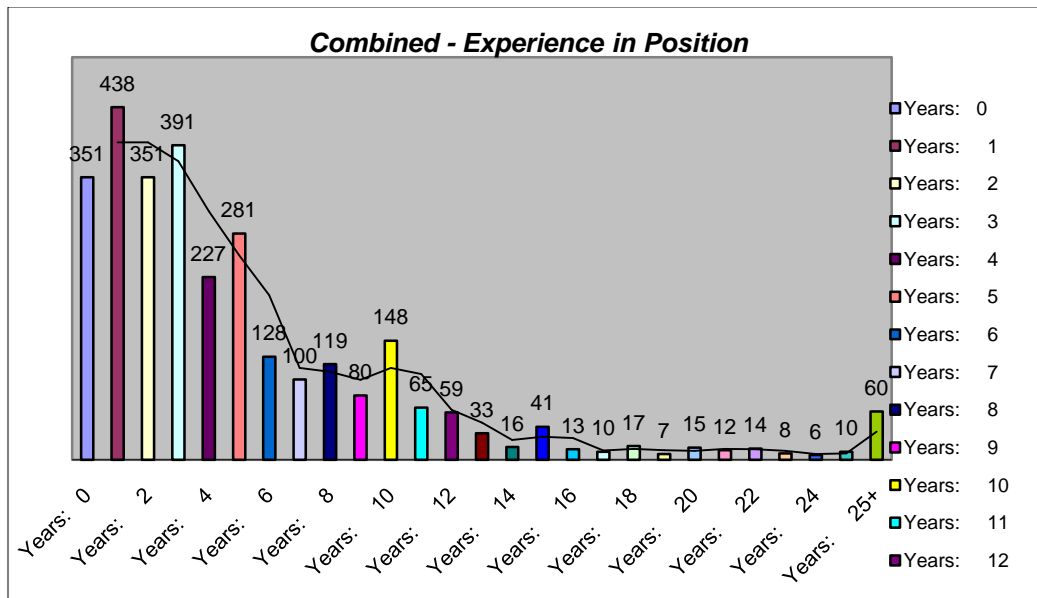
The largest age bracket is for ages 46-55. Note that 55 percent of system operators are over 45 and nearing retirement age. Relatively few younger people (25 and younger) are entering into system operations to fill the ranks of retirees.

Chart 2 – Experience in System Operations



About 60 percent of the certified population has 10 years or less experience in system operations, with 8.5 percent having none. The average experience is 10.4 years with nine years being the median. Traditionally system operators had many years of system operations experience before entering the profession. The data appear to indicate this is no longer the case.

Chart 3 - Experience in Position



This chart shows that 72 percent of system operators have six years or less experience in their current position. Half of the population has 3 years or less experience performing their job. The average experience is 5.2 years in the position.

## Planning Committee Report

### Action Required

None

### Background

This report provides a summary of the key activities of the Planning Committee (PC) and its associated subcommittees in support of the NERC or PC mission and corporate goals. The September 2010 PC meeting minutes are posted at [http://www.nerc.com/docs/pc/Draft\\_%20PC\\_%20Minutes\\_%20Sept\\_%202010\\_09\\_28\\_10.pdf](http://www.nerc.com/docs/pc/Draft_%20PC_%20Minutes_%20Sept_%202010_09_28_10.pdf).

### Critical Infrastructure Strategic Initiatives Coordinated Action Plan.

1. The technical committees approved the direction of the draft [Critical Infrastructure Strategic Initiatives Coordinated Action Plan](#) (*Action Plan*) developed by the technical committee officers and NERC staff to address:
  - The proposals for action presented in the [High-Impact, Low-Frequency Event Risk to the North American Bulk Power System](#) report;
  - The direction provided by the Chair of NERC's Board of Trustees; and
  - Alignment with the strategic initiatives identified in the Electricity Sub-Sector Coordinating Council's [Critical Infrastructure Strategic Roadmap](#).
2. Comments on the *Action Plan* were requested from the technical committees, who authorized their officers to consider the comments in formulating the final *Action Plan* for presentation to the NERC Board of Trustees at this meeting.

In support of the *Action Plan*:

3. The PC approved the scope of a Spare Equipment Database Task Force (SEDTF), The Spare Equipment TF will develop a whitepaper that identifies recommendations and conclusions, along with options, for enhancing spare equipment availability to address HILF type events. The preference would be to approach this efficiently to optimize availability and minimize any long-term overhead obligations, while addressing spare equipment that is vital to the recovery and restoration of the bulk power system from physical attacks or geomagnetic disturbances (GMD).
4. The PC and the Operating Committee (OC) approved the scope of a joint Geomagnetic Disturbance Task Force (GMDTF) that will develop a technical white paper describing the evaluation of scenarios of potential GMD impact, identifying key bulk power system parameters under those scenario conditions and evaluating potential reliability implications of these incidents. Based on these technical foundation elements, the white paper will identify potential mitigation, recovery, planning, and operational approaches that mitigate this risk

## **Event Analysis Process.**

The PC and OC, through the Event Analysis Working Group (EAWG), as well as the Regional Entities and NERC operations and engineering staffs, posted two draft documents for comments: an *Electric Reliability Organization Event Analysis Process* document and an approach for field testing the process over the next three or more months. The comments were incorporated into a revised draft that was presented to the industry in a webcast on October 12, 2010 to facilitate the conduct of the field test, as well as gaining further refinements adopted for the field test. The objective is to encourage a bottoms-up approach to conducting event analyses and providing increased opportunities for sharing lessons learned and thereby enhancing overall BES reliability.

## **Subgroup Highlights**

The PC now has 20 subgroups, five of which jointly report to the PC and the OC.

### **Joint OC/PC subgroups highlights**

1. *Event Analysis Working Group (EAWG)*. The OC and PC approved proceeding with the field trial of the new Event Analysis Process using the revised process document discussed above.
2. *Reliability Metrics Working Group (RMWG)*. The PC approved the RMWG's white paper *Integrated Bulk Power Risk Assessment Concepts* and eight of nine 2010 reliability metric proposals.
3. *Integration of Variable Generation Task Force (IVGTF)*. The PC approved the report *Flexibility Requirements and Metrics for Variable Generation: Implications for System Planning Studies* and requested comments on the draft report *Potential Reliability Impacts of Emerging Flexible Resources*.
4. *Reliability Fundamentals Working Group (RFWG)*. At the June 2010 meetings, the activities of the RFWG were temporarily suspended until the March 2011 meeting, when its status will be re-evaluated. The RFWG is charged with the oversight of the *Reliability Concepts Document*.
5. *Geomagnetic Disturbance Task Force (GMDTF)*. As discussed above, the GMDTF was approved at the OC's and PC's September meetings.

### **Other Subgroup Highlights**

- *Reliability Assessment Subcommittee (RAS)*: The PC approved for presentation to the NERC board for approval to publish three RAS documents:
  1. 2010 Scenario Reliability Assessment Report: *Potential Impacts of Environmental Regulations: Early Fossil-Fired Unit Retirements; Phase I: Impact on Planning Reserve Margins*
  2. *2009/2010 Post-Winter Operational Reliability Assessment*
  3. *2010 Long-Term Reliability Assessment*
- *Reliability Impacts on Climate Change Initiatives Task Force (RICCITF)*: This task force was disbanded, having fulfilled the tasks set forth in its scope. NERC staff will monitor future climate change legislation or related U.S Environmental Protection Agency (EPA) rulemakings seeking to regulate CO2 under existing legislation and advise the PC regarding the timing and scope of potential actions warranted to assess the reliability impacts.

- *G&T Reliability Planning Models Task Force (GTRPMTF)*: The PC approved the task force's report recommendation, which was to approve the *Methodology and Metrics* document and implementation steps. The GTRPMTF will, based on these initial efforts, formulate a common reporting format for consistent model information, and potentially modify the methodology based on the initial results. After a consistent and validated approach has been determined, the PC's Resource Issues Subcommittee will be responsible for coordinating the development of NERC-wide probabilistic assessments.
- *Loss-of Load Expectation Working Group (LOLEWG)*: The LOLEWG is a subgroup whose scope is specifically limited to information exchange among probabilistic resource adequacy practitioners. It held its first meeting on April 27–28, 2010, which was attended by approximately 60 people, both in person and on the Web. A future meeting is planned in January 2011.
- *System Protection and Control Subcommittee (SPCS)*: The PC approved the SPCS proceeding with a white paper on issues related to protection system response to power swings. The white paper will be developed jointly with the Transmission Issues Subcommittee [we should describe what the reliability objectives of this white paper will be addressing]. The SPCS also discussed issues that had been raised by members regarding the approval and updating of SPCS-produced reports. The discussion widened into a consideration of the processes for approvals, industry comments, and ongoing updates for PC developed and approved documents in general. The PC Executive Committee will consider the subcommittee's comments as well as those of the Executive Committee to recommend a PC process for approving, considering public comments, and maintaining updating reports.
- *Data Coordination Subcommittee (DCS)*: In response to comments it received to a draft white paper *Planning Data Issues and Recommendations*, the DCS developed a seven-page document *Review of DCS White Paper Key Issues*. The reliability objective of this effort is to address and prioritize enhancements in the data and model development efforts underlying the reliability assessments conducted throughout North America. The DCS and requested PC comments to these four core data collection issues:
  1. Is facility and load data below 100 kV, the limits of the Bulk Electric System (BES) in most regions, essential for accurate BES results from steady-state and dynamics response modeling?
  2. To what extent should data below 100 kV be required?
  3. How should entities that are interconnected to the Bulk Power System (i.e., "users, owners, and operators") be required to provide existing facility and forecasted load data?
  4. How should planned (i.e., future) facility data be acquired and incorporated?
- *Smart Grid Task Force (SGTF)*: The PC approved the report *Reliability Consideration from Integration of Smart Grid*. The SGTF's scope will be updated to incorporate the work plan included in the report.

## Standards Committee Report

### Action Required

None

### Background

This report summarizes key activities of the Standards Committee (SC) and its associated subcommittees to accomplish six “High Priority Goals for 2010” adopted by the SC in February 2010, in support of the NERC mission and corporate goals. The report also addresses issues of policy concern to the Board of Trustees (board) and industry stakeholders that may be discussed during the November Member Representatives Committee (MRC) and board meetings.

The SC comprises two representatives from each of the 10 industry segments who are elected by the Registered Ballot Body segment they represent. Up to two additional members may be added to represent Canadian interests. SC oversees the development of NERC reliability standards and develops standard process improvements to ensure timely and efficient development of industry consensus in support of technically excellent reliability standards.

SC meeting minutes are posted at: <http://www.nerc.com/filez/scmin.html>. The Standards program home page, which includes links to currently effective standards, standards under development, and extensive resource documents, is located at: <http://www.nerc.com/page.php?cid=2>. See in particular the tabs located under [About Standards](#).

### Standards Committee High Priority Goals for 2010

The SC adopted six high priority goals at a special meeting in late February 2010:

- Demonstration and implementation of Results-Based Standards;
- Approval and implementation of the new Standard Processes Manual;
- Execution of the SC’s new charter;
- Development of effective alternatives to the formal interpretations process;
- Ensuring that reliability standards reflect NERC’s commitment to becoming a learning organization; and
- Enhanced communications with stakeholders, regulators, and others.

### Results-Based Standards

The NERC board, at its August 2010 meeting, handed off responsibility for implementing Results-Based Standards from the Ad-hoc Team to the SC. NERC staff coordinators and several drafting teams have been fully trained in the results-based process for developing reliability standards, and a two-hour industry webinar on this subject is scheduled for October 20. Two ongoing standards projects, Project 2007-07 Vegetation Management and Project 2009-01 Disturbance and Sabotage Reporting, have already applied the results-based concepts to develop draft standards.

## **Standard Processes Manual**

The SC is pleased to report that the new [Standard Processes Manual](#) (SPM) was approved by FERC on September 3, 2010, subject to the submission of a compliance filing that addresses one specific concern identified by FERC regarding the enforceable elements of a Reliability Standard. A proposed modification to the SPM to address FERC's September 3 order is now under industry review and ballot, and should be timely completed for approval by the board on November 19. Implementation of the SPM may entail changes to several SC [Resource Documents](#), such as the Drafting Team Guidelines and the Roles and Responsibilities Document. Further, as ongoing standards projects come before the SC for additional action, such as moving from drafting to formal comment and balloting, the SC will arrange a smooth transition from the old Reliability Standards Development Procedure, Version 7 to the new SPM.

## **Execution of the Standards Committee Charter**

The SC's revised charter requires it to actively manage project workloads in the Reliability Standards Development Plan (RSDP) based on industry, board, and regulatory priorities, subject to NERC and industry resource limitations, and to ensure that standards quality and clarity issues are corrected during the standard development process. For example, the SC actively monitors ongoing high priority standards projects and authorizes various steps to help drafting teams get back on schedule.

Earlier this year, the SC Process Subcommittee developed a project "filter tool" that was refined and used to prioritize proposed projects in the *Reliability Standards Development Plan: 2011-2013* that is being presented for board approval at this meeting. The SC intends to refine the prioritization criteria and post them for industry comment during 2011. These criteria may be used to help make resource allocation choices, such as choosing which standards project to initiate next when an existing project is completed and whether development work on one project must be deferred in order to ensure timely completion of one or more other projects.

The SC has begun implementing a quality review process prior to posting of draft standards for formal stakeholder comment. Pre-posting quality review helps ensure industry understanding of the draft standard and may avoid subsequent rework of the standard during the balloting process. Reviewers drawn from NERC and regional entity staff and the Compliance and Certification Committee are trained to use a quality "check sheet" to ensure the standard meets FERC criteria for approval and NERC's characteristics of an Excellent Reliability Standard. The SC Process Subcommittee is developing a procedure that provides for SC member oversight of the review process.

## **Interpretations Processes**

The SC understands but has had some difficulty following the board's direction that the standards program should focus its resources on developing permanent standards, rather than allocating industry and staff resources to respond to numerous requests to develop formal interpretations. Earlier this year, the SC placed a temporary hold on development work associated with new and ongoing requests for interpretation, to explore whether an informal standards guidance process or Compliance Application Notices would provide an adequate and timely substitute for formal standard interpretations. This temporary hold has proved to be unworkable for a variety of reasons associated with the number and complexity of the questions

being asked by the industry and regional entities on both standards and compliance issues, posing the same types of resource burdens on NERC as formal interpretations.

For these reasons, the Standards Committee has adopted criteria for processing existing formal interpretation requests, to move ahead first with pending requests that have completed or nearly completed industry ballot with strong industry support, followed by projects that have completed initial development. The SC will manage this project queue to ensure that no more than three or four interpretations are presented to the industry for comment at the same time. Further, in light of pressing industry concerns, Critical Infrastructure Protection interpretation requests of potentially broad applicability will be given priority over other requests.

The SC has also found that the relatively unstructured process used to develop Interpretations under the RSDP Version 7 does need to be transitioned to the more fully developed “Process for Developing an Interpretation” found in the new SPM, to ensure consistent outcomes during the interpretation development process and to support development of an adequate record for regulatory approval. For example, the membership and meeting minutes of the interpretation drafting team should be publicly posted and the drafting team should be chaired by a stakeholder rather than NERC staff.

A determination also needs to be made on the documents on which an interpretation drafting team may rely to develop the interpretation. Drafting teams have been directed to follow a “strict construction” approach to interpretations, as directed by the board at its November 2009 meeting. A key unresolved issue is whether the drafting team is limited to the text of the Requirements or if other sections of the reliability standard (such as Applicability and Compliance) may be taken into account? To what extent can supporting documents such as white papers or prior versions of the standard be used to understand the intent of a Requirement? This uncertainty has become an issue in recent interpretation reviews.

### **NERC as a Learning Organization/Enterprise**

The SC continues to look for opportunities to create feedback loops from other NERC program areas and the standing technical committees to improve on both the prioritization of standards development and the content of proposed standards. For example, compliance and enforcement program concerns have been given significant weight in the prioritization of proposed projects, while many specific compliance issues have been included in the standards development issues database. The priority afforded by NERC to its cyber-security and system protection initiatives has elevated the importance of associated standards projects. The SC has also met with NERC staff to assess whether and how various reliability metrics can provide meaningful indicators of the need for new or revised requirements. See also the link to the [Risk-Informed Approach for Prioritizing Development of Standards](#) found in the 2011-13 RSDP. Finally, the SC leadership is exploring with other committees whether a longer-term standards development planning cycle could be used to identify technical research that can and should be initiated now, to support standards development projects that may only be started in the 2013-15 time frame.



## **Communications**

Each of the strategic initiatives outlined above, as well as the ongoing work of the SC and Standards Program, entails ongoing communications with a variety of industry stakeholders, subject matter experts, utility executives, and regulators. The SC Communication and Planning Subcommittee and NERC staff have developed training materials and conducted webinars and workshops on Results-Based Standards, the new Standards Processes Manual, the draft Reliability Standards Development Plan for 2011-2013, as well as the technical content of specific standards. Over 200 industry stakeholders attended a Standards and Compliance Workshop held on October 5-6 in St. Louis. A webinar on the latest version of the CIP standards was attended by 733 people. On October 12, the SC held a Leadership Retreat with the chairs, vice chairs, and staff coordinators of NERC's standard drafting teams, to identify standard development process and quality improvements. Finally, the SC is working with NERC staff to identify ways of improving the look and feel of the standards-related areas on NERC's website.

## **Issues of Policy Concern to the Standards Committee**

During its October 13-14, 2010 meeting in Houston, the SC identified a number of standards policy-related issues that may be raised at the November 2010 NERC MRC and board meetings in Atlanta. Unfortunately, the timing for posting of the MRC and board agendas precludes a full discussion of SC views concerning certain issues outlined below.

## **Available Transfer Capability Violation Risk Factors**

In board agenda Item 11.f, NERC staff recommends board approval of the staff's proposed Available Transfer Capability Violation Risk Factors. The SC agrees that NERC staff has properly applied the NERC Violation Risk Factor (VRF) definitions contained in the NERC Rules of Procedure, but nonetheless believes that application of the NERC VRF criteria produces an unreasonable result. The NERC VRF criteria state in part that:

A requirement assigned a "Lower" VRF is administrative in nature and is one that, if violated, would not:

- Be expected to affect the electrical state or the capability of the bulk power system (BPS);
- Be expected to affect the ability to effectively monitor and control the BPS; or
- In a planning time frame, under emergency, abnormal, or restorative condition:
  - Directly affect the electrical state or the capability of the BPS; or
  - Directly affect the ability to effectively monitor and control the BPS.

In effect, only administrative requirements with no impact on BPS operations qualify as Lower VRFs. If there is any potential adverse impact on reliable operations, NERC staff must assign a Medium VRF. Thus, there is a systemic upward bias in VRFs for requirements that pose a low BPS risk if violated, particularly in comparison with other requirements that if violated, do pose a medium level of risk to reliable operations.

### **NERC Three-Year ERO Performance Assessment**

The SC was generally pleased by the discussion of standards-related issues in FERC's September 16 Order on the NERC Three-Year ERO Performance Assessment. The SC is ready to work with NERC staff to develop appropriate standards program initiatives and submit a responsive informational filing as directed in the Order. The SC leadership is already working with NERC staff to develop a new triage plan to address outstanding FERC reliability standards directives.

### **FERC Order on NERC Rules of Procedure**

The SC also discussed FERC's September 16 order denying rehearing and directing NERC to propose changes to its Rules of Procedure that ensure that NERC will submit a standard in response to a regulatory directive, even if the standard developed in response to the directive does not receive support from the NERC ballot pool. The SC is concerned that actions that NERC may be required to take to comply with FERC's order may be fundamentally at odds with NERC's industry-based, ANSI-approved standards development process.

### **Formation of a Board of Trustees Technology and Standards Oversight Committee**

Unfortunately, the draft mandate for the proposed board Technology and Standards Oversight Committee (TSOC) was not posted prior to the SC's October meeting. The SC Chair did outline to the SC his understanding of the scope of standards oversight responsibilities and duties in the proposed mandate. Regardless of the board's decisions concerning the TSOC mandate, the SC welcomes the policy oversight, guidance, and direction provided by the board.



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Agenda Item 19a  
Board of Trustees Meeting  
November 4, 2010

## Board of Trustees Technology and Standards Oversight Committee Mandate

Approved by Board of Trustees: [DRAFT 9/30/10](#)

Deleted: November 5, 2009

1. The Technology [and Standards Oversight](#) Committee (TSOC) shall be composed of not less than three and not more than six Trustees.
2. The members of the TSOC shall be appointed or reappointed by the Board at the regular Meeting of the Board immediately following each Annual Meeting of the Member Representatives Committee. Each member of the TSOC shall continue to be a member thereof until his/her successor is appointed, unless he/she shall resign or be removed or shall cease to be a Trustee of the Corporation. Where a vacancy occurs at any time in the membership of the TSOC, it may be filled by the Board of Trustees.
3. The Board of Trustees or, in the event of their failure to do so, the members of the TSOC, shall appoint a Chair from among their members. The TSOC shall also appoint a Secretary who need not be a Trustee.
4. The place of meeting of the TSOC and the procedures at such meeting shall be the same as for regular Board meetings of the Corporation, or as determined by the members of the TSOC, provided that:
  - (a) A quorum for meetings shall be a majority of the number of members of the TSOC.
  - (b) The TSOC shall meet as required and at least twice a year.
5. ~~\_\_\_\_\_~~
6. The objectives of the TSOC are as follows:
  - (a) To provide the board with a thorough evaluation of and recommendations for action on proposed NERC projects that employ new technology. Such projects could include, but not be limited to: real-time system monitoring and visualization tools, reliability performance analysis tools, information and data exchange networks, reliability performance data bases, etc.
  - [\(b\) To provide the board and the NERC Standards Committee with a thorough evaluation of and recommendations for action regarding the strategic direction of NERC's standards development program.](#)

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(e) To provide advice and recommendations to the board on any technical or standards issue referred to it by the board.

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7. To achieve its objectives, the TSOC shall:

(a) Review all projects that employ new technology that may be proposed from time to time by the Corporation's staff or one of the Corporation's committees;

(b) Thoroughly evaluate all such proposals from both technical and financial standpoints;

(c) Make recommendations, as appropriate, to the board, including recommendations to include such projects in the NERC business plan and budget;

(d) Respond to the board's requests for advice and recommendations on any technical issues referred to it by the board;

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(e) Review with management the corporation's computer systems, including procedures to keep the systems secure and contingency plans developed to deal with possible computer failures;

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(f) Provide oversight of NERC's implementation of the North American SynchroPhasor Project;

(g) Identify strategic priorities for reliability standards development and provide feedback to NERC Standards Committee and board on annual work plan;

(h) Monitor overall results, including quality and timeliness of standards development work, and make recommendations to NERC Standards Committee and board regarding needed improvements;

(i) Assess emerging reliability risks affecting standards and make recommendations as appropriate;

(j) Monitor progress in addressing regulatory mandates and directives related to standards;

(k) Serve as the Level 2 Appeals Panel as set forth in the NERC Standards Process Manual, Appendix 3A to the NERC Rules of Procedure;

(l) Periodically review NERC's status with the American National Standards Institute;

(m) Respond to the board's requests for advice and recommendations on any technical issues referred to it by the board;

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(j) Review this mandate on an annual basis and recommend to the board Corporate Governance and Human Resources Committee any changes to it that the [TSOC](#) considers advisable;

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(k) Complete a self-assessment annually to determine how effectively the [TSOC](#) is meeting its responsibilities; and

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(l) Perform such other functions as may be delegated from time to time by the board.

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