

# Agenda

## Standards Oversight and Technology Committee

November 1, 2016 | 9:45-10:45 a.m. Eastern

Ritz-Carlton Buckhead  
3434 Peachtree Road  
Atlanta, GA 30326

Conference Room: The Ballroom – Lobby Level

### Call to Order

### Introductions and Chair's Remarks

### NERC Antitrust Compliance Guidelines

### Agenda Items

1. **Minutes\* — Approve**
  - a. August 4, 2016 Meeting
2. **2017-2019 Reliability Standards Development Plan\* — Approve and Recommend to Board of Trustees for Approval**
3. **Cost Effectiveness Pilot\* — Update**
4. **Reliability Standards Quarterly Status Report\* — Information**
5. **NERC and ERO Enterprise IT Projects Update\* — Review**
6. **Review of Committee Mandate\* — Information**
7. **Adjournment**

\*Background materials included.

# Antitrust Compliance Guidelines

## I. General

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

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

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

## II. Prohibited Activities

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

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

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

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

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

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

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

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

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

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

## *DRAFT* Minutes

# Standards Oversight and Technology Committee

August 4, 2016 | 2:00–3:00 p.m. Eastern

### Conference Call

Mr. Kenneth G. Peterson, Chair, called to order a duly noticed meeting of the Standards Oversight and Technology Committee (the “Committee”) of the Board of Trustees (“Board”) of the North American Electric Reliability Corporation (“NERC”) on August 4, 2016, at 2:00 p.m. Eastern, and a quorum was declared present. The agenda is attached as **Exhibit A**.

Present at the meeting were:

#### **Members:**

Kenneth G. Peterson, Chair  
Paul F. Barber  
Kenneth W. DeFontes, Jr.  
Frederick W. Gorbet

#### **Board Members:**

Gerry W. Cauley, President and Chief Executive Officer  
Robert G. Clarke  
Jan Schori

#### **NERC Staff:**

Charles A. Berardesco, Senior Vice President, General Counsel, and Corporate Secretary  
Tina Buzzard, Associate Director  
Howard Gugel, Director of Standards  
Stan Hoptroff, Vice President and Chief Technology Officer  
Scott Jones, Vice President of Finance and Treasurer  
Mark Lauby, Senior Vice President and Chief Reliability Officer  
Ken McIntyre, Vice President of Standards and Compliance  
Marcus Sachs, Senior Vice President and Chief Security Officer  
Michael Walker, Senior Vice President and Chief Financial and Administrative Officer

#### **NERC Antitrust Compliance Guidelines**

Mr. Peterson directed the participants’ attention to the NERC Antitrust Compliance Guidelines included with the agenda materials, and stated that any additional questions regarding these guidelines should be directed to Mr. Berardesco.

#### **Minutes**

Upon motion duly made and seconded, the Committee approved the minutes of the May 4, 2016 meeting as presented at the meeting.

**NERC and ERO Enterprise IT Projects Update**

Mr. Hoptroff provided an update on NERC and ERO Enterprise IT projects, referencing the detailed materials that had been included in the advance agenda package. He emphasized the close working relationship with the relevant business units. With respect to the CMEP project, Mr. Hoptroff outlined the overall approach, including a review of commercially available solutions and considering approaches taken by other compliance and enforcement agencies. He provided an update on E-ISAC projects, including the portal enhancements requested by the E-ISAC Member Executive Committee and requirements for the CRISP program. Mr. Hoptroff provided an update on NERC IT projects, including the document management system, which is on schedule from both a timing and cost perspective, and the upcoming audio-visual upgrades. Mr. Ed Schwerdt of NPCC joined the call and noted that a number of the Regional Entities are looking to leverage NERC's efforts on document management. Looking forward, Mr. Hoptroff noted that there will be a focus on enhancing the NERC external website.

**Reliability Standards Quarterly Status Report**

Mr. Gugel presented the Reliability Standards Quarterly Status Report, referencing the detailed materials that had been included in the advance agenda package. Only seven pre-2013 FERC directives remain open, with that number to be reduced to one after the upcoming Board meeting. Only eight of the Paragraph 81 and Independent Expert Review panel items remain open. Mr. Peterson noted that as a result, NERC will be shifting from addressing older issues to looking at enhancing current standards. Mr. Cauley noted that NERC continues to receive new FERC directives and will also be focused on them in terms of future reporting. Mr. Gugel reviewed the schedule for standards over the next year, which is consistent with a more measured approach to standards development. He also provided an update on the plan for the new supply chain standard directed by FERC, including outreach to industry executives. The current plan is to have the supply chain standard presented to the Board of Trustees for approval no later than the August 2017 meeting.

**Adjournment**

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

Submitted by,



Charles A. Berardesco  
Corporate Secretary

## 2017-2019 Reliability Standards Development Plan

### Action

Approve and recommend for Board of Trustees approval.

### Background

The draft 2017-2019 Reliability Standards Development Plan (RSDP), developed by NERC staff in conjunction with members of the Standards Committee (SC), focuses on conducting Enhanced Periodic Reviews (EPRs), targeting emerging risks, addressing FERC directives, responding to Standard Authorization Requests, and the standards grading initiative. NERC and the SC will continue to work with NERC committees and task forces to address any potential reliability risks. As an evolution to previous RSDPs, which emphasized the methods and progress for NERC Reliability Standards to become “steady state”<sup>1</sup>, the 2017-2019 RSDP emphasizes NERC’s approach to prioritizing activities related to EPRs, new FERC directives, and emerging risks.

The 2017-2019 RSDP was posted for a 30-day public comment period from June 20, 2016 until July 19, 2016. Modifications were made to the RSDP based on SC member and industry comments. The SC endorsed the RSDP in its September 14, 2016 meeting.

### Additional Information

A link to the 2017-2019 RSDP is included for reference: [2017-2019 RSDP](#)

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<sup>1</sup> For the purposes of that plan, “steady state” meant a stable set of clear, concise, high-quality, and technically sound Reliability Standards that are results based, including the retirement of requirements that do little to promote reliability.

## Cost Effectiveness Pilot Update

### **Action**

Information

### **Background**

Federal, State and Provincial regulatory authorities, the NERC Board of Trustees, Regional Entities, and many industry stakeholders have expressed interest in the consideration of the costs incurred from implementing NERC Reliability Standards compared to risks addressed.

In the past, determination of the costs from the implementation of NERC Reliability Standards was implicitly considered throughout the standards development process, wherein detailed comments are sought and modifications to proposed standards made, based on input from the standards ballot pool (which is a cross-section of interested participants). However, a desire for more direct assessment of costs has been raised, for a number of reasons. For example, registered entities have identified the need to estimate implementation costs for budgeting and rate case development. Further, many state and provincial regulators would like this information to determine consumer costs implications of reliability measures.

An overview of the results of Phase 1 of the cost effectiveness pilot, as well as a plan to implement Phase 2 will be presented.

## Reliability Standards Quarterly Status Report

### Action

Information

### Background

Attached is the Reliability Standards Quarterly Status Report. Given the transformation of NERC's standards toward a stable, clear, workably effective set of standards, the quarterly report has been revised to focus on more forward-looking projections along with recent accomplishments from the past quarter. The report previously provided significant amounts of data that tracked long-term progress against prior initiatives, particularly the outstanding directives from FERC Order No. 693, the Independent Experts Review Project, and paragraph 81. As those items have been largely completed and addressed through work in previous years, the emphasis of NERC's standards development has shifted toward Enhanced Periodic Reviews, completing regulatory directives, and addressing emerging risks.

Highlights include:

- **Standards Development Forecast**
  - Forecasts the NERC Reliability Standards anticipated for completion and submission to the NERC Board of Trustees for adoption through August 2017. This section also includes a listing of all Standards Development Projects with Regulatory Directives.
- **Regulatory Directives Update**
  - Provides a summary of FERC directives and guidance and details NERC filings to FERC in support of standards development. This section provides a summary update based on the previous quarter.
- **Standards Committee (SC) Report**
  - SC overview of key activities and progress from the previous quarter, including the continued activity and progress of the SC subcommittees.

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Agenda Item 4  
Attachment 1  
Standards Oversight and  
Technology Committee Meeting  
November 1, 2016

# Reliability Standards

## Standards Oversight and Technology Quarterly Report

November 1, 2016

**RELIABILITY | ACCOUNTABILITY**



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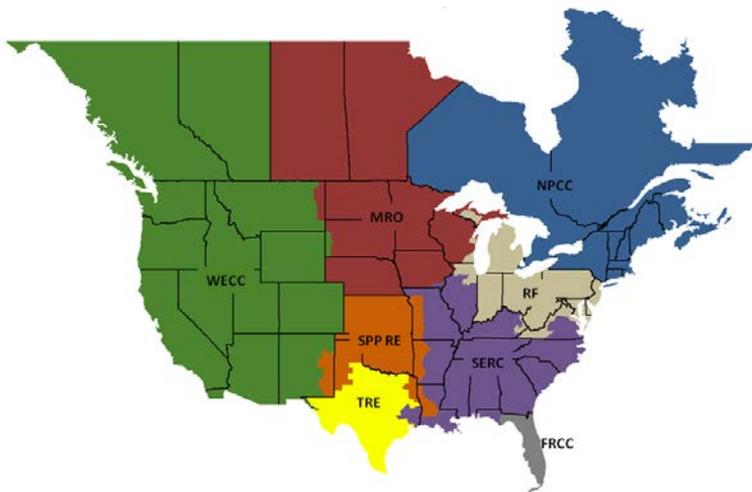
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# Preface

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

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



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

# Standards Development Forecast (Continent-wide)

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## Board Forecast for Standard Projects in Active Development

### November 2016

- Project 2010-14.2.2: BARC (BAL-004)
- Project 2015-INT-01: Interpretation of CIP-002-5.1 for Energy Sector Security Consortium (EnergySec)

### February 2017

- Project 2015-08: Emergency Operations (EOP-004, EOP-005, EOP-006, EOP-008)
- Project 2016-01: Modifications to TOP and IRO Standards (TOP-001, IRO-002)
- Project 2016-02: Modifications to CIP Standards (Revisions to Definition of “Low Impact External Routable Connectivity”)

### May 2017

- Project 2015-09: Establish and Communicate System Operating Limits (FAC-010, FAC-011, FAC-014)

### August 2017

- Project 2016-03: Cyber Security Supply Chain Management

## Projects with Regulatory Directives

Table 1, below, lists the current projects with regulatory directives. As of September 30, 2016, there were 11 standards-related directives, including FERC guidances, to be resolved through standards development activities. (Not including non-standards related directives).

Table 1: Projects with Regulatory Directives		
Project	Regulatory Directives	Regulatory Deadline
Project 2013-03 Geomagnetic Disturbance Mitigation	4	6/4/2018
Project 2015-08 Emergency Operations	1	N/A
Project 2016-02 Modifications to CIP Standards (Revisions to Definition of “Low Impact External Routable Connectivity”)	1	3/21/2017
Project 2016-02 Modifications to CIP Standards (Revisions unrelated to Definition of “Low Impact External Routable Connectivity”)	2	N/A
Project 2016-01 Modifications to TOP and IRO Standards	3	7/27/2017
Project 2016-03 Cyber Security Supply Chain Management	1	9/27/2017

# Regulatory Update

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## NERC Regulatory Update- Standards July 1, 2016 – September 30, 2016

### NERC Filings to FERC

FERC Docket No.	Filing Description	FERC Submittal Date
<a href="#">RM16-22-000</a>	<p><a href="#">Petition of NERC for Approval of Proposed Reliability Standards PRC-027-1 and PER-006-1 and Retirement of PRC-001-1.1(ii)</a></p> <p>NERC submits a petition for approval of Reliability Standards PRC-027-1 (Coordination of Protection Systems for Performance During Faults), PER-006-1 (Specific Training for Personnel) and Retirement of PRC-001-1.1(ii) (System Protection Coordination).</p>	9/2/2016
<a href="#">RM16-18-000</a>	<p><a href="#">Comments of NERC on Notice of Inquiry</a></p> <p>NERC submits comments in response to the Commission's notice of inquiry seeking comment on possible modifications to the Critical Infrastructure Protection Reliability Standards regarding the cybersecurity of control centers used to monitor and control the bulk electric system in real time.</p>	9/26/2016
<a href="#">RM16-15-000</a>	<p><a href="#">Comments of NERC on NOPR Proposing Regulations Implementing FAST Act Provisions on CEII</a></p> <p>NERC submits comments in response to the Commission's Notice of Proposed Rulemaking (NOPR) proposing to implement provisions of the Fixing America's Surface Transportation Act that require the designation, protection and sharing of Critical Energy Infrastructure Information (CEII).</p>	8/19/2016
<a href="#">RR16-5-000</a>	<p><a href="#">Petition for Approval of Proposed ROP Revisions</a></p> <p>NERC submits a petition requesting approval to incorporate Frequency Response Sharing Group and Regulation Reserve Sharing Group, as defined in the <i>Glossary of Terms Used in NERC Reliability Standards</i> and used in BAL-003-1.1 and BAL-001-2, to the following parts of the NERC Rules of Procedure:</p> <ul style="list-style-type: none"> <li>• Appendix 2 - Definitions Used in the Rules of Procedure;</li> <li>• Appendix 5A - Organization Registration and Certification Manual; and</li> <li>• Appendix 5B - Statement of Compliance Registry Criteria.</li> </ul>	8/15/2016
<a href="#">RD16-9-000</a>	<p><a href="#">Petition of NERC for Approval of Proposed Reliability Standard COM-001-3</a></p> <p>NERC submits a petition for approval of proposed Reliability Standard COM-001-3 (Communications).</p>	8/15/2016
<a href="#">RM16-20-000</a>	<p><a href="#">Petition of NERC for Approval of Reliability Standard PRC-012-2</a></p> <p>NERC submits a petition for approval of Reliability Standard PRC-012-2 (Remedial Action Schemes).</p>	8/5/2016
<a href="#">RM16-7-000</a>	<p><a href="#">Comments of NERC in Response to NOPR BAL-002-2 (Disturbance Control Standard – Contingency Reserve for Recovery from a Balancing Contingency Event)</a></p> <p>NERC submits comments in response to the Commission's NOPR proposing to approve Reliability Standard BAL-002-2 (Disturbance Control Standard-Contingency Reserve for Recovery from a Balancing Contingency Event).</p>	7/25/2016

## FERC ISSUANCES

(any standard development related directives or proposed directives are noted in the summary)

FERC Docket No.	Issuance Description	FERC Issuance Date
<a href="#">RM15-11-000</a>	<p><a href="#">Order No. 830 on GMD Reliability Standard TPL-007-1</a>            FERC issues a final rule approving Reliability Standard TPL-007-1 Transmission System Planned Performance for Geomagnetic Disturbance (GMD) Events and directing NERC to modify the standard within 18 months of the effective date of the final rule as follows:</p> <ul style="list-style-type: none"> <li>• modify the benchmark GMD event set forth in Attachment 1 to the standard so as to not rely solely on spatially averaged data;</li> <li>• require the collection of necessary GMD related data and to make such data publically available; and</li> <li>• include deadlines for the development and completion of corrective action plans required by the standard.</li> </ul> <p>In addition, FERC directed NERC to:</p> <ul style="list-style-type: none"> <li>• submit a GMD work plan within six months and subsequently, one or more informational filings that address specific GMD-related research areas; and</li> <li>• pursuant to Section 1600 of the NERC Rules of Procedure, collect GMD-related data from registered entities for the period beginning May 2013 and to make the information publicly available.</li> </ul>	9/22/2016
<a href="#">RD16-6-000</a>	<p><a href="#">Order Approving Reliability Standards IRO-018-1 and TOP-010-1</a>            FERC issues an order approving Reliability Standards IRO-018-1 (Reliability Coordinator Real-time Reliability Monitoring and Analysis Capabilities) and TOP-010-1 (Real-time Reliability Monitoring and Analysis Capabilities) and directing modifications to the violation risk factors for three Requirements.</p>	9/22/2016
<a href="#">RM16-13-000</a>	<p><a href="#">Notice of Proposed Rulemaking to Approve Reliability Standards BAL-005-1 and FAC-001-3</a>            FERC issues a Notice of Proposed Rulemaking (NOPR) proposing to approve Reliability Standards BAL-005-1 (Balancing Authority Control) and FAC-001-3 (Facility Interconnection Requirements).</p>	9/22/2016
<a href="#">RD16-8-000</a>	<p><a href="#">Letter Order Approving the Retirement of Regional Reliability Standard PRC-002-NPCC-01</a>            FERC issues a letter order approving NERC and NPCC's joint petition for approval for the retirement of NPCC Regional Reliability Standard PRC-002-NPCC-01 (Disturbance Monitoring) as well as two NPCC regional definitions, Current Zero and Generating Plant.</p>	8/16/2016

<a href="#">RM15-14-001</a>	<p><a href="#">Order No. 822-A Denying Rehearing</a>                  FERC issues an order denying rehearing of <a href="#">Order No. 822</a>, issued on January 21, 2016, that approved seven CIP Reliability Standards.</p>	<p style="text-align: center;">7/21/2016</p>
<a href="#">RM15-14-002</a>	<p><a href="#">Order No. 829 Directing Standard for Supply Chain Cyber Controls</a>   <a href="#">Errata Notice</a>                   FERC issues a final rule requiring the development of a new or modified Reliability Standard on supply chain risk management for industrial control system hardware, software, and computing and networking services associated with Bulk Electric System operations within one year.</p>	<p style="text-align: center;">7/21/2016</p>
<a href="#">RM16-18-000</a>	<p><a href="#">NOI Regarding Cyber Systems in Control Centers</a>                  FERC issues a Notice of Inquiry (NOI) seeking comment on possible modifications to the CIP standards regarding the cybersecurity of Control Centers that are used to monitor and control the Bulk Electric System in real-time.</p>	<p style="text-align: center;">7/21/2016</p>
<a href="#">RM15-25-000</a>	<p><a href="#">Order No. 828 Clarifying Effective Date and Compliance Date</a>                  FERC issues an order clarifying that Order No. 824's (i) effective date will conform to the <i>Federal Register</i> publication date; and (ii) compliance date will be based on issuance of the final rule in Docket No. RM16-15-000 and will be published in the <i>Federal Register</i>.</p>	<p style="text-align: center;">7/7/2016</p>

# Standards Committee Report

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## Background

This report highlights some of the key activities of the Standards Committee (SC) during the third quarter of 2016.

### 2017-2019 Reliability Standards Development Plan

The 2017–2019 Reliability Standards Development Plan (RSDP) recognizes the diligent work of the last few years to bring the body of NERC Reliability Standards to the initial stage of steady state while transitioning to focusing on Enhanced Periodic Reviews (EPRs), FERC directives, emerging risks, Standard Authorization Requests, and the standards grading initiative. The 2017-2019 RSDP contemplates that the work of the Integration of Variable Generation Task Force and Essential Reliability Services Working Group may result in one or more Standards Authorization Requests and subsequent standards projects.

As with the 2016-2018 RSDP, Enhanced Periodic Reviews will occur at a measured pace, compared to the level of activity and pace of standards development during the past three years, and they will be aligned with strategic considerations of reviewing standard families that are interrelated. The addition of the standards grading metric, which uses an enhanced version of the template developed by the Independent Experts Review Panel (IERP), will inform the EPRs as to the quality and content of the standards.

The 2017-2019 RSDP also includes plans for completing the EPRs initiated in 2016, and for commencing additional EPRs in 2017.

While most of the work in the next three years will focus on EPRs, there may be new or emerging risks identified that would generate new standards development projects.<sup>1</sup> NERC and the SC will continue to seek input and recommendations from the RISC with regard to emerging or potential risks to reliability that may require revisions to existing standards or new standards development.

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<sup>1</sup> For example, in response to FERC’s 2016 order on cybersecurity supply chain risk management, the SC has initiated a project to ensure standards development may be completed within the twelve month filing deadline specified by the order. A drafting team was seated on September 14, 2016, and they have already begun work to support an initial framework, planning for a November 2016 technical conference, and targeting an initial posting of the draft Reliability Standard in January 2017.

## NERC and ERO Enterprise IT Projects Update

### Action

Information

### Background

At the August 2016 Standards Oversight and Technology Committee (SOTC) open meeting, Information Technology (IT) provided an update on projects currently planned or underway for the following three NERC IT clients:

- Regional Entities (REs)
- Electricity Information Sharing & Analysis Center (E-ISAC)
- NERC Corporate

Further, IT provided an update on 2017-2018 major ongoing initiatives.

Since the open meeting in August, one ERO Enterprise project, the physical and logical separation of the E-ISAC computer network, has been successfully completed. This project was completed to further support the separation protocol between NERC's Compliance function and the E-ISAC.

Projects currently underway include the replacement of legacy applications known as the User Management Program (commonly known as UMP), MyAccount, and Application broker. Replacements of these legacy applications will be designed, configured, and implemented on an application platform based on Microsoft technologies. This allows access to market-based skills and additional well known and understood software solutions. In addition, these projects enable further consolidation and streamlining of a number of disparate business applications resulting in a reduction of the support burden and providing additional enhancements to the ERO Enterprise.

In addition, Enterprise Reporting–Generating Availability Data System (ER GADS) will be designed and implemented using commercially available technology solutions, making the data available to authorized users via common analytical tools and will form the basis for the creation of a data warehouse for the ERO Enterprise.

GADS Wind Turbine Generation will also be configured on the ERO's application platform and will be very similar in design to the Misoperations Information Data Analysis System (MIDAS) and Events Analysis Management System (TEAMS) applications.

Investigation of a new Compliance Monitoring and Enforcement Program (CMEP) tool continues. The ERO Enterprise Technology Leadership Team (the ERO TLT) is focusing on ensuring that the appropriate value for such an investment exists to merit implementation of a common tool. Potential implementation strategies, ranging from incremental updates to a common system across the ERO Enterprise, are being considered. Investments in this area will

be analyzed through the review of a detailed business case by the newly formed CMEP Technology Program Executive Committee. The committee members include Lane Lanford (Texas RE), Tim Gallagher (ReliabilityFirst), Ed Schwerdt (NPCC), Gerry Cauley (NERC), and Stan Hoptroff (NERC). An ERO-wide steering committee, which will be chaired by Dan Skaar (MRO), has been formed and the ERO TLT approved the CMEP Technology Program Charter. IT program leaders from the ERO have begun to explore software offerings to learn more about concepts and capabilities available in the market and to interview potential professional service providers with expertise in the selection and implementation of these type tools along with a strong knowledge and experience working with NERC and the ERO Enterprise.

In addition to a significant focus on the ERO Enterprise, IT has begun implementation of a document management system for NERC, leveraging SharePoint 2013 as the foundational platform. The implementation of the Document Management Program is well underway with the launch of the IT, Finance and Accounting, and Human Resources pilot groups. Additional departments are planned to come online in 2016 and 2017. NERC IT has also begun the implementation of a new audio visual solution for our Atlanta and Washington, D.C. offices.

In 2017 and the coming years, IT will place significant emphasis on NERC's public-facing website, entity registration, CMEP, and enhancements of the ERO's analytical capabilities for authorized users.

## **Review of Committee Mandate**

### **Action**

Information

### **Background**

As part of the annual review of all Board committee mandates, the NERC Legal Department has reviewed the current Standards Oversight and Technology Committee (SOTC) mandate. The mandate was updated this past year to both conform to SOTC practices and to align the mandate with the form of other Board committee mandates. Based on its review of the current mandate, the Legal Department is not recommending any further revisions at this time.

# Board of Trustees Standards Oversight and Technology Committee Mandate

Approved by the Board of Trustees: February 11, 2016

## Committee Membership

The Board of Trustees Standards Oversight and Technology Committee (SOTC or the Committee) of the North American Electric Reliability Corporation (NERC) shall be composed of not less than three and not more than six of the independent members of the Board of Trustees (Board). The members of the SOTC shall be appointed or reappointed by the Board at the regular meeting of the Board immediately following each Annual Meeting of the Members Representative Committee. Each member of the SOTC shall continue to be a member thereof until a successor is appointed, unless a member resigns, is removed, or ceases to be a trustee of the corporation. When a vacancy occurs at any time in the membership of the SOTC, it may be filled by the Board.

## Purpose

The purpose of the SOTC is to assist the Board by providing oversight to the corporation's standards development processes and the overall strategic focus and progress of the standards development program, and to provide oversight to the corporation's information technology program, as well as performing such other responsibilities as directed by the Board or this Mandate.

## Committee Authority and Responsibilities

To carry out its purpose, the SOTC shall have the following authority and responsibilities:

### Technology:

1. As part of the annual business plan and budgeting process, provide the Finance and Audit Committee and the Board with recommendations regarding management proposed resource requirements and funding for (i) the design, procurement, installation, operation, and maintenance of information technology hardware, software and applications, including hardware, software, and applications hosted by third parties, supporting NERC's operations and program area initiatives; and, (ii) investments in, or supporting, the development of new technology to improve and ensure the reliability of the bulk power system in North America, historic examples of which included funding for the development of transmission system awareness tools, synchrophaser technology, technology used to monitor and manage transmission congestion, and data reporting tools providing information regarding generator, transmission system, and demand side resource availability and performance.
2. Review with NERC management the corporation's overall computer systems environment, including procedures to keep the systems secure and contingency plans developed to deal with

possible computer failures.

3. Respond to the Board's requests to the Committee for advice and recommendations on any technology-related issues;

**Standards:**

1. In collaboration with the NERC Reliability Issues Steering Committee (RISC), work with NERC management to identify strategic priorities for reliability standards development and provide feedback to NERC Standards Committee, the Board, and NERC management on the annual standards development work plan.
2. Monitor overall results of the standards development process, including quality and timeliness of standards development work, and make recommendations to the NERC Standards Committee, the Board, and NERC management regarding potential improvements to the standards development process.
3. In collaboration with the RISC and management, assess emerging reliability risks affecting standards and make recommendations to the Board as appropriate.
4. Monitor progress in addressing regulatory mandates and directives related to standards.
5. Serve as the Level 2 Appeals Panel as set forth in the NERC Standards Process Manual, which is an Appendix to the NERC Rules of Procedure.
6. Periodically review NERC's status with the American National Standards Institute.
7. Respond to the Board's requests for advice and recommendations on any standards-related referred to it by the Board.

**Additional Responsibilities:**

1. In connection with NERC's Reliability Standard Audit Worksheet Revision Process (RSAW Revision Process), take any actions contemplated by the RSAW Revision Process, as such Process is amended from time to time.
2. Perform such other functions as may be delegated from time to time by the Board.

**Committee Meetings**

The SOTC shall meet at least twice a year by conference call or in person. Meetings may occur at the same place in conjunction with the regular Board meetings of the corporation, or as determined by the members of the SOTC, using the same meeting procedures established for the Board. Meetings may be held in either open or closed session as set forth in the Bylaws of the corporation.

A majority of the Committee members shall constitute a quorum. Except where prescribed differently by law: (a) any action or decision of the SOTC requires a vote of a majority of the Committee members then in attendance at any Committee meeting provided a quorum is present; and (b) participation may

be telephonic or by Action without a Meeting. The Committee may hold special meetings as circumstances require. Minutes of each Committee meeting shall be maintained as part of the Committee's record.

**Governance**

The Board, or in the event of their failure to do so, the members of the SOTC, shall appoint a chair from among their members. The SOTC Chair shall be responsible for leadership of the Committee, including scheduling of meetings, setting agendas, presiding over Committee meetings, and making reports to the Board. A member(s) of the NERC staff shall assist the Chair and shall serve as the non-voting secretary.

**Review**

The SOTC shall review this mandate annually and recommend to the Board Corporate Governance and Human Resources Committee any changes it considers advisable. Any changes must be approved by the full Board. The SOTC shall complete a self-assessment annually to determine its effectiveness.