Agenda
Technology and Security Committee
November 6, 2018 | 11:15 a.m.-12:00 p.m. Eastern

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

Conference Room: Grand Ballroom - Lower Lobby Level

Call to Order

Introductions and Chair’s Remarks

NERC Antitrust Compliance Guidelines

Agenda Items
1. Minutes* — Approve
   a. August 9, 2018 Meeting

2. ERO Enterprise Information Technology Strategy and IT Projects Update* — Review

3. E-ISAC Update* — Review

4. 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 restricts 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.
Acting Chair Kenneth W. DeFontes Jr. called to order a duly noticed open meeting of the Technology and Security Committee (the “Committee”) of the Board of Trustees (“Board”) of the North American Electric Reliability Corporation (“NERC” or the “Company”) on August 9, 2018, at 2:00 p.m. Eastern, and a quorum was declared present. The agenda is attached as Exhibit A.

Present at the meeting were:

**Committee Members**
- Kenneth W. DeFontes, Jr., Acting Chair
- Janice B. Case
- Suzanne Keenan
- Roy Thilly

**Board Members**
- Frederick W. Gorbet
- Jan Schori
- Jim Robb, President and Chief Executive Officer

**Committee Members Not Present**
- George S. Hawkins

**NERC Staff**
- Charles A. Berardesco, Senior Vice President, General Counsel, and Corporate Secretary
- Tina Buzzard, Associate Director
- Stan Hoptroff, Vice President, Chief Technology Officer, and Director of Information Technology
- Scott Jones, Senior Vice President, Chief Financial and Administrative Officer, and Corporate Treasurer
- Bill Lawrence, Senior Director of E-ISAC
- Mark G. Lauby, Senior Vice President and Chief Reliability Officer
- Sonia C. Mendonça, Vice President, Deputy General Counsel, and Director of Enforcement
- James Merlo, Vice President and Director of Reliability Risk Management
- Michael Walker, Senior Vice President and Chief Enterprise Risk and Strategic Development Officer

**NERC Antitrust Compliance Guidelines**
Mr. DeFontes, Jr. directed the participants’ attention to the NERC Antitrust Compliance Guidelines included in the agenda, and indicated that all questions regarding antitrust compliance or related matters should be directed to Mr. Berardesco.

**Chair’s Remarks**
Mr. DeFontes, Jr. noted that he was performing the role of acting chair for this meeting in Mr. Hawkins absence, and at his request. Mr. DeFontes, Jr. congratulated Mr. Lawrence on his upcoming appointment as Vice President and Chief Security Officer.
Minutes
Upon motion duly made and seconded, the Committee approved the minutes of the May 9, 2018 meeting as presented at the meeting.

ERO Enterprise Information Technology (IT) Strategy and IT Projects Update
Mr. Hoptroff provided an overview of the ERO Enterprise projects, referencing the materials that had been included in the advance agenda package. He highlighted expectations regarding functionality of the Compliance Monitoring and Enforcement Program Technology Project, and discussed planned communication and training activities. Mr. Hoptroff also highlighted projects relating to Standards and Registration, and provided an overview of E-ISAC technology updates. Mr. Hoptroff emphasized that these efforts are being pursued within the predefined budgets for the projects. Mr. Hoptroff mentioned the success of the efforts associated with data transfers in connection with the SPP RE dissolution and noted that the planned upgrade to SAFNR will be going through the standard approval process for IT projects. A member of the MRC complimented the ERO on the success of the data transfer associated with the SPP RE dissolution.

E-ISAC Update
Mr. Lawrence provided an update on recent E-ISAC activities, referencing the materials that had been included in the advance agenda package. Mr. Lawrence focused on accomplishments in the first half of 2018. He noted the E-ISAC’s role as a service organization for the industry, with key partnerships with government and data sharing organizations. He highlighted successes in hiring and development of staff, and progress on various deliverables under the strategic plan, which he reviewed by strategic area. He also noted efforts on engagement with industry, technology pilots and programs, and efforts regarding data sharing with the Canadian government.

2019 Business Plan and Budget Update: E-ISAC and IT
Mr. Jones provided a brief update on the budget items related to the E-ISAC and IT areas.

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

Submitted by,

Charles A. Berardesco
Corporate Secretary
Call to Order

Introductions and Chair's Remarks

NERC Antitrust Compliance Guidelines

Agenda Items

1. Minutes* — Approve
   a. May 9, 2018 Meeting

2. ERO Enterprise Information Technology Strategy and IT Projects Update* — Review

3. E-ISAC Update* — Review

4. 2019 Business Plan and Budget Update: E-ISAC and Information Technology* — Review

5. Adjournment

*Background materials included.
ERO Enterprise Information Technology Strategy and Projects Update

Action

Information

Background
At the August 9, 2018 open meeting of the Technology and Security Committee, an update was provided on the ERO IT Strategy. Additionally, updates were provided on several IT projects:

- The Compliance Monitoring and Enforcement Program (CMEP) Technology Project [1] update included the status of the process harmonization workshops, the change management plan, and stakeholder engagement, including the relationship with the Certification and Compliance Committee (CCC) and the Alignment Working Group (AWG).

- The Entity Registration solution was reviewed, and Standards and Registration data integration with BWise will be completed in the third quarter of 2019.

- The business case for the upgrade of Situation Awareness for FERC, NERC and the Regional Entities (SANFR) was discussed and should be completed by the end of 2018.

- A review of the Southwest Power Pool Regional Entity (SPP RE) Dissolution was provided and all data migration requirements were reported as successfully completed.

- An update on the Electricity Information Sharing and Analysis Center (E-ISAC) Portal was given, highlighting that the first portal community was delivered in late June 2018.

Summary
Since the August meeting, additional CMEP Technology Project process harmonization workshops have been completed along with the software configurations for self-reports. Furthermore, conference calls and meetings were conducted in August and September with the CCC and the CCC-AWG. Initial mockups were presented for their review and feedback, which has been incorporated into the ongoing design work with Deloitte and BWise.

In addition, work supporting the scheduled investments in the Entity Registration process continues, along with the planning for integrations necessary to exchange Entity Registration and Reliability Standards data between the CMEP Technology solution and the xRM-based Centralized Organization Registration ERO System (CORES).

Regarding the E-ISAC, work continues on additional portal user communities. The integration of the machine-to-machine interface between the E-ISAC Portal and ThreatConnect is underway and will be completed in November 2018.

NERC IT continues in its mission to deliver technology solutions supporting the effective and efficient use of resources for registered entities, the ERO Enterprise, and the E-ISAC.

[1] The CMEP Technology Project is a strategic initiative designed to support the ERO Enterprise as it continues to evolve as a risk-informed regulator. It supports three ERO Enterprise goals: implementation of a risk-informed CMEP (Goal 2), reduction of known risks to reliability (Goal 3), and improving the efficiency and effectiveness of the ERO (Goal 6).
E-ISAC Quarterly Update

Action
Review

Background
The E-ISAC is implementing the Long-Term Strategic Plan in 2018, following a strategic framework developed with the Member Executive Committee, with the focus areas of information sharing, analysis, and engagement.

Summary
In late 2017, the E-ISAC developed the Long-Term Strategic Plan, working closely with the Electricity Subsector Coordinating Council’s Member Executive Committee.

Bill Lawrence, NERC’s Vice President and Chief Security Officer and Director of the E-ISAC, will provide the committee with an update regarding the E-ISAC’s progress in execution of the long-term strategy. This update will include key activities and initiatives supporting the three primary long-term strategic focus areas of member engagement, information sharing and analysis. He will also provide an update on the technology projects which are currently underway, resource planning initiatives, and key 2019 focus areas.
E-ISAC Update
Long-Term Strategy Execution

Bill Lawrence, Vice President and CSO, NERC, and Director, E-ISAC
Technology and Security Committee Meeting
November 6, 2018
Update Topics

- Member Engagement
- Information Sharing
- Threat Analysis
- Technology Update
- Resource Planning
- Metrics
- MEC Working Group Initiative
- 2019 Key Initiatives
• 6,956 E-ISAC Members
  ▪ 16.5% increase in 2018 (Average of 22 added per week)
• Industry Engagement Program
  ▪ 21 analysts from 16 organizations
• Regional Industry Engagement – Key Initiatives
  ▪ Northeast – IESO 4th Annual Executive Brief on Cybersecurity
  ▪ Midwest – MRO Security Conference
  ▪ Southeast – SERC Joint Technical Committee Conference
  ▪ West - SCE Exercise, GridSecCon 2018
• Three Main Objectives
  ▪ Highlight the value of the E-ISAC through a discussion of increased capabilities
  ▪ Provide a deeper understanding of the benefits of E-ISAC membership
  ▪ Strengthen the E-ISAC’s relationship with Canadian members

• Recent Outreach Efforts

• Canadian Roadshow
  ▪ Q4 start
  ▪ Focused on outreach across all interconnected provinces

• GridSecCon 2018 Classified Briefing / GridEx V in 2019

• Measure Impact (membership, portal activity, surveys)
• Portal
  - Approximately 17 percent increase YTD in registered users
  - Increase in cyber and physical bulletins posted
    - Cyber-219 thru Q3 2018
    - Physical-134 thru Q3 2018
  - Two private User Communities in soft-launch phase
• CRISP
  - Expanding membership with DOE funding support
  - Public power and cooperative utility pilots under development
• Unclassified Threat Briefings
  ▪ Will host 4 in 2018
  ▪ CRISP - 2 workshops

• Classified Threat Briefings
  ▪ Coordinated 3 non-CRISP classified briefings in 2018
    o Securing the Grid V (May) – approximately 100 attendees
    o GridSecCon 2018 (October) – approximately 45 attendees
    o CIPC (December) – approximately 50 attendees
  ▪ CRISP- monthly briefings

• Increased Number of Physical and Cyber Bulletins
• Portal Enhancements
• Cyber Automated Information Sharing System
• Malware Analysis Repository and Threat Information Exchange
• Data Storage and Management System
• Customer Relationship Management System
• DHS Shared Resources HF Radio Disaster Recovery Capability
• 2018 Resource Additions (22 -> 32)
  ▪ Two watch officers (1 to go)
  ▪ Three cyber security analysts
  ▪ Two physical security analysts
  ▪ One executive assistant
  ▪ Two programs and engagement managers
  ▪ One chief of staff
• Evaluating current capabilities and resource needs
• Three main focus areas
  ▪ Monitoring 2018 department metrics
    ○ 9-6-18 Status Review with MEC
  ▪ Exploring benchmarking against other ISACs
  ▪ Development of 2019 department metrics
• MEC Working Group Task Group Initiative
  ▪ Moving towards creation of limited number of groups:
    o Focused on specific issues requiring support
    o Limited duration
    o Defined deliverables
    o Subject matter expertise
    o Oversight by MEC and MEC Working Group
  ▪ Developed Task Group charter template
  ▪ Proposed initial task force focus areas
    o Canadian Engagement Strategy and execution
    o Metrics
    o ERO Enterprise Effectiveness Survey Results
2019 Key Priorities

• Information Sharing
  ▪ Enhance CRISP capabilities and participation
  ▪ Establish two-way sharing of machine-readable cyber indicators

• Analysis
  ▪ Hire/integrate planned resource additions
  ▪ Develop data storage and management system
  ▪ Develop and deploy analyst work bench
  ▪ Enhancing CRISP analysis

• Engagement
  ▪ GridEx V
  ▪ Expand Industry Engagement Program
  ▪ Execute Canadian Engagement Strategy
Questions and Answers