Minutes
Member Representatives Committee
February 8, 2017 | 1:15 p.m. – 5:15 p.m. Pacific

Outgoing Chair Nabil Hitti, with incoming Chair John Twitty and incoming Vice Chair Jason Marshall present, called to order the North American Electric Reliability Corporation (NERC) Member Representatives Committee (MRC) meeting on February 8, 2017, at 1:17 p.m., Pacific. The meeting announcement, agenda, and list of MRC members in attendance are attached as Exhibits A, B and C, respectively.

Mr. Hitti thanked the MRC members, the NERC Board of Trustees, and Gerry Cauley for their support during his tenure on the MRC. He noted that many of the original goals for the ERO had been accomplished, and that the ongoing work of the ERO is a critical component of the overall energy infrastructure, with a direct effect on society and quality of life. Mr. Twitty recognized Mr. Hitti’s dedication and engagement with the MRC since standards became mandatory.

Introduction and Chair’s Remarks
Mr. Twitty welcomed new MRC members and attendees, and acknowledged the attendance of the Board, Michael Bardee and others from the Federal Energy Regulatory Commission (FERC), Murray Doehler from the Canadian Association of Members of Public Utility Tribunals, and State Commissioner David Clark.

Mr. Twitty recognized the MRC responses to the January 10, 2017 policy input request from Fred Gorbet, chairman of the Board. He reminded attendees that full presentations were conducted at the committee meetings and will not be repeated during the MRC meeting.

NERC Antitrust Compliance Guidelines and Public Announcement
Kristin Iwanechko, committee secretary, called attention to the NERC antitrust compliance guidelines and the public meeting notice. Any questions should be addressed to NERC’s general counsel, Charles Berardesco.

Ms. Iwanechko declared a quorum present with the following recognized proxies:

- Barry Lawson for Jay Bartlett – Cooperative Utility
- Bill Gallagher for David Osburn – Transmission-Dependent Utility
- Peter Brandien for Gordon van Welie – ISO/RTO
- David Clark for Asim Haque – State Government
Minutes
The MRC approved, on a motion by Sylvain Clermont and seconded by Carol Chinn, the draft minutes of its November 1, 2016 meeting in Atlanta and its January 17, 2017 conference call.

Election of NERC Trustees
Ken Peterson, chair of the Board of Trustees Nominating Committee (BOTNC), provided a report and recommendation for election of four Board members. The MRC unanimously approved the re-election of Janice Case, Fred Gorbet, and Roy Thilly and election of Deborah Parker for three-year terms ending in 2020.

Roadmap for Integrating Mexico into the ERO
Laura Hussey, director of international relations at NERC, reminded attendees that the Energy Policy Act of 2005, FERC Orders certifying NERC as the ERO, and the NERC Bylaws laid the foundation for integrating Mexico into the ERO. She also noted that representatives of the U.S. and Mexican governments signed a set of bilateral reliability principles on January 7, 2017, that are supportive of the international ERO framework. Ms. Hussey stated that NERC expects to execute a Memorandum of Understanding (MOU) with the appropriate Mexican parties in the near future. She noted that the MOU would be a relatively high-level document, with further details to be worked out as implementation progresses. Ms. Hussey discussed next steps after execution of the MOU, which could include potential changes to NERC Rules of Procedure and adding Mexican representation to committees. She added that Mexico has adopted ten standards so far and NERC is working on the process for filing standards with Mexico.

- An MRC member suggested leveraging lessons learned from Canadian experiences, as there may be similar challenges.

- An MRC member asked how Mexico would be integrated with the strategic planning process. Ms. Hussey stated that it is a bit early to have those discussions at this point, but envisions that they will be worked into the process over the next year.

Responses to the Board’s Request for Policy Input
Mr. Hitti acknowledged the MRC’s responses to Fred Gorbet’s January 10, 2017, letter requesting policy input on the ERO Enterprise strategic planning process and the next steps for the Distributed Energy Resources Task Force final report. The following comments on the policy input topics are not all inclusive, but provide the general tenor and scope of the discussion:

ERO Enterprise Strategic Planning Process
Mike Walker, senior vice president and chief financial and strategic development officer at NERC, noted the continued work of NERC and the Regional Entities to align strategic planning and business processes and supporting documentation. Mr. Walker provided an overview of policy input on suggested improvements to the strategic planning process and schedule enclosed in the background materials, stating that commenters were generally supportive of the adjustments, particularly with respect to shifting Reliability Issues Steering Committee (RISC) risk prioritization activities and the review of the strategic plan to every two years. In response to recommendations received, Mr. Walker recognized the
value of stakeholder input and review throughout the process, and the opportunity for stakeholder committees to provide input on the development of meaningful and measurable metrics. Also with respect to the metrics, Mr. Walker explained that the historical data for the existing metrics has been posted on the NERC website, and that NERC is working with the Regional Entities to make the historical data available on a regional basis. Mr. Walker added that, with respect to concerns that an ERO Enterprise long-term strategy should be bounded by the ERO’s statutory authority, the ERO Enterprise remains mindful of keeping resources focused on near-term priorities, but that the ERO Enterprise also has a role in assessing emerging risks that are identified through collaboration with the RISC.

- An MRC member acknowledged the great progress and transparent collaboration on the ERO Enterprise strategic planning process and documents, but that the metrics continue to need more conversation.
- An MRC member expressed agreement with CEA’s comment to create a visual representation of the inputs into the strategic planning process and NPCC’s suggestion for the RISC to consider cost considerations when developing the risk profiles.
- Mr. Gorbet thanked stakeholders for their policy input and stated that the suggestion to do the RISC and strategic planning activities on an alternating year schedule made sense and was worth exploring. Mr. Walker confirmed he would discuss with the RISC.

Next Steps for Distributed Energy Resources Task Force (DERTF) Final Report
John Moura, director of reliability assessment and system analysis at NERC, highlighted four major key findings identified in the DERTF final report: (1) DER penetration is rapidly increasing and altering the load mix; (2) technical and engineering challenges of integrating DERs on distribution systems are well understood, but the reliability implications on the bulk power system (BPS) are less so; (3) DERs will increasingly have capabilities for active power control and reliability services; and (4) consideration of fundamental changes to modeling, planning, and operations and conventional assumptions. He also highlighted the recommendations for next steps around reliability guidelines, data sharing, system modeling, DER component models, definitions, and industry collaboration.

Mr. Moura noted that the policy input received was supportive overall and in general, the DERTF agrees with the comments and recommendations made, including views on NERC’s role and when standards should be considered. Mr. Moura noted that the DERTF final report is being presented to the Board the next day for acceptance and the DERTF would be disbanded. He also discussed the plan for coordination and outreach with NARUC and other state regulators, FERC, provincial regulators, the Department of Energy, inverter manufacturers and researchers, and the NERC Planning and Operating Committees. Mr. Moura added that videos similar to those that were developed for the essential reliability services report would be developed to support the DERTF report.

- A Board member appreciated that next steps for this report were coordinated with policy input and suggested that similar reports in the future might benefit from a similar approach.
- MRC members praised the report and noted appreciation for NERC’s leadership in this area.
• An MRC member asked if there is another group that will be responsible for following DER. Mr. Moura noted that a lot of the expertise is retained within the Essential Reliability Services Working Group (ERSWG).

Additional Policy Discussion of Key Items from Board Committee Meetings
Attendees did not have any additional comments in response to the discussions from the Standards Oversight and Technology Committee and Compliance Committee meetings. Attendees shared the following comments in response to the discussions at the Finance and Audit Committee and Corporate Governance and Human Resources Committee meetings.

Finance and Audit Committee
• Scott Jones, vice president, corporate treasurer, and director of finance and administration at NERC, noted that the Board has requested an increased focus on reserves and cash management at NERC and across the ERO Enterprise. The challenge to managing cash levels is timing—the Regional Entity budgets are finalized fairly early in the year and the NERC budget is filed with FERC in August, limiting the opportunity for adjustments against reserves later in the year. Consideration is being given to a process submission of Board-approved budgets to FERC, but with an option for NERC and Regional Entities to reassess reserve levels after the budget filing and when there is additional visibility into the projected year end reserve levels, allowing NERC and the Regional Entities to reduce assessment levels as appropriate. Mr. Jones emphasized that this would not be a mandatory process, but an option for NERC and each of the Regional Entities.

Corporate Governance and Human Resources Committee
• A Board member thanked NERC staff and the Regional Entities for their effort in revising the metrics this year.
• An MRC member suggested that the Board should review its independence and conflict of interest review processes, given the changing industry dynamics and the potential for new industry participants.
• A Board member highlighted a theme around transparency and noted that it means different things to different people. The Board member suggested thinking about how the work of sub-groups (e.g., MRC business plan and budget input group) is transparent.

Update and Schedule of Near-Term Reliability Assessments
Mr. Moura provided an update on the upcoming reliability assessments, noting that the work being done by the RISC and MRC has provided valuable input to the determination of future assessments. He noted that the RISC recommendations identify the following four high and medium risks that should be assessed: changing resource mix, BPS planning, resource adequacy and planning, and extreme natural events. Mr. Moura noted that, for 2017, there are three periodic reliability assessments (long-term reliability assessment, summer assessment, and winter assessment) and at least three special assessments planned for 2017. For 2018, Mr. Moura noted that the three periodic assessments would be conducted, but topics for special assessments have not yet been selected. However, he added that NERC
plans to conduct a smaller assessment on the 2017 solar eclipse. He noted that ERO Enterprise staff maintains a list of topics to be considered for special assessments. Mr. Moura reviewed the current list and requested MRC input on the highest priority topics to be considered by the ERO Enterprise.

- MRC members supported topics identified for consideration, including sensitivities around resources penetrations and severe seasonal peaks, as well as accelerated nuclear retirements.
- An attendee noted that the RISC has recommendations based on changes and complexities with the system, and assessments should be conducted to help understand how to model and measure the system with those changes.

**Geomagnetic Disturbance Events (GMD) Research Work Plan Update**

Howard Gugel, senior director of standards and education at NERC, noted that a FERC order was issued requiring further actions to address GMD, including revisions to TPL-007-1 and conducting additional research and data collection. The revisions to TPL-007-1 include modifying the benchmark GMD event definition used for GMD assessments, requiring entities to collect GMD data, and establishing deadlines for Corrective Action Plans (CAPs) and mitigating actions to address identified GMD impacts. Mr. Moura reviewed the three-pronged approach, which includes the standard revision plan, research plan, and data collection and sharing plan. He noted that the research plan is due to be filed with FERC in May 2017 and is being developed with the assistance of the GMD Task Force (GMDTF). Mr. Moura reviewed the preliminary research plan proposal which would begin in Q3 2017 and preliminary timing of reviews.

**Inverter Disconnects During Transmission Disturbances**

James Merlo, vice president of reliability risk management at NERC, provided an overview of the Blue Cut wildfire in August 2016 that caused 13 500 kV line faults and two 287 kV line faults. All of these faults cleared normally, with roughly the same clearing time and magnitude, and four of the faults caused a loss of photovoltaic (PV) generation. While not a qualifying event in the ERO Events Analysis process, the occurrence was significant and unusual enough that the ERO requested an event report and is working with the engineers and planners at the California Independent System Operator and Southern California Edison (SCE) to better understand this first known major loss of renewable resources due to a transmission system disturbance. He identified the next steps, which include a NERC task force to further investigate potential causes and solutions, engaging inverter manufacturers to share challenges associated with some of the existing frequency and voltage measurement techniques, and developing guidance as information and solutions become available. John Pespisa, director of operational compliance at SCE, added that NERC looking at DER impacts is very timely, as there is very little controllability to what DERs do from an operational perspective.

**Cyber Automated Information Sharing System (CAISS) Overview**

Marc Sachs, senior vice president and chief security officer at NERC, provided an overview of CAISS which allows the Electricity Information Sharing and Analysis Center (E-ISAC) to rapidly disseminate technical information about cyber and physical attacks using a computer-based sharing and analysis system. CAISS is currently being piloted, as requested by the Electricity Subsector Coordinating Council (ESCC) and the results of the pilot will be integrated in a future platform that should be launched later this year. Mr. Sachs noted that there were ten initial participants, with more joining since the beginning of 2017. Any
entities interested in participating should contact Mr. Sachs or E-ISAC operations. Mr. Sachs added that cost is minimal for those that want to participate; NERC is paying for the back-end services and participants are responsible to pay for any hardware or software needed at users’ sites. He reviewed the technologies behind CAISS and reviewed screenshots of the ThreatConnect platform, which is the front-end user interface.

**Update on FERC Reliability Matters**

Mike Bardee, director of the office of reliability at FERC, provided an overview of several FERC reliability activities.

**Fixing America’s Surface Transportation Act (FAST Act) and Critical Energy/Electric Infrastructure Information (CEII) Final Rule**

Mr. Bardee noted that FERC issued a final rule on November 17, 2016, amending its regulations to add processes for the designation, protection, and sharing of CEII. FERC also clarified non-public and CEII treatment for data downloaded from NERC databases. Mr. Bardee noted that the final rule becomes effective as of February 21, 2017.

**Primary Frequency Response**

Mr. Bardee noted that FERC issued a Notice of Proposed Rulemaking (NOPR) on November 11, 2016, proposing to amend the large and small generator interconnection agreements to: (1) require all new generating facilities to install, maintain and operate functioning governor or equivalent controls; and (2) incorporate certain operating requirements including maximum droop and deadband parameters and sustained response provisions. He noted that the comment period closed on January 24, 2017, and the next step will be to develop a final rule.

**Remedial Action Schemes**

Mr. Bardee noted that FERC issued a NOPR on January 19, 2017, proposing to approve PRC-012-2, but requesting clarification that it would not supersede TPL-001-4. He noted that comments will be due sixty days after publication in the Federal Register.

**BAL-002-2 Final Rule**

Mr. Bardee noted that FERC issued a final rule on January 19, 2017, approving BAL-002-2 and directing modifications regarding extensions of the 15-minute period for Area Control Error recovery. FERC also directed NERC to collect and report data on MW losses and resets after Reportable Balancing Contingency Events, and to study and report on risks of most severe single contingency exceedances that do not cause energy emergencies.

Mr. Bardee also noted that FERC does not currently have a quorum of commissioners, and thus cannot act on a number of items, but can act on certain matters where staff has delegated authority and nonsignificant routine matters. He also noted that FERC will not hold an open meeting of the commissioners until it regains a quorum.
**Accountability Matrix**
Ms. Iwanechko invited questions or comments regarding the accountability matrix included in the MRC agenda package, which is updated quarterly and captures key action items from the quarterly MRC and Board meetings and the policy input letter responses.

**Regulatory Update**
Mr. Berardesco invited questions or comments regarding the regulatory report, which highlights Canadian and Mexican affairs, as well as past and future significant FERC filings.

**Future Meetings**
The following are future dates for the MRC Pre-Meeting and Informational Sessions:

- April 13, 2017
- July 12, 2017
- October 12, 2017

The following are future NERC Board and MRC meetings dates and locations:

- May 10-11, 2017 – St. Louis, MO
- August 9-10, 2017 – Ottawa, Canada
- November 8-9, 2017 – New Orleans, LA

**Adjournment**
There being no further business, the meeting terminated at 4:34 p.m., Pacific.

Submitted by,

Kristin Iwanechko
Secretary
Meeting Announcement

Board of Trustees Committees
Member Representatives Committee
Board of Trustees

February 8-9, 2017 | San Diego, California

The Westin San Diego
400 West Broadway
San Diego, CA 92101

Click here for: Meeting Registration and Hotel Information Link

For more information or assistance, please contact Tina Buzzard (via email).

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Reliability | Accountability

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Introduction and Chair’s Remarks

NERC Antitrust Compliance Guidelines and Public Announcement*

Consent Agenda

1. Minutes* - (Approve)
   a. November 1, 2016 Meeting
   b. January 17, 2017 Conference Call

2. Future Meetings*

Agenda Items

3. Election of NERC Trustees* - (Elect)

4. Roadmap for Integrating Mexico into the ERO*

5. Responses to the Board’s Request for Policy Input*
   a. ERO Enterprise Strategic Planning Process*
   b. Next Steps for Distributed Energy Resources Task Force Final Report*

6. Additional Policy Discussion of Key Items from Board Committee Meetings*
   a. Finance and Audit Committee (February 2, 2017)
      i. Year-end Unaudited Statement of Activities for NERC and the Regional Entities
      ii. Investment Performance and Policy
   b. Corporate Governance and Human Resources Committee
      i. Board and Board Committees’ Self-Assessments and MRC Assessment of Board Effectiveness Results
      ii. Governance Guidelines
iii. Annual Conflict of Interest and Independence Requirements
iv. 2016 Year-End Performance Report
c. Compliance Committee
   i. Compliance Monitoring and Enforcement Program Annual Report
   ii. Coordinated Oversight Program Update
   iii. Internal Controls Evaluation Update
d. Standards Oversight and Technology Committee
   i. ERO Enterprise IT Application Strategy Update
   ii. Functional Model Update
   iii. Supply Chain Management Standard Update
   iv. Guidelines and Technical Basis Update
   v. Reliability Standards Quarterly Status Report

7. Update and Schedule of Near-Term Reliability Assessments*
8. Geomagnetic Disturbance Events Research Work Plan Update*
9. Inverter Disconnects During Transmission Disturbances*
10. Cyber Automated Information Sharing System (CAISS) Overview*
11. Update on FERC Reliability Matters*
12. Accountability Matrix*
13. Regulatory Update*

*Background materials included.
### Member Representatives Committee - Attendance (February 8, 2017)

#### Voting Members

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<tr>
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<tr>
<td>John</td>
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<td>Jason</td>
<td>Marshall</td>
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<td>John</td>
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<td>1. Investor-Owned Utility</td>
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#### Non-Voting Members

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