Chair John Twitty, with Vice Chair Jason Marshall present, called to order the North American Electric Reliability Corporation (NERC) Member Representatives Committee (MRC) meeting on November 8, 2017, at 1:15 p.m., Central. The meeting announcement, agenda, and list of MRC members in attendance are attached as Exhibits A, B and C, respectively.

**Introduction and Chair's Remarks**
Mr. Twitty welcomed MRC members and attendees, and acknowledged the attendance of the Board, FERC Commissioner Cheryl LaFleur, David Ortiz and others from the Federal Energy Regulatory Commission (FERC), Murray Doehler from CAMPUT, and State Commissioners David Clark and Asim Haque. Mr. Twitty also recognized Ken Peterson’s contributions as a NERC trustee.

Mr. Twitty recognized the MRC responses to the October 5, 2017, policy input request from Roy Thilly, 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 NERC’s 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:

- Jackie Roberts for Herb Schrayshuen – Small End-Use Electricity Customer
- Gordon van Welie for Peter Gregg – ISO/RTO

**Minutes**
The MRC approved, on a motion by Sylvain Clermont and seconded by Greg Ford, the draft minutes of its August 9, 2017, meeting in Ottawa.

**Election of MRC Officers for 2018**
Mr. Twitty announced the nominations of Jason Marshall for chair and Greg Ford for vice chair of the MRC for 2018. The MRC unanimously approved, on a motion by Bill Gallagher and seconded by Sylvain
Clermont, Mr. Marshall as chair and Mr. Ford as vice chair. Mr. Marshall and Mr. Ford will assume their new positions at the start of the February 2018 MRC meeting in Fort Lauderdale, FL.

**MRC Sector Nominations and Elections Schedule**

Mr. Twitty reminded attendees that the nomination period for the annual election of member representatives closes on Monday, November 13, 2017. The election will run from December 7, 2017, through December 18, 2017.

**Board of Trustees Nominating Committee (BOTNC) Update**

Fred Gorbet, chair of the BOTNC, reminded attendees that the BOTNC agreed to recommend to re-elect Mr. Hawkins and Ms. Schori to the Board and is looking to fill two vacancies. He reported that the interview team has interviewed eight candidates. The BOTNC will meet in a few weeks via conference call to select the two recommended candidates. The full report of the BOTNC will be sent to the MRC in December, with the election held at the February MRC meeting.

**Responses to the Board’s Request for Policy Input**

Mr. Twitty acknowledged the MRC’s responses to Roy Thilly’s October 5, 2017, letter requesting policy input on the ERO Enterprise CMEP program alignment process and Department of Energy grid study. The following comments on the policy input topics are not all inclusive, but provide the general tenor and scope of the discussion:

**ERO Enterprise CMEP Program Alignment Process**

This topic was presented and discussed during the Board Compliance Committee meeting in the morning. Attendees did not have additional comments on this topic during the MRC meeting.

**Department of Energy Grid Study**

Travis Fisher, senior advisor from the Office of Electricity Delivery and Energy Reliability at the Department of Energy (DOE), provided an overview and key findings of the DOE study, “*Staff Report to the Secretary on Electricity Markets and Reliability*” (Grid Study), highlighting the following:

- In April 2017, DOE Secretary Rick Perry requested a grid study to examine the evolution of wholesale electricity markets, compensation for resilience in wholesale energy and capacity markets, and premature baseload power plant retirements.

- Key findings related to power plant retirements showed that a combination of market and policy forces, including low natural gas prices, low electricity growth, environmental regulations, and increased variable renewable energy penetration, have accelerated the closure of a significant number of traditional baseload power plants.

- Key findings related to resilience and reliability noted that (1) bulk power reliability is adequate today, but long-term concerns about baseload retirements require further study; (2) markets recognize and compensate reliability, but more work is needed to understand resilience across a variety of scenarios; and (3) growing natural gas interdependence still needs to be addressed.
Fritz Hirst, director of legislative and regulatory affairs at NERC, summarized stakeholder responses to the policy input letter questions concerning recommendations by the DOE that “resilience” be formally incorporated into NERC’s mission statement, and that NERC work with DOE on engagement with Canada and Mexico. Mr. Hirst then provided an overview of FERC’s notice of proposed rulemaking (NOPR) to establish just and reasonable rates for wholesale electricity sales, in which FERC would consider rules on independent system operators (ISOs) and regional transmission organizations (RTOs) to ensure that certain reliability and resilience attributes are fully valued. Mr. Hirst reviewed NERC’s comments on the NOPR, explaining they articulate the reliability issues on baseload retirements and highlight the need for the system to have the right combination and amount of resources. Mr. Hirst then noted the target date for FERC action on the NOPR is December 11, 2017.

Mr. Thilly, chair of the Board of Trustees, highlighted the policy input received related to the need to develop a common definition of resilience and suggested that this could be assigned to the Reliability Issues Steering Committee (RISC).

- An MRC member noted that many aspects of resiliency include adequacy.
- An MRC member suggested it would be beneficial to look at resiliency and reliability from the perspective of a Venn diagram and consider what a reliable system looks like that isn’t resilient.
- An MRC member discussed the need to first “unpack” resilience before defining a global, all-encompassing term. Additional members supported the concept of first looking at the elements of resiliency in the context of bulk power system reliability before going too far in developing a definition.
- An MRC member suggested, in addition to being tasked with defining resilience, the RISC should be asked to define the context and consider NERC’s role.
- An observer commented that the National Infrastructure Advisory Council has already done work related to defining resiliency that could be leveraged.
- Pete Brandien, chair of RISC, noted that RISC would accept the assignment.

**Update on RISC’s ERO Reliability Risk Priorities Report**

Peter Brandien, RISC chair, provided a status of the latest ERO Reliability Risk Priorities Report. He reviewed the key inputs to the report, including the Reliability Leadership Summit, FERC technical conference, pulse point interviews, NERC technical studies, and the DOE grid study. Consistent with the previous report, the RISC identified nine risk profiles for continued level of attention. Eight of the profiles were consistent with the previous report and one profile was shifted from focusing on asset management and maintenance to increasing complexity in protection and control systems. Mr. Brandien discussed the levels of risk, noting that while the draft report categorizes levels of risk as high, moderate, and lower, the RISC is looking for feedback on whether they should categorize the risk profiles in a different way. He also reviewed the inherent risk mapping, noting that RISC spent time discussing each profile and comparing them to each other. Profiles 1, 7, and 9 moved from where they were in the previous report. Profile 4 also moved, but that was as a result of the change in focus of the profile. Mr. Brandien noted that the first draft of the report is posted for stakeholder comment through November 17, 2017. RISC will meet via
conference call after the comment period to review comments received and discuss reducing the number of recommendations and modifying the high, medium, and lower categorizations for levels of risk. RISC will submit the final report to the Board in February for acceptance. Going forward, RISC will submit the reports to the Board in August on a two-year cycle to better align with the strategic planning process.

- An MRC member asked whether RISC considered locational attributes for resources. Mr. Brandien noted that it is addressed generically, recognizing that different areas would be impacted differently.

- Mr. Thilly noted that there may be value in putting the profiles in different buckets as described, but labeling them as High, Moderate, and Lower is confusing because it implies that emerging risks are a much greater threat than a known risk that may be quite severe. Gerry Cauley, president and chief executive officer at NERC, agreed and suggested categorizing the profiles based on the quadrants of the inherent risk map.

- An MRC member suggested that the risk profiles may be a good starting point for a working definition of resilience.

**ERO Enterprise Long-Term Strategy, Operating Plan, and 2018 Metrics**

Michael Walker, senior vice president and chief enterprise risk and strategic development officer at NERC, provided an overview of the ERO Enterprise Long-Term Strategy, Operating Plan, and 2018 Metrics that will be submitted to the Board for approval on November 9, 2017. The long-term strategy and operating plan approvals are subject to finalization of the recommendations in the RISC report, which will be submitted to the Board for acceptance in February 2018. Mr. Walker noted that the development process for all three documents included stakeholder comment periods and presentations to the MRC, and MRC business plan and budget input group. He explained that the long-term strategy focuses on building and preserving current achievements and adapting to change and the operating plan is a living document that is a three-year snapshot of priorities to inform business planning and budgeting activities. Moving forward, the operating plan will be reviewed and updated every other year and the long-term strategy will be reviewed as necessary. Mr. Walker noted that the metrics are the same as 2017 with some enhancements and emphasized that in addition to the ERO Enterprise metrics, NERC and the Regional Entities have individual and departmental goals used for their compensation programs. Mr. Walker concluded by summarizing that operating focus areas moving forward include regulatory role, the changing grid, security, reliability and resilience, and enterprise-wide resource planning and talent management. Over the next few months, there will be efforts to look at and improve the efficiency of stakeholder engagement.

- An MRC member commented that, per previous discussion on the RISC report, she would expect to see the number of activities in the operating plan go down if the recommendations in the RISC report are reduced.

- An MRC member thanked staff for the open process in crafting the documents.

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

**2017 Long-Term Reliability Assessment**

John Moura, director of reliability assessment and system analysis at NERC, provided a preliminary overview of the Long-Term Reliability Assessment (LTRA) that is developed annually by NERC and will be submitted to the Board for acceptance in December. Mr. Moura noted that the LTRA has a new format for 2017 in which it is more succinct, includes additional clarification on data terms and concepts, and was developed with front-end stakeholder input. Mr. Moura then discussed the LTRA’s preliminary key findings as follows: (1) a canceled nuclear plant expansion in SERC-E has resulted in a projected margin short-fall and other areas project sufficient margins during the next five years; (2) amidst slower demand growth, conventional baseload units continue to retire with rapid additions of natural gas, wind, and solar; (3) new applications of assessment metrics will better capture the changing composition of the North American resource mix and identify needs essential to reliability services; and (4) over 7,400 miles of added transmission is planned in order to maintain reliability and meet policy objectives with the onset of 14.8 GW of wind and 12.6 GW of utility scale solar Tier 1 resources. Mr. Moura reviewed the remaining timeline for the LTRA, noting that an embargoed report will be provided to the Board and MRC on November 13, 2017, with comments due on November 24, 2017. The LTRA will be submitted for Board approval during its conference call on December 4, 2017, with a target release to the public on December 14, 2017.

- A Board member inquired about the challenges presented with building new natural gas pipelines. Mr. Moura responded that the contract requirements remain, and an MRC member commented that there is a regulatory gap in how the wholesale markets are constructed. Another MRC member commented that there are pipeline capacity constraints depending on the region.

**2017-2018 Winter Reliability Assessment**

Thomas Coleman, director of reliability assessment at NERC, provided an overview of the 2017-2018 Winter Reliability Assessment, noting that all 20 areas meet reserve margins for the upcoming winter and are sufficient for each assessment area. He also reviewed the key findings as noted in the presentation. Mr. Coleman noted that NERC anticipates sending the assessment to the Board and MRC for information on November 13, 2017, with a target release date of November 15, 2017.

**Using Advanced Analytics to Improve Industry Models and Conduct Forward-Looking Assessments of Emerging Risks to the BPS**

This topic was not presented due to time constraints and was postponed to a future meeting.

**Hurricanes Harvey and Irma and Grid Resiliency**

Kenny Mercado, senior vice president of electric operations at CenterPoint Energy, gave a presentation on CenterPoint Energy’s response to Hurricane Harvey, explaining the overall impact to electric operations and benefits of grid modernization. Mike Spoor, vice president of transmission and substation operations at Florida Power & Light (FPL), followed with a presentation on FPL’s preparation for and response to
Hurricane Irma, discussing the beneficial impacts of its investments in a more resilient energy grid and an overview of FPL’s hurricane restoration efforts.

Update on FERC Reliability Matters
David Ortiz, deputy director of the Office of Electric Reliability at FERC, provided an overview of the following FERC reliability activities, as outlined in the posted slide presentation.

- Primary Frequency Response
- Balancing Authority Control and Facility Interconnection Requirements
- Revised Reliability Standard on Remedial Action Schemes
- Emergency Preparedness and Event Reporting
- Cyber Systems in Control Centers
- Lessons Learned from Commission-Led CIP Version 5 Reliability Audits
- Security Management Controls
- GMD Research Work Plan
- Grid Reliability and Resilience Pricing

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:

- January 11, 2018
- April 10, 2018
- July 18, 2018
- October 10, 2018

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

- February 7-8, 2018 – Ft. Lauderdale, FL
- May 9-10, 2018 – Washington, D.C.
- August 15-16, 2018 – Calgary, Canada
Mr. Twitty then invited MRC members to provide their thoughts on the purpose of the informational sessions and input on how the MRC should most effectively conduct its business both in advance of MRC meetings and during meetings. Mr. Cauley noted that there is a pre-planning meeting in advance of each quarterly meeting for the MRC chair and vice chair, Board chair and vice chair, and NERC leadership to discuss agenda topics and balance the agendas. Discussion noted the continued value of the informational sessions in (1) keeping stakeholders updated on key issues from NERC staff and (2) allowing for more substantive, forward-looking discussion at the MRC meetings. Additionally, an MRC member noted that having policy input due before quarterly agenda packages are posted can create challenges in crafting policy input responses for additional topics that are included on the agendas.

Adjournment
There being no further business, the meeting terminated at 5:20 p.m., Central.

Submitted by,

Kristin Iwanechko
Secretary
Meeting Announcement
Board of Trustees Committees
Member Representatives Committee
Board of Trustees

November 8-9, 2017  |  New Orleans, LA

JW Marriott New Orleans
614 Canal Street
New Orleans, LA 70130

Click here for: Meeting Registration and Hotel Information Link.

The Schedule of Events and meeting agenda packages for the November 8-9 meetings will be posted on or about October 25. Please note the Schedule may be adjusted real-time should meetings conclude early and/or extend past their scheduled end time.

For more information or assistance, please contact Tina Buzzard (via email).
Agenda
Member Representatives Committee
November 8, 2017 | 1:00 p.m. – 5:00 p.m. Central
(Please note the Schedule may be adjusted real-time should meetings conclude early and/or extend past their scheduled end time.)

JW Marriott New Orleans
614 Canal Street
New Orleans, LA 70130

Conference Room: Ile de France (3rd floor)

Introduction and Chair’s Remarks

NERC Antitrust Compliance Guidelines and Public Announcement*

Consent Agenda

1. August 9, 2017, Meeting Minutes* - (Approve)
2. Future Meetings*
3. Elections and Nominations
   a. Election of MRC Officers for 2018*
   b. MRC Sector Nominations and Elections Schedule*

Regular Agenda

4. Board of Trustees Nominating Committee Update*
5. Responses to the Board’s Request for Policy Input*
   a. ERO Enterprise CMEP Program Alignment Process
   b. Department of Energy Grid Study*
6. Update on RISC’s ERO Reliability Risk Priorities Report*
7. ERO Enterprise Long-Term Strategy, Operating Plan, and 2018 Metrics*
8. Additional Policy Discussion of Key Items from Board Committee Meetings*
   a. Corporate Governance and Human Resources Committee (November 2, 2017)
   b. Finance and Audit Committee
   c. Compliance Committee
   d. Standards Oversight and Technology Committee
9. 2017 Long-Term Reliability Assessment*
10. 2017-2018 Winter Reliability Assessment*
11. Using Advanced Analytics to Improve Industry Models and Conduct Forward-Looking Assessments of Emerging Risks to the BPS*
12. Hurricanes Harvey and Irma and Grid Resiliency*
13. Update on FERC Reliability Matters*
14. Accountability Matrix*
15. Regulatory Update*

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

#### Voting Members

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>John</td>
<td>Twitty</td>
<td>Chair</td>
</tr>
<tr>
<td>Jason</td>
<td>Marshall</td>
<td>Vice Chair</td>
</tr>
<tr>
<td>John</td>
<td>Pespisa</td>
<td>1. Investor-Owned Utility</td>
</tr>
<tr>
<td>Jennifer</td>
<td>Sterling</td>
<td>1. Investor-Owned Utility</td>
</tr>
<tr>
<td>Carol</td>
<td>Chinn</td>
<td>2. State/Municipal Utility</td>
</tr>
<tr>
<td>Vicken</td>
<td>Kasarjian</td>
<td>2. State/Municipal Utility</td>
</tr>
<tr>
<td>Jay</td>
<td>Bartlett</td>
<td>3. Cooperative Utility</td>
</tr>
<tr>
<td>Greg</td>
<td>Ford</td>
<td>3. Cooperative Utility</td>
</tr>
<tr>
<td>Sylvain</td>
<td>Clermont</td>
<td>4. Federal/Provincial</td>
</tr>
<tr>
<td>Lam</td>
<td>Chung</td>
<td>4. Federal/Provincial</td>
</tr>
<tr>
<td>Tony</td>
<td>Montoya</td>
<td>4. Federal/Provincial</td>
</tr>
<tr>
<td>Bill</td>
<td>Gallagher</td>
<td>5. Transmission Dependent Utility</td>
</tr>
<tr>
<td>David</td>
<td>Osburn</td>
<td>5. Transmission Dependent Utility</td>
</tr>
<tr>
<td>Martin</td>
<td>Sidor</td>
<td>6. Merchant Electricity Generator</td>
</tr>
<tr>
<td>Donald</td>
<td>Holdsworth</td>
<td>6. Merchant Electricity Generator</td>
</tr>
<tr>
<td>Brenda</td>
<td>Hampton</td>
<td>7. Electricity Marketer</td>
</tr>
<tr>
<td>Ben</td>
<td>Engleby</td>
<td>7. Electricity Marketer</td>
</tr>
<tr>
<td>Michelle</td>
<td>D'Antuono</td>
<td>8. Large End-Use Electricity Customer</td>
</tr>
<tr>
<td>Jay</td>
<td>Barnett</td>
<td>8. Large End-Use Electricity Customer</td>
</tr>
<tr>
<td>Jackie</td>
<td>Roberts</td>
<td>9. Small End-Use Electricity Customer - Proxy Herb Schrayshuen</td>
</tr>
<tr>
<td>Herb</td>
<td>Schrayshuen</td>
<td>9. Small End-Use Electricity Customer</td>
</tr>
<tr>
<td>Gordon</td>
<td>van Welie</td>
<td>10. ISO/RTO</td>
</tr>
<tr>
<td>Peter</td>
<td>Gregg</td>
<td>10. ISO/RTO - Proxy Gordon van Welie</td>
</tr>
<tr>
<td>Bill</td>
<td>Magness</td>
<td>10. ISO/RTO</td>
</tr>
<tr>
<td>Rob</td>
<td>McGarrah</td>
<td>11. Regional Entity - FRCC</td>
</tr>
<tr>
<td>Lou</td>
<td>Oberski</td>
<td>11 Regional Entity - RF</td>
</tr>
<tr>
<td>Asim</td>
<td>Haque</td>
<td>12. State Government</td>
</tr>
<tr>
<td>David</td>
<td>Clark</td>
<td>12. State Government</td>
</tr>
</tbody>
</table>

#### Non-Voting Members

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murray</td>
<td>Doehler</td>
<td>Canadian Provincial</td>
</tr>
<tr>
<td>Michael</td>
<td>Bardee</td>
<td>U. S. — Federal - Proxy David Ortiz</td>
</tr>
<tr>
<td>Richard</td>
<td>Doying</td>
<td>Regional Entity - MRO</td>
</tr>
<tr>
<td>Harvey</td>
<td>Reed</td>
<td>Regional Entity - NPCC</td>
</tr>
<tr>
<td>Lee</td>
<td>Xanthakos</td>
<td>Regional Entity - SERC</td>
</tr>
<tr>
<td>Liz</td>
<td>Jones</td>
<td>Regional Entity - Texas RE</td>
</tr>
<tr>
<td>Jim</td>
<td>Robb</td>
<td>Regional Entity - WECC</td>
</tr>
<tr>
<td>Kristin</td>
<td>Iwanechko</td>
<td>Secretary</td>
</tr>
</tbody>
</table>