NERC News
August 2018

Executive Management Spotlight – Janet Sena

NERC Board Meets With Canadian Regulators
On August 14, the NERC Board of Trustees hosted a meeting with Canadian federal and provincial reliability regulators. The meeting is held annually, in conjunction with the August quarterly Board meeting. This year marked the sixth joint meeting, providing an important opportunity to strengthen and deepen the collaboration that underpins NERC’s unique, multi-jurisdictional approach to regulating the reliability and security of the North American grid.

NERC Board Chair Roy Thilly and NERC CEO Jim Robb each offered perspectives on the importance of the U.S.–Canadian partnership to reliability. Reflecting on the significant contributions Canadians have made to the Electric Reliability Organization (ERO), Thilly noted that two of the four chairs of the NERC Board under NERC’s current governance structure have been Canadians (Richard Drouin and Fred Gorbet). Thilly also noted the importance of the relationship between NERC and the Canadian Association of Members of Public Utility Tribunals (CAMPUT). Murray Doehler, who served as CAMPUT’s representative to NERC beginning in 2015, recently retired from his position as a member of the Nova Scotia Utility and Review Board. David Morton, chair of the British Columbia Utilities Commission, was appointed by CAMPUT’s executive committee to serve as the new representative to NERC. Continued on page 2

Headlines

Board Meets with Canadian Regulators, Approves 2019 Budgets, Adopts 3 Standards

August Marks Important Anniversaries in ERO History

Bill Lawrence Named Vice President and Chief Security Officer
Canadian Regulators (cont’d)

As in prior years, this year’s meeting agenda included updates on standards adoption and compliance monitoring and enforcement, as well as timely topics such as the evolution of the reliability coordination function in the Western Interconnection as well as cyber and physical security. The topics for each year’s agenda are selected based on input from the NERC Board and CAMPUT’s representative. NERC looks forward to the continued partnership toward assuring the reliability and security of the North American grid. Janet Sena is senior vice president and director of Policy and External Affairs.

Headlines

Board Meets with Canadian Regulators, Approves 2019 Budgets, Adopts 3 Standards

During its recent quarterly meeting, the Board of Trustees met with Canadian regulators, approved the 2019 Business Plans and Budgets for NERC and the Regional Entities and adopted three standards. The meeting began with welcoming remarks by Dave Erickson, chief executive officer of the Alberta Electric System Operator.

Erickson highlighted the enormous role NERC plays in helping industry get through the transformation happening and encouraged NERC to continue its risk-based work. Erickson was joined by the Honorable Sergio Marchi, president and CEO of the Canadian Electricity Association in highlighting the importance of collaboration across North America to assure reliability. During the 2003 blackout 15 years ago, our cross-border cooperation set the stage for successfully achieving our common goals of security, reliability and resilience, Marchi said. Also delivering opening remarks were Catherine Jereza, deputy assistant secretary at the Department of Energy; Murray Doehler, outgoing CAMPUT representative; and David Morton, incoming CAMPUT representative.

Board Chair Roy Thilly began the meeting by introducing NERC’s new chief security officer — Bill Lawrence — noting Bill’s dedication to the security of the grid, to the implementation of the E-ISAC Long-Term Strategic Plan and to his commitment to stakeholders.

Addressing the approximately 200 stakeholders in attendance, Jim Robb, NERC president and CEO, noted that this summer is one of anniversaries — the 50th anniversary of NERC, the 15th anniversary of the 2003 blackout and the 13th anniversary of the Energy Policy Act of 2005.

“These anniversaries and our meeting in Canada have given me a chance to reflect on the interconnected nature of our grid and the importance of our international collaboration,” Robb said. “The Electric Reliability Organization is an agency for driving a common approach to reliability and security. We have a tremendous amount of work to do together, and it is a high priority for all of us. I am confident we will continue working diligently with the Regions, our Canadian partners, industry and other stakeholders.”

In Board action, the 2019 ERO Enterprise Business Plan and Budgets were approved. The NERC Business Plan and Budget focuses on several key areas: investment in the E-ISAC and cyber security; addressing one of the most critical issues facing the electric industry; and costs to enhance and support the technology and tools used by the ERO Enterprise to promote the long-term effectiveness and efficiency.

The 2019 budgets for the seven Regional Entities were approved by the NERC Board, after undergoing approval by their respective regional boards. The 2019 Business Plan and Budgets will be submitted to FERC for approval later this month. Throughout the process, significant input was received by stakeholders and industry representatives.
During the meeting, the Board received several updates on ERO activities, including Reliability Coordinator functions in the Western Interconnection, supply chain standards activities and the Standards Efficiency Review. The Board received an update from Melanie Frye, president and CEO of WECC, on the Reliability Coordinator function in the Western Interconnection. WECC has hosted a series of forums providing stakeholders the opportunity to discuss implications of having multiple Reliability Coordinators within the Interconnection. The ERO has specific authority regarding the Reliability Coordinator, namely that entities are properly registered and that Reliability Coordinator functions are certified. To that end, NERC and WECC sent a joint letter to Balancing Authorities and transmission operators in the Western Interconnection footprint requesting they identify their respective plans for Reliability Coordinator service by September 4.

Throughout 2018, the ERO has focused efforts on supply chain standards activities undertaken in response to Board resolutions designed to establish a common understanding of the supply chain risk to the bulk power system and initiate activities to mitigate those risks. These activities included the creation of an Advisory Task Force, training for Regional Entity Compliance Monitoring and Enforcement Program staff and the initial draft of Cyber Security Supply Chain Risk Study performed under contract by the Electric Power Research Institute, which is expected to be finalized in the first quarter of 2019. White papers were delivered by industry trade associations and forums to address best and leading practices in supply chain management. Going forward, NERC plans to work with a vendor group from within the Advisory Task Force for better insight and to develop a plan for evaluating the effectiveness of the standards.

Another discussion took place on the Standards Efficiency Review, which is part of NERC’s focus on ensuring NERC Reliability Standards appropriately address risks to the bulk power system. The project began with a list of approximately 113 requirement candidates for retirement, along with a justification for each. A draft Standard Authorization Request was posted for informal comment June 7–July 10.

The Standards Efficiency Review team will present the Standard Authorization Request to the Standards Committee for potential acceptance and authorization for solicitation of Standard Authorization Request drafting team members. The next phase will address requirements that were not initially flagged for retirement, but were identified for alternatives to retirement, such as consolidation or modification. The project is scheduled for completion by the second quarter of 2019.

In other Board action, three Reliability Standards were adopted and a GMD data request was approved:

- **BAL-002-3 – Disturbance Control.** The modification to this standard — in response to FERC Order 835 — requires contingency reserve for recovery from a balancing contingency event. FERC directed NERC to develop modifications to the standard that require responsible entities coordinate with the Reliability Coordinator upon circumstances preventing compliance with the 15-minute area control error recovery period.

- **CIP-012-1 – Cyber Security, Communications between Control Centers.** This standard requires the protection of sensitive Bulk Electric System data communicated between control centers.

- **VAR-001-5 – Voltage and Reactive Control.** The modification to this standard is a result of periodic review and eliminates a duplicative variance requirement.

- **The GMD Data Request** requires transmission and generation owners to provide NERC with their geomagnetic monitoring data to support ongoing research and analysis of GMD risks to the bulk power system. The request criteria was developed in response to a FERC order approving TPL-007-1 – Transmission System Planned Performance for Geomagnetic Disturbance Events that also directed NERC to collect the data under Section 1600 of the NERC Rules of Procedure. The technical specifications for the data were developed by the Geomagnetic Disturbance Task Force and align with existing industry GMD data capabilities.
Earlier in the week, the NERC Board met with Canadian regulators for its annual meeting to discuss several components of the cross-border grid reliability framework, including standards adoption, entity registration and memoranda of understanding. Canadian regulators also were briefed on cyber security, including the implementation of the E-ISAC Long-Term Strategic Plan, and NERC’s reliability assessment and performance analysis capabilities.

“We've built a strong foundation of collaboration with Canadian regulators and industry,” said Thilly, noting the large turnout of Canadian participants. “These relationships are essential for us to work together effectively to carry out our shared mission of a reliable and secure North American grid.”

Board presentations may be found by clicking here. The next Board of Trustees meeting is November 7 in Atlanta. Announcement.

August Marks Important Anniversaries in ERO History
Fifteen years ago, in August 2003, inadequate system awareness, vegetation management and reliability coordination led to the worst blackout in North American history, impacting an estimated 50 million people in the midwestern and northeastern United States as well as Ontario, Canada. This blackout led to the enactment of the Energy Policy Act of 2005 (August 2005). That Act of Congress called for the creation of an Electric Reliability Organization to assure a reliable bulk power system across North America. NERC was certified by the Federal Energy Regulatory Commission as the ERO in 2006.

Over the past 15 years, the ERO Enterprise (i.e., NERC and the Regional Entities that operate under delegated authority from NERC) has become the independent voice for reliability and security. Over the same time period, industry has begun a significant transition toward a new and different resource mix and nation-state adversaries have become a persistent threat to the entire grid. Both of these changes create new challenges to bulk power system reliability and security. With appropriate insight and information sharing, the right set of foundational standards, careful planning and diligent operations, industry can continue to navigate these changes in a manner that results in enhanced reliability, resilience and security.

The ERO Enterprise is a key mechanism for driving these needed changes. In the coming years, the ERO Enterprise will focus on security, including CIP standards and increasing the capability of the Electricity Information Sharing and Analysis Center; working with industry and vendors on the integration of inverter-based technology; and supporting industry as it manages the rapid pace of change based on the large-scale integration of variable energy resources, deployment of energy storage technologies and increasing dependence on natural gas infrastructure.

Industry is on the front line of making these changes work, and the ERO Enterprise has become an essential part of the fabric of the industry's reliability and security ecosystem. Even with all these changes underway, the North American bulk power system remains

Bill Lawrence Named Vice President and Chief Security Officer
NERC’s Board of Trustees named Bill Lawrence as vice president and chief security officer, effective August 16. In his new role, Lawrence will lead all of NERC’s security programs executed through the Electricity Information Sharing and Analysis Center (E-ISAC) operations, directing security risk assessments and mitigation initiatives to protect critical electricity infrastructure across North America. Lawrence will also lead coordination efforts with government agencies and stakeholders on cyber and physical security matters, including analysis, response and sharing of critical sector information.

Cyber and physical security are top risk priorities for NERC President and Chief Executive Officer Jim Robb, who oversaw the nationwide search for the right executive to lead the programs executed through the E-ISAC.

“I am excited to have Bill in this role leading NERC’s security programs. Bill’s dedication to the security mission of the E-ISAC and his commitment to
stakeholders factored heavily in our decision to name him as our top officer for the E-ISAC.”

Lawrence joined NERC in July 2012 and has held a variety of positions with the EISAC, including overseeing the development of NERC’s grid security exercise and grid security conference — GridEx and GridSecCon, respectively. Currently, Lawrence serves as senior director of the E-ISAC, leading the division in its mission to identify and mitigate cyber and physical security risks to the grid in North America.

“I am humbled to have this opportunity to make positive strides toward the security and resilience of the grid. Security across North America is a vital piece of our mission. The threats are real, dynamic and extremely significant,” Lawrence said.

“The E-ISAC Long-Term Strategic Plan provides the framework to increasing the EISAC capability required to help stakeholders protect the grid. I look forward to leading that charge and working with our industry and government stakeholders toward that end.”

Prior to joining NERC, Lawrence was a pilot of F-14 Tomcats and F/A-18F Super Hornets for the U.S. Navy. He also served as the deputy director in the Character Development and Training Division at the U.S. Naval Academy, where he taught courses in Ethics and Cyber Security.

Lawrence has a bachelor’s degree in Computer Science from the U.S. Naval Academy, a master’s degree in International Relations from Auburn Montgomery and a master’s degree in Military Operational Art and Science from the Air Command and Staff College. He also has a Project Management Professional certification and several cyber security certifications.

Compliance

ERO Enterprise Program Alignment Process Resources Updated
The ERO Enterprise Program Alignment Process is intended to enhance efforts to identify, prioritize and resolve alignment issues across the ERO Enterprise. This is a repeatable, transparent process that registered entities (or other relevant industry stakeholders) may use to report any perceived inconsistency in the approach, methods or practices implemented and executed by the Regional Entities.

Using this process, NERC captures identified issues from the various resources in a centralized repository. NERC classifies the issues through an initial screening process to ensure the appropriateness for this process, and then works with Regional Entities and stakeholders to analyze the issues and determine the scope and material impact. The ERO Enterprise develops recommendations and determines the priority of the activities taking into consideration all ERO Enterprise efforts. Finally, NERC posts the issue along with the recommendations/results in the Issues and Recommendations Tracking document and provides status updates on its activities.

On August 7, 2018, the Issues and Recommendations Tracking spreadsheet was updated.

Compliance Monitoring and Enforcement Program Quarterly Report Available
This report highlights key ERO Enterprise Compliance Monitoring and Enforcement Program (CMEP) activities that occurred in Q2 2018 and provides information and statistics regarding those activities. In Q2 2018, CMEP activities throughout the ERO Enterprise reflected continuing implementation of a risk-based approach that has allowed the ERO Enterprise to focus resources on risks to the reliability of the bulk power system, entity-specific risks and serious risk noncompliance with Reliability Standards. NERC and the Regional Entities also collaborated on various compliance monitoring activities to identify lessons learned and provide additional insight and information to industry stakeholders. Most significantly, in Q2 2018, the ERO Enterprise focused on the continued alignment of core CMEP activities. For more information, please refer to the full report posted as Item 5 in the Compliance Committee agenda package.

Four Reliability Standard Audit Worksheets Posted
Four Reliability Standard Audit Worksheets (RSAWs) have been posted to the RSAW page on NERC.com under
the heading “Current RSAWs for Use.” RSAWs are guides provided by the ERO that describe types of evidence registered entities may use to demonstrate compliance with a Reliability Standard. The worksheets include information regarding how the ERO may assess evidence and are drafted during the development of their corresponding Reliability Standards, which allows for enhanced transparency around compliance expectations.

**BAL-005-1 – Balancing Authority Control** establishes requirements for acquiring data necessary to calculate Reporting Area Control Error. The standard also specifies a minimum periodicity, accuracy and availability requirement for acquisition of the data and for providing the information to the system operator. BAL-005-1 applies to Balancing Authorities and will become effective January 1, 2019. BAL-005-1 will replace BAL-005-0.2b and BAL-006-2.

**FAC-001-3 – Facility Interconnection Requirements** requires Transmission Owners and applicable Generator Owners to document and make available facility interconnection requirements so that entities seeking to interconnect will have the necessary information and adverse impacts on the reliability of the Bulk Electric System will be avoided. FAC-001-3 applies to Transmission Owners and applicable Generator Owners and will become effective on January 1, 2019. FAC-001-3 replaces FAC-001-2.

**BAL-002-2(i) – Disturbance Control Performance – Contingency Reserve for Recovery from a Balancing Contingency Event** ensures the Balancing Authority or Reserve Sharing Group balances resources and demand and returns the Balancing Authority’s or Reserve Sharing Group’s Area Control Error to defined values (subject to applicable limits) following a Reportable Balancing Contingency Event. BAL-002-2(i) became effective January 1, 2018, and the RSAW was updated to reflect the correct name of the standard.

**PRC-025-2 – Generator Relay Loadability** sets load-responsive protective relays associated with generation facilities at a level to prevent unnecessary tripping of generators during a system disturbance for conditions that do not pose a risk of damage to the associated equipment. PRC-025-2 became effective July 1, 2018, and the RSAW was updated to reflect the correct name of the standard.

### Reliability Risk Management

**Lessons Learned Posted**

NERC published two new Lessons Learned under the Event Analysis – Lessons Learned tab on NERC.com. Additional Lessons Learned are available in the September 2017 Hurricane Irma Event Analysis Report.

The **Firewall Failure After Time Limit Exceeded** Lesson Learned examines an incident in which, due to a firmware error, a firewall stopped processing network traffic without proper failover after an internal run-time limit was exceeded. This resulted in persistent remote terminal unit communication issues. This Lesson Learned is of primary interest to balancing authorities, generation operators, reliability coordinators, transmission operators and transmission owners that operate an energy management system.

The **Loss of Substation Data Circuits to SCADA** Lesson Learned reviews a problem that occurred during the initiation of a transfer of SCADA (Supervisory Control And Data Acquisition) from the company’s alternate control center to primary control center. During the initiation, an interruption of vendor-provided substation data circuits occurred that resulted in a temporary and partial loss of SCADA operating and monitoring capability for more than 30 minutes. This Lesson Learned is of primary interest to transmission owners, transmission operators, balancing authorities, and reliability coordinators.

A successful Lessons Learned document clearly identifies the lesson, contains sufficient information to understand the issues, visibly identifies the difference between the actual outcome and the desired outcome and includes an accurate sequence of events, when it provides clarity.
Webinar Resources Posted
NERC has posted the streaming webinar and slide presentation from the PRC-025-2 Requirement Training webinar.

NERC has also posted the streaming webinar and slide presentation for the Project 2015-10 – Single Points of Failure webinar.

Update on Standards Efficiency Review Project
Beginning in January 2018, the Standards Efficiency Review (SER) project team, consisting of over 50 industry participants, evaluated the body of NERC Operating and Planning Reliability Standards using a risk-based approach to identify potential efficiencies through retirement or modification of Reliability Standard Requirements. The SER team formed three sub-teams to analyze how the standards apply in the Long-Term Planning time frame, Near-Term Operations time frame and Real-Time Operations.

These three SER sub-teams:

- Held a series of collaborative meetings, during which the teams identified approximately 114 requirements as non-essential for reliability and therefore candidates for retirement; and
- Collectively drafted a combined Standards Authorization Request (SAR) summarizing their recommendations and justifications for retirement.

NERC posted the draft SAR for informal industry comment June 7–July 10, 2018. The SER team is currently reviewing and incorporating industry comments. The SER team will submit the final SAR to the Standards Committee (SC) in fall 2018 and their work will be considered complete. This was considered Phase 1 of the SER project. After the SER team submitted the SAR to the SC, the process for modifying and retiring a Reliability Standard as outlined in Section 4.0 of the Standard Processes Manual formally began, including the creation of a standards drafting team.

Nominations are currently being sought for SER drafting team members. Nominations must be submitted by September 17, 2018. Use the electronic form to submit a nomination. If you experience issues using the electronic form, contact Wendy Muller. An unofficial Word version of the nomination form is posted on the Drafting Team Vacancies page and the project page. The Standards Committee is expected to appoint members to the team mid-October 2018. Nominees will be notified after they have been selected.

Concurrent to finalizing the SAR, the SER team initiated Phase 2 of the efficiency review. This phase considers how Operating and Planning Standards can be modified or administered to further reduce burdens to, and achieve efficiencies for, registered entities and the ERO. Current members of the Phase 1 effort may volunteer again to participate in Phase 2. To complement the existing team, the Phase 2 team will be supplemented with volunteers from the Compliance and Certification Committee and the SC. Once the Phase 2 of the project is underway, NERC will consult with the SER Advisory Group and stakeholders, on a plan to address the CIP Standards in the SER. For more information on the SER project, contact Chris Larson or Howard Gugel.

Updated Links for Affected Reliability Standards
Due to recent server changes, links to the following Reliability Standards have been updated on the U.S. Effective Dates page:

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If you encounter difficulties accessing any Reliability Standards on the U.S. Effective Dates page, please send an email to sarcomm@nerc.net.

Regional Entity Events

Midwest Reliability Organization (MRO)
- MRO Technical Training, September 25 [Register](#)
- MRO Security Conference, September 26 [Register](#)
- MRO Qtr. 3 Security Advisory Council Meeting, September 27 [Register](#)
- MRO Board of Directors Meeting, October 4 [Register](#)
- MRO Compliance Committee Meeting – Webex, October 17 [Register](#)
- MRO Standards Committee Meeting – Webex, October 18 [Register](#)
- MRO Planning Committee Meeting, October 23 [Register](#)
- MRO Fall Reliability Conference, October 24 [Register](#)
- MRO Operating Committee Meeting, October 25 [Register](#)

**Texas RE**
- Talk with Texas RE, September 20 [Register](#)
- Fall Standards and Compliance Workshop, October 17 [Register](#)

**Upcoming Events**
- Monitoring and Situational Awareness Technical Conference – October 2–3, Carmel, Indiana [Register](#)
- GridSecCon 2018 – October 15–19, Las Vegas, Nevada [Register](#)
- Board of Trustees Committees, Members Representatives Committee, and Board of Trustees Meetings – November 6–7, 2018, Atlanta [Meeting Registration and Hotel Information](#)

**Filings**

**NERC Filings to FERC**

August 7, 2018
- [BAL-003 Informational Filing](#) | NERC submits a supplemental informational filing to its June 29 informational filing providing additional information regarding the Balancing Authorities compliance obligations in the Western Interconnection.

August 14, 2018
- [Compliance Filing in Response to January 16 Order](#) | NERC submits an unaudited report of NERC's budget-to-actual variance information for the second quarter 2018. This compliance filing is in accordance with the January 16, 2013 Order, which approved a Settlement Agreement between the FERC Office of Enforcement and NERC, related to findings and recommendations arising out of its 2012 performance audit.

August 17, 2018

August 24, 2018
- [Request for Acceptance of NERC’s 2019 Business Plan and Budget Filing and the 2019 Business Plans and Budgets of the Regional Entities](#) | NERC submits its request for acceptance of NERC’s 2019 Business Plan and Budget Filing as well as the 2019 Business Plans and Budgets of the Regional Entities and for the approval of proposed assessments to fund budgets.

**NERC Filings in Canada**

August 10, 2018
- [NERC Informational Filing Supplement BAL-003 (Alberta)](#)

August 23, 2018
- [Notice of Filing of NERC of Proposed Reliability Standard BAL-002-3](#) | Attachments to BAL-002-3 Filing

**Careers at NERC**

**Analyst Physical Security**
- Location: Atlanta [Details](#)

**Engineer Performance Analysis**
- Location: Atlanta [Details](#)

**Cyber Analyst-Network Analyst**
- Location: Washington, D.C. [Details](#)

**E-ISAC Junior Analyst Physical Security**
- Location: Washington, D.C.
Details

E-ISAC Watch Officer – Open Source Intelligence
Location: Washington, D.C.

Details