

NERC News

March 2019

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ERO Executive Spotlight – Tim Gallagher, President and CEO, ReliabilityFirst

Working Together To Stay Secure

Cyber security compromises and the potential of cyber attacks are currently ranked as the No. 3 global risk by the World Economic Forum. NERC's Reliability Issues Steering Committee also identified this risk as high for the North American bulk power system. Chances are that it is a highly ranked risk on your corporate risk registers too. Cyber security is extremely challenging, as it involves intentional, coordinated attacks; and the motivations, delivery mechanisms, opportunities and technologies for these attacks are constantly changing.



For some time now, NERC and the Regions have been auditing against and enforcing the CIP Standards, and grid reliability and security have benefited from these efforts. In order to effectively combat potential attacks and reduce our residual risk, however, we need to apply an "all hands on deck" approach.
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Working Together (cont'd)

Collectively, we seek to shift focus from managing and reducing the compliance risk associated with cyber vulnerabilities, to managing the risk of actual cyber breaches. We all can agree that the financial, reputational and physical harms that can occur from a breach far outweigh penalties levied by a regulatory agency.

The ERO community has worked extensively over the past several years with industry partners who had deficiencies in their security postures. In many cases, ERO Enterprise staff labored for months, hand-in-hand, with staff from affected companies to help them turn around their security postures and remediate their deficiencies. Based upon this collective effort, the Regions, in conjunction with NERC and key industry partners, published the [2018 CIP Themes and Lessons Learned: Mitigating Risks behind the Critical Infrastructure Protection Reliability Standards](#) report. This report summarizes what we have learned after working with multiple companies and accumulating many lessons learned regarding how to better enhance security postures. Experience and history shows that there are consistent, repeated themes observed in those with challenges. Despite efforts to stay ahead of security threats, the reality is entities are sometimes held back by deficiencies or limitations in their corporate structure, culture or resources. Work continues, so watch for webinars and lessons learned throughout the year.

The main themes identified as contributing to deficient security postures are:

- Development of organizational silos (vertical, horizontal and multiple layers).
- Disassociation between compliance and security (treating the two as separate functions with separate purposes).
- Lack of awareness of an entity's needs or deficiencies (incomplete or lack of knowledge of the systems and how they interrelate).

- Inadequate tools or ineffective use of tools (lack of automation and tools or overreliance or use without complete understanding).

I encourage you to review this report, consider whether any of the themes are present in your organization and reach out to your Region if you want to have further discussions. Even if these themes are not present in your organization now, you may wish to spend some time thinking about how you will maintain your security posture, as we have seen some companies struggle with sustainability issues. Look at NERC and the Regions as allies in this constant, always evolving battle. Together, we can provide a reliable and secure bulk power system. *Tim Gallagher is president and chief executive officer at [ReliabilityFirst](#).* ■■■

Headlines

Robb Participates in FERC, DOE Security Investments Technical Conference

Jim Robb, NERC's president and chief executive officer, participated in a security investments technical conference co-sponsored by the Federal Energy Regulatory Commission and the Department of Energy on March 28. The conference – "Security Investments for Energy Infrastructure" – was divided into two panels: Cyber and Physical Security, Best Practices, and Industry and Government Engagement; and Incentives and Cost Recovery for Security Investments. Robb participated on Panel 1, which focused on current and emerging cyber and physical security threats as well as cyber and physical security best practices and mitigation strategies. [Robb Testimony](#)

Leveraging the Grid's Human Vulnerabilities to Improve Reliability at the Human Performance Conference

The technicians and engineers who build, maintain and operate the grid are at the heart of the eighth annual Human Performance Conference: [Improving Human Performance on the Grid](#), which focuses on improving performance at the organizational, process and individual levels. They are highly trained and educated. They are also human — and fallible.

This year's keynote address, "Doing Ordinary Things at Extraordinary Times" was given by Joseph W. Pfeifer, former chief of Counterterrorism and Emergency Preparedness for the New York City Fire Department (FDNY). During his career, Pfeifer commanded some of the largest disasters in New York City's history and played a major command role during 9/11 and Hurricane Sandy.

This conference — a collaboration between NERC, the North American Transmission Forum (NATF) and the Department of Energy (DOE) — provided the space for industry to come together, leverage their commonality and vulnerability and learn how to achieve a culture of high reliability on the bulk power system.

Reinforcing the collaborative nature of the conference, NERC and NATF signed an updated memorandum of understanding (MOU) designed to leverage respective strengths to identify existing and emerging risks, prioritize actions and implement mitigation strategies to assure the continued reliability of the bulk power system.

Jim Robb, president and CEO at NERC, welcomed conference participants, highlighting the collective approach within the ERO Enterprise to work as one effective, efficient, collaborative and synchronous machine.

The three-day conference featured an array of speakers and presenters that include industry leaders, academia, government, vendors and manufacturers all using the science and art of human performance to enhance and improve human behavior.

"The wealth of knowledge and expertise in this room is incredible," said James Merlo, vice president and director of Reliability Risk Management at NERC. "It reaffirms that industry recognizes the importance of sharing and collaborating and honoring the people who have their hands on the controls."

In addition to the conference, participants were able to choose from a variety of training workshops, including a NERC Cause Analysis training, an Advanced Cause Analysis session, a Stand Your Ground: How Strong

Character Improves Safety and Reliability session, a Brain Science Behind Human Performance and Organizational Culture session, a Risk Modeling session, a Learning Activities for Human Performance session and more.

The grid is a complex and high-risk machine, and the ERO Enterprise recognizes the crucial role that human performance plays in reliability. NERC is committed to continuous learning and improvement of bulk power system reliability.

Presentations from the conference will be posted on the NERC website in April. Previous conference presentations can be found [here](#).

Experts from Electric, Firefighting Sectors Share Best Practices for Improving Human Performance

Experts from the electric industry and the firefighting community convened at NERC headquarters for a unique training session focused on a common approach to emergency response in both sectors. The discussion highlighted the essential role that continual training and experience play in improving human performance.

"The electric industry, aviation industry and the first responder community are among the leading sectors in which a comprehensive training approach produces organizations that are highly reliable," said James Merlo, NERC vice president and director of Reliability Risk Management. "The key to developing highly reliable and resilient organizations and services is a firm commitment to continuous human performance improvement that is grounded in a culture of improving systems and processes that set workers up for success," Merlo said.

Topics at the NERC training session included how the human brain responds to emergencies, thinking deliberately and responding calmly in emergencies and regularly exercising and updating emergency response plans based on current and future scenarios.

Speakers at the NERC training session included Joseph W. Pfeifer, former chief of Counterterrorism and Emergency Preparedness for the New York City Fire Department, and John Russ, program manager at National Firefighter Near Miss Reporting System.

The NERC training session took place before the start of NERC's eighth annual [Human Performance Conference](#).

Energy Systems Integration Group (ESIG) Recognizes NERC Staff for Inverter Work

During its annual spring meeting, the Energy Systems Integration Group (ESIG), the leading source of global expertise for energy systems integration and operations, announced the winners of its 2019 Excellence Awards.

NERC award recipients Bob Cummings, Ryan Quint and Rich Bauer received an Excellence Award for reliability improvement work related to interconnected photovoltaic generation through NERC's Inverter-based Resource Performance Task Force (IRPTF). With more than 175 members from across industry, the IRPTF is an incredible example of the collaborative power of the ERO Enterprise.

These awards recognize energy professionals from around the world for their contributions and accomplishments toward the planning and operation of energy systems across multiple pathways and geographical scales in ways that are reliable, economic and sustainable. [ESIG Announcement](#)

Fifth Reliability Leadership Summit Highlights Key Risks, Solutions for Bulk Power Systems Future

NERC convened its fifth Reliability Leadership Summit on March 14, with more than 100 leaders from industry and government coming together to identify and prioritize evolving and emerging risks as well as develop approaches to managing them as the bulk power system undergoes transformational change. Consumer, technology, market and policy factors are creating a new grid reliability and security paradigm.

The summit opened with remarks from Mark Lauby, senior vice president and chief reliability officer at NERC, and Nelson Peeler, chief transmission officer at Duke Energy and the chair of NERC's Reliability Issues Steering Committee (RISC). The morning keynote speaker was Bruce Walker, assistant secretary at the Department of Energy's Office of Electricity. An afternoon keynote was

presented by Mark P. Mills, senior fellow at the Manhattan Institute.

"The collaboration between industry and government at each Reliability Leadership Summit is a key focal point in the RISC's process to identify and solve bulk power system risks in North America. The summit also provides participants the opportunity to discuss known bulk power system risks as well as identify entirely new risks that must be mitigated," said Mark Lauby, senior vice president and chief reliability officer at NERC. "The summit dialogue informs critical planning decisions for the bulk power system as the industry moves toward a reliable and secure future with different resources, technologies and operating characteristics."

The topics of this year's summit focused on current and emerging risks to the reliability and security of the grid; the rapid shift in generation resources; accelerated technology deployment; regulatory and policymaking in an era of unprecedented bulk power system change; reliably integrating record levels of renewable generation into electricity markets; and assuring adequate fuel supplies for power plants.

Panels reflected the diverse set of North American stakeholders involved in planning and operating the bulk power system. Participants included a mix of U.S. and Canadian utilities, state and provincial utility regulators, U.S. market operators and U.S. government agencies.

Summit discussions will be used to update the reliability risk profiles developed by the RISC, which will then be presented to the NERC Board of Trustees at its May 8–9 meeting in St. Louis. The RISC's 2018 recommendations to the Board of Trustees can be found [here](#). These recommendations set the stage for activities that industry and the Electric Reliability Organization (ERO) Enterprise will undertake in the coming years, informing its three-year plan, business plan and budget.

Using engineering, data and analysis, the ERO Enterprise identifies bulk power system risks to help industry manage the rapid pace of change affecting the reliability and security of the grid today.

Robb Featured on CEA's New Podcast

Jim Robb recently was a guest on the Canadian Electricity Association's (CEA's) new podcast, "Flux Capacitor." The podcast, which occurs monthly, is hosted by Francis Bradley, CEA's chief operating officer and vice president of Public Affairs and Emerging Issues.

The podcast, launched in January 2019, focuses on the future of electricity, future technological changes and impacts and the transformation of the industry. Flux Capacitor – [Episode 3, Jim Robb](#) ■■■

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 March 6, 2019, NERC updated the [Issues and Recommendations Tracking spreadsheet](#).

Register for Supply Chain Small Group Advisory Sessions

NERC will host small group advisory meetings with registered entities, standards developers and Regional Entities to assess the implementation of the CIP Supply Chain Standards:

- CIP-013-1 – Cyber Security – Supply Chain Risk Management
- CIP-005-6 – Cyber Security – Electronic Security Perimeter(s)
- CIP-010-3 – Cyber Security – Configuration Change Management and Vulnerability Assessments

The event will consist of two parts:

- **General Session and Live Webinar:** On October 30, 2019, from 1:00–4:00 p.m. a general interest session, including industry speakers and NERC staff, will be held to discuss supply chain risk and possible solutions.
- **One-on-One Sessions:** Closed, one-on-one discussions between a registered entity's supply chain security experts and ERO Enterprise staff about issues pertinent to that entity's implementation of the supply chain standards.

Workshop/Webinar Registration: In-person attendance to the October 30, 2019 workshop is limited to no more than two attendees per registered entity. Entities that schedule a SGAS appointment will be given priority for in-person attendance.

- Send workshop registration requests to CIPComplianceStaff@nerc.net with name, contact information and registered entity that is being represented.
- If a SGAS appointment is being requested, simply mention workshop attendance in that registration request.
- The workshop session will be broadcast via webinar. Registration is open to interested participants; more information will be available approximately 15 days before the date of the event.

Small Group Advisory Sessions (SGAS) Registration: NERC will accept SGAS one-on-one registrations on a first-come, first-served basis. If the number of requests exceeds the time allotted, NERC will coordinate alternative arrangements.

- There is no limit to the number of Subject Matter Experts (SMEs) who can participate in

SGAS sessions. For those who cannot attend in person, NERC will arrange for phone/web participation.

- NERC will notify those who request a SGAS of their appointment time so the registered entity can make their travel arrangements accordingly. NERC will schedule the specific time after registration is received. The only commitment on the day of the appointment is at the time of the scheduled discussion.
- Send SGAS registration requests to CIPComplianceStaff@nerc.net. Registration is free and is required by **September 30, 2019** with the following information:
 - Requester name and contact information
 - Entity Name(s)
 - NCR(s)
 - If the requester intends to represent multiple entities, contact information for someone at each entity represented
 - Preferred day(s) (Tuesday, Wednesday morning, or Thursday) and time(s) for appointment.

For more information or assistance, please contact [Brian Allen](#).

Newly Effective Standards

On April 1, 2019, the following standards became effective:

[BAL-002-3 – Disturbance Control Standard – 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.

[EOP-004-4 – Event Reporting](#) improves the reliability of the Bulk Electric System by requiring the reporting of events by Responsible Entities.

[EOP-005-3 – System Restoration from Blackstart Resources](#) ensures plans, facilities and personnel are prepared to enable system restoration from Blackstart

Resources to ensure reliability is maintained during restoration and priority is placed on restoring the interconnection.

[EOP-006-3 – System Restoration Coordination](#) ensures plans are established and personnel are prepared to enable effective coordination of the system restoration process to ensure reliability is maintained during restoration and priority is placed on restoring the interconnection.

[EOP-008-2 – Loss of Control Center Functionality](#) ensures continued reliable operations of the Bulk Electric System in the event that a control center becomes inoperable.

Nomination Period Open for Compliance and Certification Committee

The Compliance and Certification Committee (CCC) is requesting nominations to fill the vacant positions listed below. In the capacity of a NERC Board of Trustees (Board)-appointed stakeholder committee serving and reporting directly to the NERC Board, the CCC will engage with, support and advise the NERC Board and NERC regarding all facets of the NERC Compliance Monitoring and Enforcement Program, Organization Registration Program and Organization Certification Program.

The following voting positions are currently open for nominations to the CCC:

- RE-MRO
- Electricity Marketer
- Federal/Provincial Utility/Power Authority
- Investor Owned Utility
- Merchant Electricity Generator
- Small End-Use Electricity Customer
- U.S. State
- 2 Large End-Use Customers
- U.S. Federal

The CCC has an open nomination process. Individuals or recognized industry groups may nominate candidates for consideration. Terms will be for three years and will begin interim membership after acceptance by the CCC Nominating Subcommittee and approval by the CCC, and

full membership after NERC Board approval of membership appointments at its scheduled meetings.

The next 2019 CCC scheduled meeting is June 18–19, 2019 in Chicago. Please review the [CCC Charter](#) for information regarding the responsibilities of CCC members. If you are interested in serving as or nominating a member to the NERC Compliance and Certification Committee, please complete the [nomination form](#) and send it to CCCElections@nerc.net by **April 18, 2019**. ■■■

Standards

Nomination Period Open for Project 2019-02 – BES Cyber System Information Access Management

Nominations are being sought for Project 2019-02 – BES Cyber System Information Access Management Standard Authorization Request (SAR) drafting team members through April 26, 2019.

The time commitment for this project is expected to be two face-to-face meetings per quarter (on average three full working days each meeting) with conference calls scheduled as needed to meet the agreed upon timeline the team sets forth. Team members may also have side projects, either individually or by sub-group, to present for discussion and review.

Lastly, an important component of the team effort is outreach. Members of the team will be expected to conduct industry outreach during the development process to support a successful ballot. By submitting a nomination form, you are indicating your willingness and agreement to actively participate in face-to-face meetings and conference calls. Previous drafting or periodic review team experience is beneficial, but not required.

Use the [electronic form](#) to submit a nomination. If you experience issues using the electronic form, contact [Linda Jenkins](#). 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

May 22, 2019. Nominees will be notified shortly after they have been selected. ■■■

Regional Entity Events

[Midwest Reliability Organization \(MRO\)](#)

- **Business Plan and Budget Review Teleconference**, April 18 | [Details](#)
- **MRO Protective Relay Subcommittee Meeting** April 23–24 | [Details](#)
- **CMEP Advisory Council Meeting**, May 2 | [Details](#)
- **Reliability Advisory Council Meeting** May 21 | [Details](#)
- **MRO Reliability Conference**, May 22 | [Details](#)

[ReliabilityFirst \(RF\)](#)

- **2019 Spring Reliability and CIP Workshop** May 1–3, Baltimore | [Register](#)
- **Reliability and Compliance Open Forum Call Conference Call**, May 20 | [Details](#)
- **Short Circuit Data Modeling Workshop** June 5, Independence, Ohio | [Details](#)
- **Reliability and Compliance Open Forum Call Conference Call**, June 17 | [Details](#)
- **Reliability and Compliance Open Forum Call Conference Call**, July 15 | [Details](#)
- **2019 Protection System Workshop** August 13–14, Independence, Ohio | [Details](#)
- **2019 Human Performance Workshop** August 14, Independence, Ohio | [Details](#)
- **Reliability and Compliance Open Forum Call Conference Call**, August 19 | [Details](#)
- **Reliability and Compliance Open Forum Call Conference Call**, September 16 | [Details](#)
- **2019 Fall Reliability and CIP Workshop** October 1, Cleveland, Ohio | [Details](#)
- **Reliability and Compliance Open Forum Call Conference Call**, October 21 | [Details](#)

[Texas RE](#)

- **Spring Standards and Compliance Workshop**, April 25 | [Details](#)
- **MRC, AG&F, and Board Meetings**, May 15
- **Talk with Texas RE**, May 23 | [Register](#)
- **Talk with Texas RE**, June 20 | [Register](#)

- **Compliance 101 Workshop**, July 25 | [Details](#)

[Western Electricity Coordinating Council \(WECC\)](#)

- **Reliability and Security Workshop**
April 9–11, Garden Grove, Calif. | [Register](#)
- **Grid Fundamentals Class**
April 23–25, Salt Lake City, Utah | [Register](#)
- **Western Reliability Summit**
May 1, Scottsdale, Ariz. | [Register](#)
- **Board of Directors and associated meetings**
June 18–19 ■■■

Upcoming Events

For a full accounting of NERC events, such as meetings and conference calls for standard drafting teams, other standing committees, subcommittees, task forces, and working groups, please refer to the [NERC calendar](#).

- **Transmission Resiliency Summit** – April 3–4, Charlotte, N.C. | [Register](#)
- **Board of Trustees, Board Committees, and Member Representatives Committee Meetings** – May 8–9, St. Louis | [Register](#)
- **NERC–NATF–EPRI 2019 Power System Modeling Conference Workshop** – June 18–19, Novi, Mich. [Register](#)
- **Member Representatives Committee Pre-Meeting Conference Call and Informational Webinar**– 11:00 a.m.–12:30 p.m. Eastern, April 9 [Register](#)
- **Standards Committee Conference Call** – 1:00–3:00 p.m. Eastern, April 17 | [Register](#) ■■■

Filings

NERC Filings to FERC

March 6, 2016

[Errata To Joint Petition for Approvals in Connection with the Dissolution of the FRCC RE](#) | NERC submits an errata to the February 27, 2019 joint petition regarding the request for approvals in connection with the dissolution of the Florida Reliability Coordinating Council, Inc. Regional Entity (“FRCC RE”). The errata provides an updated list of Registered Entities that NERC proposes to transfer from FRCC RE’s footprint to SERC Reliability Corporation’s footprint.

[Joint Petition of NERC and WECC for Approval of Proposed Regional Reliability Standard for IRO-006-WECC-3](#) | NERC and WECC jointly

submit proposed Regional Reliability Standard IRO-006-WECC-3 (Qualified Path Unscheduled Flow (USF) Relief) for FERC approval. Regional Reliability Standard IRO-006-WECC-3 addresses the requests for transmission relief due to unscheduled flow on Qualified Paths in the Western Interconnection.

March 7, 2019

[Petition of NERC for Approval of Proposed Reliability Standard CIP-008-6](#) | NERC submits a petition for approval of Proposed Reliability Standard CIP-008-6 (Cyber Security - Incident Reporting and Response Planning). The proposed Reliability Standard addresses FERC’s directives from Order No. 848.

March 20, 2019

[Joint Petition of NERC and Texas Reliability Entity, Inc. for Approval of Amendments to the Texas Reliability Entity, Inc. Bylaws](#) | NERC and Texas Reliability Entity, Inc. submit a joint petition for approval of amendments to the Texas RE Bylaws.

March 29, 2019

[2019 NERC Standards Report, Status and Timetable for Addressing Regulatory Directives](#) | NERC submits its 2019 NERC Standards Report, Status and Timetable for Addressing Regulatory Directives. The annual report is in accordance with Section 321.6 of the NERC Rules of Procedure.

NERC Filings in Canada

March 13, 2019

[Notice of Filing of NERC of Proposed Regional Reliability Standard IRO-006-WECC-3 \(Alberta\)](#) | [Attachments to IRO-006-WECC-3](#)

March 19, 2019

[Notice of Filing of NERC of Proposed Reliability Standard CIP-008-6 \(Alberta\)](#) | [Attachments to CIP-008-6 Filing](#) ■■■

Careers at NERC

Cyber Analyst – Network Analyst

Location: Washington, DC

[Details](#)

E-ISAC Watch Officer – Open Source Intelligence

Location: Washington, DC

[Details](#) ■■■

NERC Articles

[A Secure, Resilient Energy Grid](#)

Electric Perspectives – March/April 2019

Jim Robb, president and chief executive officer ■■■