

NERC News

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ERO Executive Spotlight – Stan Hoptroff

Behind the Scenes of the Align Project

The [Align](#) project will enhance the ERO Enterprise's ability to share and analyze CMEP data in a way that is crucial to the security and reliability of the grid. It will also provide consistency across regional processes and systems for monitoring compliance across the ERO Enterprise, ensuring more equity in outcomes. While the Align project team continues to ensure data security, refine and harmonize compliance audit and investigation business processes and address stakeholder concerns regarding evidence collection, I wanted to provide an update on all the work they are doing behind the scenes.



The Align project team is planning for a Release 1 go-live in Q4 2020 with two pilot Regions (i.e., MRO and Texas RE) and select registered entities. Currently, the project team is designing the ERO Enterprise evidence lockers, which will be under construction soon. All registered entity-provided evidence, unless prohibited by a standard, will go into a registered entity or ERO Enterprise locker. [Continued on page 2](#)

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Update (cont'd)

Evidence lockers are highly secure, isolated and on-premises environments that collect and protect evidence; enable submission by authorized and authenticated entity users; provide compartmentalized analysis of evidence in temporary, isolated and disposable environments; and do not interface with any other systems. Evidence in these environments is encrypted immediately upon submission; securely isolated per entity; never extracted; never backed up; and subject to proactive and disciplined destruction policies. The team is designing these lockers to improve and protect the security of the highly sensitive information submitted. If you have questions regarding the lockers, please view our [January webinar](#) that delves more deeply into these topics or submit your questions [here](#). The project team updates the [Align FAQ page](#) with answers to questions received on a weekly basis.

NERC's training department is developing all training materials (i.e., videos, a user guide, and quick reference cards) with the goal of announcing the training schedule between Q2 and Q3 and scheduling regional adoption workshops. The project team will announce the Release 1 go-live date and rollout schedule soon. Stay up to date by visiting the [Align Project page](#). *Stan Hoptroff is vice president, chief technology officer and director of Information Technology.* ■■■

Headlines

Robb Featured on IESO Podcast

Jim Robb was a guest on IESO's podcast called "Powering Tomorrow," which features discussions with leaders from across the electricity industry and beyond. Guests offer their perspectives on the opportunities and challenges the grid faces in the midst of rapid change, as well as the innovative ideas or concepts that are helping shape the future of the electricity system. In his interview, Robb discussed the benefits of having an interconnected grid as well as how the North American grid of the future will be more digitized, distributed and

decarbonized. [Powering Tomorrow | The World's Largest Machine: The North American Power Grid](#)

Statement on February FERC Open Meeting

At its monthly open meeting on February 20, FERC took action on two key reliability items. FERC released a notice of inquiry (NOI) on virtualization and cloud computing services. Separately, FERC ordered NERC to submit an informational filing on the schedule and plans for open standard development projects on these topics.

The NOI focuses on the benefits and risks associated with virtualization and cloud computing for use in operating the Bulk Electric System (BES). It seeks comments on potential vulnerabilities of moving sensitive data to the cloud, mitigation methods and if potential barriers to the use of these technologies exist in Critical Infrastructure Protection (CIP) standards.

The informational filing will include the schedule and plans for two NERC standard development projects — Project 2016-02 and Project 2019-02. NERC launched the Project 2016-02 in response to Order No. 822. In addition to having addressed directives identified in Order No. 822, the Project 2016-02 standard drafting team is now developing modifications to address stakeholder-identified issues, including clarifying the use of virtualization technologies.

Project 2019-02, initiated based on stakeholder-identified issues, addresses BES Cyber System Information Access Management. The proposed modifications seek to enhance the CIP standards by providing a secure path toward the use of third-party data storage and analysis systems and by clarifying the protections expected when using cloud services.

NERC will continue to work with FERC and stakeholders on standards that advance the security of the bulk power system. [FERC Press Release](#)

Lauby Elected to National Academy of Engineering

The National Academy of Engineering (NAE) announced that it has elected Mark Lauby, NERC’s senior vice president and chief engineer, to its 2020 class for a career of distinguished contributions to his field. NAE cited Lauby’s development and application of techniques for electric grid reliability analysis in its election notice.

“Mark has truly had a distinguished technical career with his work at EPRI and NERC, where he serves as our chief engineer. He is a unique talent and very passionate about his work and the challenges facing the North American power grid,” said Jim Robb, NERC’s president and CEO. “His colleagues at NERC congratulate him on this terrific recognition of his contributions to the reliability of the bulk power system.”

Election to NAE is among the highest professional distinctions accorded to an engineer — with only 105 new members named this year. Academy membership honors those who have made outstanding contributions to “engineering research, practice or education, including, where appropriate, significant contributions to the engineering literature” and to “the pioneering of new and developing fields of technology, making major advancements in traditional fields of engineering or developing/implementing innovative approaches to engineering education.”

“I am both humbled and honored to be recognized in his way,” Lauby said. “I look forward to contributing to the mission of NAE.”

Lauby and the other new members will be formally inducted during a ceremony at NAE’s annual meeting in Washington, D.C., on October 4.

NERC Publishes Annual Report Highlighting ERO Enterprise Transformation, Effectiveness and Efficiency Efforts

Assuring a highly reliable and secure grid is NERC’s continuous mission. NERC’s [2019 Annual Report](#) highlights the ERO Enterprise’s efforts to assure the effective and efficient reduction of risks to the bulk power system in the face of a changing reliability and

security ecosystem. Nearly 400 million North American citizens depend on electricity in their daily lives. Working with users, owners and operators of bulk power system assets, government partners and other stakeholders and industry participants, the ERO Enterprise pursues its mission of assuring the effective and efficient reduction of risks.

“Electricity is essential to the quality of our 21st century lifestyle and is delivered by a complex fabric of industry participants, government partners and nongovernmental organizations,” writes Jim Robb, NERC’s president and CEO. “My objective is to ensure that the ERO Enterprise plays its part in strengthening that fabric for the benefit of all North Americans.”

The ERO Enterprise remains committed to achieving its vision of a reliable and secure North American bulk power system and working as one synchronous machine — effectively, efficiently, and collaboratively— in 2020 and beyond.

MRC Elects New Board Member; Board Initiates Cyber Security Standards Project, Releases Annual Report

NERC’s first Board of Trustees meeting of 2020 focused on governance actions, enhanced effectiveness, cyber standards and achievements. Specific actions included the initiation of a project to modify the Cyber Security Standards to include controls for low-impact cyber systems; approval of the 2020 work plan priorities; and the adoption of several standards modifications.

During their meeting on Wednesday, February 5, the Member Representatives Committee (MRC) elected Jim Piro to serve on the Board of Trustees. Previously, Piro served as president and CEO for Portland General Electric from 2009 until his retirement in 2017. Prior to that, he was executive vice president and chief financial officer, among other roles, initially joining the company in 1980. Roy Thilly and Suzanne Keenan were re-elected to the Board. All terms are for three years.

The MRC also thanked outgoing Board members Janice Case, David Goulding and Fred Gorbet for their many years of service to NERC and its stakeholders. The Board

presented them with resolutions in recognition of their contributions.

Pedro Pizarro, president and CEO of Edison International, welcomed the Board to California. Pizarro discussed how protecting the bulk power system is a shared priority, stressing that collaboration is the most important tool in our toolkit. He also urged industry to focus on striving for the gold standard with regard to cyber security efforts, which must continue getting “more gold” as we go forward, he said.

Also in attendance was Chair Neil Chatterjee of FERC. In his remarks, Chatterjee noted that reliability and security are at the core of FERC’s mission, highlighting the positive collaboration between FERC and NERC.

Other opening remarks were given by Chuck Kosak, deputy assistant secretary of the Department of Energy (DOE); David Morton, chair of the British Columbia Utilities Commission and CAMPUT representative to NERC; and Bill Fehrman, vice chair of the Member Executive Committee and CEO of Berkshire Hathaway Energy, who updated the Board on the National Infrastructure Advisory Committee report.

In his president’s remarks, Jim Robb announced the signing of a memorandum of understanding (MOU) between NERC’s Electricity Information Sharing and Analysis Center (E-ISAC) and DOE, which outlines a shared commitment to information sharing and analysis and further solidifies our ongoing relationship.

“This is a great milestone in our already successful partnership,” Robb said. “This MOU will help us better serve industry with more in-depth and timely information to protect against security threats and vulnerabilities and respond to incidents. I’m pleased with the continued progress we are making and our mutual commitment to protecting the grid.”

Robb also noted the accomplishments of the ERO Enterprise over the last year, highlighting the [2019 Annual Report](#). “We are transforming the ERO Enterprise, and 2019 was a pivotal year for us,” Robb said. “NERC and the Regional Entities have different —

yet equally important and complementary — roles in delivering ERO Enterprise programs, which allows us to work as one synchronous machine — effectively, efficiently and collaboratively.”

The Board approved NERC staff’s recommendation to initiate a project modifying the Cyber Security Standards to include controls for vendor access and detection of malicious communication for low-impact BES Cyber Systems. This action was in response to a previous directive by the Board to further study the nature and complexity of supply chain risks associated with low-impact assets. Prospective modification to the existing Cyber Security Standards is based on analysis of a Section 1600 data request conducted by NERC.

Following direction from the Board at its November 2019 meeting, NERC staff identified recommendations to prioritize in the [Electromagnetic Pulse Task Force](#) report. Staff identified short-term priorities, which included a recommendation that the EMP Task Force report to the Reliability and Security Technical Committee.

The Board approved the appointment of sector and at-large representatives for the [Reliability and Security Technical Committee](#), a newly formed committee drawing from diverse industry stakeholder expertise to study, mitigate and/or eliminate emerging risks to the bulk power system. Greg Ford serves as chair, and David Zwergel serves as vice chair.

In other action, the Board adopted multiple ERO Enterprise-wide standards modifications and one regional standard modification:

- The applicability of the following Reliability Standards was modified to align these Reliability Standards with appropriate registered entities based on the recent Risk-Based Registration initiatives:
 - FAC-002-3 – Facility Interconnection Studies
 - IRO-010-3 – Reliability Coordinator Data Specification and Collection
 - MOD-031-3 – Demand and Energy Data

- MOD033-2 – Steady-State and Dynamic System Model Validation
 - NUC-001-4 – Nuclear Plant Interface Coordination
 - PRC-006-4 – Automatic Underfrequency Load Shedding
 - TOP-003-4 – Operational Reliability Data
- **PRC-024-2** was modified to clarify expected system responses and correct technical issues for inverter-based resources.
 - **TPL-007-4** was modified to require the development and implementation of corrective action plans (CAP) to mitigate assessed supplemental geomagnetic disturbance event vulnerabilities and require ERO approval for CAP extensions.
 - **BAL-001-TRE-1** was modified to remove the governor deadband and droop setting requirements for steam turbines for combined cycle units and clarifies the responsible entity for Frequency Measurable Event exclusion requests.

Board presentations are located on [NERC's website](#). The next Board of Trustees meeting is May 14, in Washington, D.C. ■■■

Compliance

ERO Enterprise Revised CIP Evidence Request Tool Version 4.0 Posted

NERC posted a revised [ERO Enterprise CIP Evidence Request Tool](#), which is a common [request for information tool](#) for CIP Compliance monitoring engagements. The purpose of the tool is to help the ERO Enterprise with consistency and transparency in its audit approach. It will also help responsible entities — especially those that operate in multiple Regions — understand what types of evidence are useful in preparation for an audit and fulfill these requests more efficiently.

Supply Chain Small Group Advisory Sessions Frequently Asked Questions Posted

In October 2019, NERC hosted 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

NERC posted the [FAQs](#) from the participants who attended the small group advisory sessions. ■■■

Standards

With the implementation of the [Align Project](#) in 2020, there will be changes to the [Reliability Standards web page](#) and associated reports, including the One-Stop Shop, U.S. Effective Date Status/Functional Applicability spreadsheet and VRF and VSL matrices. More details will be provided in the coming months.

Webinar Resources Posted

NERC posted the [slide presentation](#) and [streaming webinar](#) for the Project 2019-03 – Cyber Security Supply Chain Risks webinar. ■■■

Regional Entity Events

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

- **CMEP Advisory Council Meeting**, March 4 [Details](#)
- **Reliability Advisory Council Meeting**, April 1 [Details](#)
- **Organizational Group Oversight Meeting**, April 1 [Details](#)
- **Board of Directors Meeting**, April 2 | [Details](#)

[Northeast Power Coordinating Council, Inc. \(NPCC\)](#)

- **Spring Compliance & Standards Workshop**, May 20–21 | [Details](#)

[ReliabilityFirst \(RF\)](#)

- **Spring Reliability Workshop**, April 21–23 [Details](#)

SERC Reliability Corporation

- **Spring Compliance Seminar**, March 10–11 | [Details](#)
- **Small Entity Seminar**, March 11 | [Details](#)
- **CORES Data Workshop**, March 12 | [Details](#)
- **System Operator Conference #1**, April 7–9 | [Details](#)
- **System Operator Conference #2**, April 28–30 | [Details](#)

Texas RE

- **Talk with Texas RE: Upcoming CIP Standards**, March 19 | [Details](#)
- **Spring Standards and Compliance Workshop**, April 8–9 | [Details](#) ■■■

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](#).

- **Operating Committee, Planning Committee, and Critical Infrastructure Protection Committee Meetings** – March 3–4, Atlanta | [OC Registration](#) | [PC Registration](#) | [CIPC Registration](#)
- **Reliability and Security Technical Committee Meeting** – March 4, Atlanta | [Register](#)
- **Standards Committee Meeting** – 10:00 a.m.–3:00 p.m. Eastern, March 18, Atlanta | [Register](#)
- **NATF-EPRI-NERC Transmission Resiliency Summit** – March 31–April 1, Tempe, AZ | [Register](#)
- **Project 2016-02 – Modifications to CIP Standards Industry Workshop** – April 1, Atlanta | Registration Coming Soon
- **Electric Power Human Performance Improvement Symposium** – September 29–October 1, Denver | [Register](#)
- **GridSecCon 2020** – October 20–23, Houston | Registration Coming Soon ■■■

Filings

NERC Filings to FERC in February

February 7, 2020

[Petition of NERC for Approval of Proposed Reliability Standard TPL-007-4](#) | NERC submitted a petition requesting FERC approval of proposed Reliability Standard TPL-007-4 – Transmission System Planned Performance for Geomagnetic Disturbance Events. TPL-007-4 makes two modifications to the currently effective standard. The proposed modifications would: (i) Require entities to develop Corrective Action Plans for vulnerabilities identified through supplemental GMD Vulnerability Assessments; and (ii) Require entities to seek approval from the ERO of any extensions of time for the completion of Corrective Action Plan items.

February 14, 2020

[Compliance Filing in Response to January 2013 Order](#) | NERC submitted an unaudited report of NERC's budget-to-actual variance information for Q4 2019. This compliance filing is in accordance with FERC's 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.

February 21, 2020

[Motion for Extension of Compliance Filing Deadline in Response to the Order on the Five-Year Performance Assessment](#) | NERC submitted a motion for the extension of the Compliance Filing Deadline in response to the January 23, 2020 Order on the Five-Year Performance Assessment.

[Petition for Approval of SAR Standards](#) | NERC submitted a petition requesting Commission approval of seven proposed Reliability Standards developed under [Project 2017-07 – Standards Alignment with Registration](#).

NERC Canadian Filings to FERC in February

[Notice of Filing of the NERC of Proposed Reliability Standard TPL-007-4](#) ■■■

Careers at NERC

Senior CIP Technical Advisor

Location: Atlanta

[Details](#)

Senior Auditor Internal Audit and Corporate Risk Management

Location: Atlanta

[Details](#) ■■■