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### Extreme Weather Grid Reliability Plan

The Federal Energy Regulatory Commission (FERC) recently finalized two rules to help improve reliability for the bulk power system (BPS) during periods of extreme weather. The [first rule](#) directs the North American Electric Reliability Corporation (NERC) to develop a new or modified Reliability Standard to require transmission system planning for extreme heat and cold weather conditions over wide geographical areas. This directive includes studying the impact of concurrent failures of bulk power system generation and transmission equipment and implementing corrective actions as needed.

The [second rule](#) directs transmission providers to submit one-time reports describing their policies and processes for conducting extreme weather vulnerability assessments and identifying mitigation strategies.

Preliminary assessments from the FERC and NERC teams studying the December 2022 Winter Storm Elliott underscore the need for the new rules. Since 2011, the country has experienced at least seven major extreme weather events, each of which stressed electric grid operations. Both rules take effect 90 days after publication in the Federal Register. Each transmission provider must file the one-time informational report required by the second final rule 120 days after publication in the Federal Register.



### From Texas RE's 2022 Assessment of Reliability Performance

In 2022, Texas RE analyzed 83 BPS events, including the Odessa disturbance, which is on par with the number of events reported per year during the preceding four years. In total, 452 events were reviewed between 2018 and 2022. Of the 429 root and contributing causes identified, the "Equipment/Material" category occurred most frequently with 37 percent of all identified causes. "Design/Engineering" was second with 13 percent, followed closely by "Management/Organization" with 11 percent. The number of Category 1 events has been stable over the last five years.

For more information on the overall reliability picture of the Texas Interconnection, review the [full report](#).

### State of Reliability Technical Assessment

NERC has released its [2023 State of Reliability](#) (SOR) Technical Assessment. The SOR provides objective information on issues from 2022 that affected the reliability and resilience of the North American BPS. It includes past system performance trends and emerging reliability risks, the relative health of the interconnected system, mitigation activities, and provides recommendations for industry and policymakers.

The full report is available [here](#).



## Effective Mitigation for Most Commonly Reported PNCs: PRC-024

Effective mitigation should reduce the likelihood of recurrence and the risk posed by a future potential noncompliance (PNC). With regards to PRC-024, change management procedures for equipment installation and maintenance, third-party vendor oversight, and overlapping controls for PRC Reliability Standards are three areas in which mitigation can help to reduce the likelihood of recurrence of a PRC-024 PNC and increase the likelihood of detection should one occur. Quick detection of a PNC should hopefully result in a shorter duration of noncompliance, thus reducing the risk posed by the PNC. These three areas are discussed below in more detail with examples of effective mitigation.

### Change Management

When new equipment is installed or maintenance occurs on already existing equipment, these equipment changes may inadvertently adjust the settings for a Protection System or cause a Protection System to default to factory settings that are no longer compliant with PRC-024. An effective method to ensure compliance is to include a step in the installation or maintenance paperwork to verify that settings for Protection Systems still comply with PRC-024. In practice, this could be an additional step on a checklist for installation of new equipment. Requiring personnel responsible for equipment changes to verify Protection System settings should prevent a Facility from becoming noncompliant with PRC-024.

### Vendor Oversight

When vendors are involved in equipment installation or maintenance, adding an oversight process for the registered entity to review a vendor's work may help ensure that non-compliant Protection System settings are detected, thereby preventing or quickly identifying a PNC. For example, requiring an in-house manager or subject matter expert to review the vendor's final paperwork will enable a registered entity to confirm that settings are compliant with PRC-024. As mentioned above, some factory settings may not comply with PRC-024, so adding a review step (rather than assuming that the original equipment manufacturer settings are compliant) provides the registered entity with assurance that its Protection System settings comply with PRC-024.

### Overlapping Controls

PRC Reliability Standards complement each other by design. Accordingly, building in overlapping controls in PRC procedures will help ensure that Facilities remain compliant with PRC-024. For example, PRC-005 requires periodic maintenance for Protection Systems, including a required activity to verify that protective relay settings are as specified. This maintenance activity provides an opportunity to add additional detective controls to ensure that settings are compliant with PRC-024, as well as helping with quick detection of noncompliant settings. Similarly, a registered entity may choose to include a review of the "no trip zone" when documenting a verification under PRC-019-2 R1. As noted before, quick detection of a PNC hopefully results in shorter duration of noncompliance, thus reducing the risk posed by the PNC.





## CIP-012-1 Training Module

SERC recently announced the release of an online training module for [CIP-012-1](#), Cyber Security – Communications between Control Centers. This training module discusses the identification of RTA/RTM data for your company, as well as determining the applicability of Control Centers and communications links. It also reviews some topology examples that are in place to help with understanding and implementation considerations. The link to this training module and others are available in the SERC [Resource Library](#).

## E-ISAC Membership

The Electricity Information Sharing and Analysis Center (E-ISAC) is encouraging all registered entities to [register](#) to become E-ISAC members, to take advantage of its security information sharing network. Membership in E-ISAC is open to all asset owners and operators, with security personnel and general managers being the primary intended audience. Personnel with compliance monitoring and enforcement program (CMEP) roles are not eligible to be E-ISAC members.

## NERC Lesson Learned

In 2004 and 2005, a string of hurricanes made a huge impact on the Southeastern United States. Florida took the brunt of the impacts from four Category 3 or higher hurricanes (Charley, Frances, Ivan, and Jeanne) during six weeks in 2004. The 2005 Atlantic hurricane season was one of the most active in history and included Wilma, which hit as a Category 3 storm. Wilma caused more than 3.2 million outages in Florida, a record at the time. The estimated impact of the 2004 season on the United States was \$61 billion. The 2005 season more than doubled that at \$170 billion. An even more severe Atlantic hurricane season came in 2020.

This [NERC Lesson Learned](#) contains some of the key takeaways from those events and corrective actions to help mitigate extreme weather damage.

## Texas RE Grid Transformation Workshop

The rapid interconnection of BPS-connected inverter-based resources is fundamentally transforming the electric grid both in Texas and throughout North America. The transformation of the power system from one dominated by large spinning masses to variable resources operated by power electronics is occurring rapidly, and includes the increased use and importance of natural gas resources for system balancing and the participation of distributed energy resources (DER).

In light of these changes, Texas RE is hosting a special Grid Transformation Workshop on July 20, 2023, to explore the multifaceted aspects of navigating this transition and realize the benefits of an ever-increasing inverter-based grid topology. The workshop will bring together a broad set of energy industry experts to discuss the issues in planning for, modeling, and reliably implementing solutions for our evolving grid.



[Agenda & Speaker Bios](#) | [Register](#)

### Other Upcoming Events

**August MRC, AG&F, and Board Meetings**  
*Keynote Speaker: Pablo Vegas, ERCOT CEO*

**Winter Weatherization Workshop**

**Fall Standards, Security, & Reliability Workshop**



## Upcoming ERO Events

### [Technical Talk with RF](#) – July 17, 2023

ReliabilityFirst (RF) offers a regularly scheduled monthly call to provide entities and stakeholders with a forum for addressing topics and questions relevant to reliability, resilience, and security. This session will cover cold weather preparation and an update on EOP standards.

### [MRO CMEP Conference](#) – July 26, 2023

### [SERC Technical Webinar: Evolving Power Grid](#) – July 26, 2023

SERC staff and industry subject matter experts will present on current topics of interest regarding the shifting of a physically different response to events caused by increased penetration of inverter-based resources. Topics include analysis of Dynamic Phenomena in grid response, the impact of variable generation resources on SERC under-frequency load shedding program, and short circuit analysis.

### [Virtual Electromagnetic Transient Boot Camps](#)

In preparation for widespread EMT modeling, NERC and the U.S. Department of Energy are hosting Virtual Electromagnetic Transient Boot Camps. While these outreach opportunities are open to all industry personnel, Transmission Planners and Planning Coordinators are specifically encouraged to participate.

### [Preparatory Session](#) – July 27, 2023 | 12:00 p.m. – 2:00 p.m. Central

### [Individual IBR Plant Performance Session](#) – August 3, 2023 | 12:00 p.m. - 4:00 p.m. Central

### [System Impact Assessment Session](#) – September 14, 2023 | 12:00 p.m. – 4:00 p.m. Central

### [WECC Grid Fundamentals](#) – August 22-23, 2023

This in-person course is hosted in two unique half-day sessions, offering a comprehensive explanation of how the electric power system works, how it is managed, and why. Presentations will review the technology, operation, and markets of a modern reliable power grid. Environmental issues and regulations that affect the electric power system will also be discussed.

### [GridEx VII](#) – November 14-15, 2023

Registration for GridEx VII ends on September 1, 2023, for lead planner and planners. Industry members and government partners are encouraged to have their planners register to coordinate their organization's planning process and exercise conduct.

Lead planners and planners must have [E-ISAC Portal](#) access to register for GridEx VII. Organizations that are not eligible for E-ISAC Portal access can participate in GridEx VII by partnering with E-ISAC members. For questions regarding E-ISAC membership, contact [memberservices@eisac.com](mailto:memberservices@eisac.com).

## GridEx VII

North America's Largest Grid Security Exercise



## Standards Update

### NERC Actions

**On June 12, 2023**, NERC and NPCC submitted [comments](#) for the 2023 New England Winter Gas-Electric Forum.

**On June 13, 2023**, NERC submitted a [Motion to Intervene](#) and Comments in Opposition to the Petition for Rulemaking to Require Enhanced Standard for Determining Critical Infrastructure, Using Engineering Models to Define Critical Infrastructure Assets to be Subject to Enhanced Protection filed by the Secure-the-Grid Coalition.

**On June 15, 2023**, NERC submitted [reply comments](#) to comments of Public Citizen, Inc. regarding the Petition for Approval of Revisions to the Texas RE Regional Reliability Standards Process (RSDP).

**On June 15, 2023**, NERC submitted an [informational filing](#) as directed by FERC in its February 20, 2020 Order. This filing contains a status update on one standard development project relating to the CIP Reliability Standards.

### FERC Actions

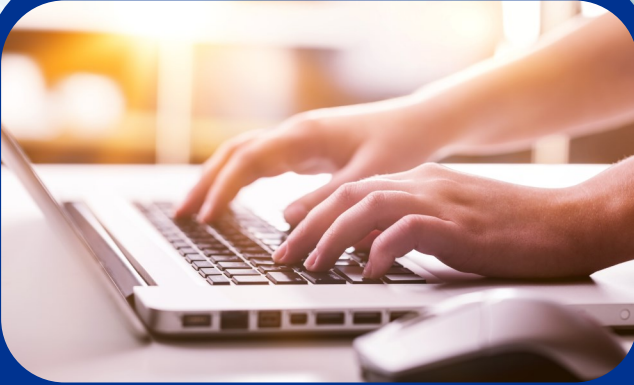
**On June 15, 2023**, FERC issued a [Final Rule](#) directing NERC to develop a new Reliability Standard or modifications to TPL-001-5.1 that addresses concerns pertaining to transmission system planning for extreme weather within 18 months of publication of the Final Rule in the Federal Register.

**On June 29, 2023**, FERC issued an [order](#) addressing arguments raised on rehearing regarding Extreme Cold Weather Reliability Standards (EOP-011-3 and EOP-012-1) approved by FERC on February 16, 2023.

Currently Posted Reliability Standards Projects	Action	End Date
<a href="#">Project 2022-02—Modifications to TPL-001 and MOD-032</a>   Draft 1 - MOD-032-2	Initial Ballots & Non-Binding Poll	7/14/2023
<a href="#">Project 2021-07—Extreme Cold Weather Grid Operations, Preparedness, and Coordination Phase 2</a>   Draft 1 EOP-012-2	Initial Ballot & Non-Binding Poll	7/20/2023
<a href="#">Project 2020-06—Verifications of Models and Data for Generators</a>   Draft 3	Additional Ballots & Non-Binding Polls	7/21/2023
<a href="#">Project 2019-04—Modifications to PRC-005-6</a>   Draft 1	Initial Ballots & Non-Binding Poll	7/24/2023

## Upcoming Enforceable Standards





**Contact Information for Texas RE Management**



**Current Openings**



**Upcoming Events**



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