

Announcement

Inverter-Based Resource Performance Identifies Reliability Risk; Joint Report Provides Recommendations

August 10, 2022

ATLANTA – Today, NERC and Texas RE published a joint disturbance report, [Panhandle Wind Disturbance: Joint NERC and Texas RE Staff Report](#), which studies an event involving the loss of wind resources in the Texas Panhandle area that occurred on March 22, 2022. While the event did not meet the qualified criteria for a Category 1i event per the Electric Reliability Organization (ERO) Event Analysis Process, the ERO Enterprise conducted an analysis of this event due to the high risk of inverter-based resource performance issues. The ERO Enterprise continues to analyze these disturbances to identify systemic reliability issues, support affected facility owners and share key findings and recommendations with industry for increased awareness and action.

“Many of the issues that the ERO Enterprise has identified with solar photovoltaic resources can also occur with other forms of inverter-based technology, such as wind, as evidenced by this most recent event,” said Ryan Quint, NERC’s Director of Engineering and Security Integration. “This makes it even more critical for the ERO Enterprise to continue its focus on inverter risk issues, working with industry to take mitigating actions to avoid any possible risks to bulk power system reliability.”

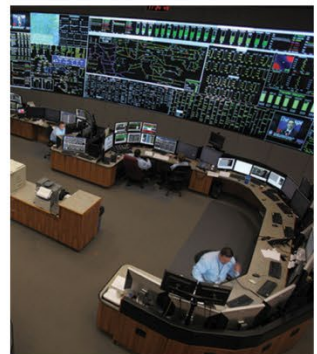
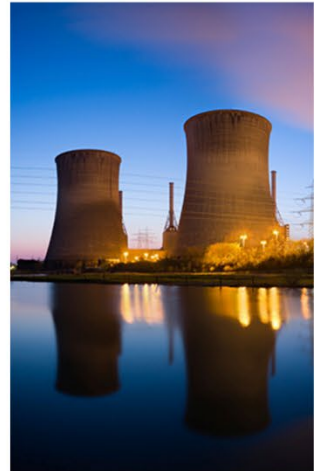
The report provides two key recommendations for industry action:

1. A reiterated need for enhanced inverter-based resource ride-through requirements, with an overhauled PRC-024 Reliability Standard suitable to inverter performance issues identified in past events.
2. A strengthened need for a performance-based standard that addresses abnormal performance issue identification, analysis and mitigation for inverter-based resources to assure that systemic risk issues specific are addressed in a timely manner before they reach a point that could pose significant reliability risks to the bulk power system.

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“I’d like to thank all of the NERC and Texas RE staff that contributed to the analysis of inverter-based resource performance issues that went into this report,” said Joseph Younger, Texas RE’s vice president and chief operating officer. “Considering the projected growth of inverter-based resources in Texas and elsewhere, it is critical that the ERO continue to work with industry to implement the report’s recommendations to ensure the ongoing reliability of the bulk power system as our resource mix changes.”

As part of its ongoing responsibilities as the ERO of North America, NERC is tasked with assuring the reliability of the North American bulk power system and is continually assessing the impacts of the changing resource mix. While inverter-based resources present new opportunities in terms of grid control, they also introduce potential risks to the system, as documented by NERC in multiple disturbance [reports](#) and related NERC [reliability guidelines](#). Please refer to [NERC Quick Reference Guide: Inverter-Based Resource Activities](#) for more details on all aspects of work in this area. The NERC Inverter-Based Resource Performance Subcommittee will continue driving implementation of the recommendations set forth in the NERC disturbance reports.

The ERO Enterprise, made up of NERC and the six Regional Entities, will continue to analyze disturbances that involve widespread reductions of solar photovoltaic resources to identify any systemic reliability issues, support affected facilities in developing mitigating measures and share key findings and recommendations with industry for increased awareness and action.

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Electricity is a key component of the fabric of modern society and NERC, as the Electric Reliability Organization, serves to strengthen that fabric. The vision for the ERO Enterprise, which is comprised of NERC and the six Regional Entities, is a highly reliable and secure North American bulk power system. Our mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid.