

NERC News: November

ERO Executive Spotlight

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IBR Risk Illustrates Need for Agility as Industry Evolves

Everything, everywhere, all at once. That's how many have recently described what is happening in our industry.

From the evolving resource mix to electrification, extreme weather, cyber security events and physical security concerns — everything, everywhere, all at once seems an apt description.

It's becoming more and more clear that a critical component of ensuring reliability is remaining nimble in order to aggressively address risks as they are identified, morph and develop. A great example of this is the risk associated with inverter-based resource (IBR) performance. The growth of IBRs across the Western Interconnection has been impressive — in 2022, the West added more than 3,000 megawatts of new solar photovoltaic resources, while battery storage systems grew at an even more rapid rate, from 659 megawatts in 2020 to more than 7,000 megawatts today.

These resources have provided needed capacity contribution to reliability for generating units that are retiring as part of the clean energy transition. And while much has been learned about IBR performance since the first event report, the 2016 Blue Cut Fire, the grid continues to experience disturbances tied to unexpected or abnormal performance of IBRs.

The most recent disturbance report — the first widespread solar disturbance in the Western Interconnection outside of California — occurred in southern Utah in April 2023, when 921 megawatts of solar generation (57 percent of the solar output in this balancing authority) unexpectedly tripped offline as a result of a normally cleared 345 kV transmission line fault.

Each incident has led to new information, lessons

learned and recommendations, and much has been done by industry to respond. That said, recent event reports reveal similar root causes for events over the last seven years, concluding that recommendations have not been adopted as rapidly as needed. Substantial work remains to fully mitigate the risks we now understand, as well as prepare to identify and respond to yet-to-be discovered risks.

NERC's [IBR Activities Quick Reference Guide](#) highlights the significant efforts underway to address this reliability risk. FERC further supported and complemented these efforts by issuing an order in October directing NERC to develop new or modified reliability standards specifically addressing issues such as IBR data sharing, model validation, planning and operational studies and performance requirements.

The Utah incident and others also demonstrate the need for a performance-based ride-through standard to ensure IBRs remain connected to the bulk power system during disturbances. NERC has begun addressing this issue as well, proposing a modification of the registry criteria to address reliability gaps. WECC and the other Regional Entities are now collaborating with NERC to identify which facilities qualify under this revised registration standard and will raise awareness of the registration requirements among those Generator Operators and Owners.

As the number of IBRs on the bulk power system continues to increase, we need to continue to work together to ensure reliability. What was once an emerging risk is now a significant and known threat to reliability. We need everyone aligned around mitigating this risk — everyone, everywhere, all at once — as we navigate our way through the energy transition.





Headlines

[NERC Releases Findings and Critical Recommendations from Inverter-Based Resource Level 2 Alert](#)

[NERC's GridEx VII Tests Rapid and Innovative Response Capabilities](#)

[ERO Enterprise Executives Speak at FERC Reliability Technical Conference](#)

[Robb Talks About the Future of the Grid on Podcast Released Today](#)

[Generator Fuel Supplies, Power Plant Winterization, Load Forecasting Complexity Increase Reliability Risk in North America this Winter](#)

[FERC, NERC Release Final Report on Lessons from Winter Storm Elliott](#)

[FERC, NERC Joint Statement on Reliability](#)

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Other NERC Activities

[Standards](#)

[Compliance and Enforcement](#)

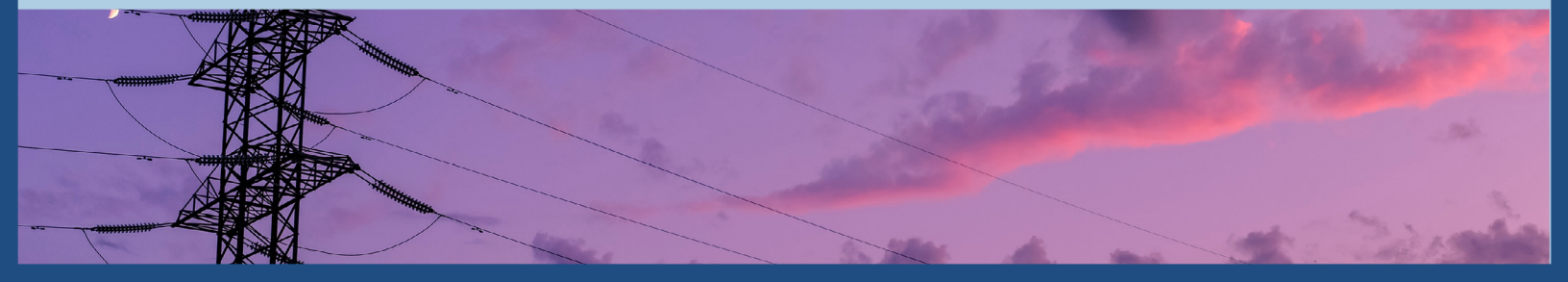
[Event Analysis, Reliability Assessment and Performance Analysis Highlights](#)

[E-ISAC](#)

Filings

[U.S. Filings](#)

[Canadian Filings](#)





Events Across the ERO Enterprise

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Atlanta/Remote

Senior Engineer Transmission
Assessments,
Atlanta/Remote

Senior Contracts Coordinator and
Procurement,
Atlanta/Remote

Enforcement Analyst,
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