

Announcement

Improvements in Winter Readiness Offset by Natural Gas Supply, Exponential Load Growth Concerns

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ATLANTA - NERC's 2024-2025 Winter Reliability Assessment (WRA) finds that while regulatory and industry initiatives have improved winter readiness, many parts of North America are once again at an elevated risk of energy shortfalls under extreme conditions. The findings are largely driven by issues related to natural gas production and delivery coupled with potential limited regional pipeline capacity in the U.S. Mid-Atlantic and Northeast, robust load growth that continues to surpass growth in dispatchable resources, and retirements in thermal generation resources. Similar to last year, no areas are identified as having a high risk of energy shortfalls in extreme weather conditions and all areas are expected to have adequate resources under normal winter peak load conditions.

"It is clear that regulatory and electric industry winterization initiatives introduced to address reliability issues experienced during Winter Storms Uri and Elliott have made a positive impact on generation readiness going into this winter," said Mark Olson, NERC's manager of Reliability Assessments. "However, we cannot ignore ongoing concerns around natural gas supply and NERC encourages entities across the gas-electric value chain to take the actions necessary to prepare for extreme cold, to keep gas flowing, and to keep the lights and furnaces on."

In addition, significant growth in winter load due to factors such as the electrification of heating and transportation, coupled with the load from new data centers, is creating a more challenging and complex environment as coal-fired and older gas-fired generators retire and are replaced by variable and energy-limited resources.

"Winter brings unique challenges for the electric industry, and this year, growing demand and increased reliance on natural gas add new layers of risk." said John Moura, NERC's director of Reliability Assessments and Performance Analysis. "Our assessment highlights concern around the challenges in sudden and prolonged demand spikes, and the need to manage those by improving short-term forecasts to more effectively posture both electric and natural gas systems."

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The WRA identifies the lingering impact of Hurricanes Helene and Milton in the southeast United States that may also make the grid less resilient to extreme winter storms while recovery efforts continue.

This year's assessment, previewed in the <u>2024-2025 Winter Reliability Assessment video</u>, makes a series of recommendations to reduce the risks of energy shortfalls on bulk power system this winter that include:

- Cold Weather Preparations Reliability Coordinators (RC), Balancing Authorities (BA), and Transmission
 Operators in elevated risk areas should review seasonal operating plans and the protocols for
 communicating and resolving potential supply shortfalls. Operators should review recommendations
 contained in the 2022 Winter Storm Elliott Report as well as the FERC/NERC System Performance Review
 of the January 2024 Arctic Storms. Generator Owners should complete winter readiness plans and checklists
 prior to December, deploy weatherization packages well in advance of approaching winter storms.
- **Load Forecasting** BAs should be cognizant of the potential for short-term load forecasts to underestimate load in extreme cold weather events and be prepared to take early action to implement protocols and procedures for managing higher than expected demand.
- Fuel RCs and BAs should implement generator fuel surveys to monitor the adequacy of fuel supplies. They should prepare their operating plans to manage potential supply shortfalls and take proactive steps for generator readiness, fuel availability, load curtailment, and sustained operations in extreme conditions.
- **Regulation and Policy** State and provincial regulators and policymakers can assist grid owners and operators in advance of and during extreme cold weather by supporting requested environmental and transportation waivers as well as public appeals for electricity and natural gas conservation.

Undertaken annually in coordination with the Regional Entities, NERC's Winter Reliability Assessments examine multiple factors that collectively provide deep and unique insights into reliability risk. These factors include resource adequacy, encompassing reserve margins and scenarios to identify operational risk; fuel assurance; and preparations to mitigate reliability concerns.

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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.