

Media Release

Industry Plans for Resource Mix Changes, Tighter Reserve Margins in Some Areas, Assessment Finds

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ATLANTA – The transformation of the bulk power system generation mix requires grid planners to address new threats to reliability while keeping reserve margins at or above targets, NERC finds in its latest 10-year reliability outlook. More resources are needed in Texas, the Midwest and Ontario to avoid the risk of below-target reserve margins in the first five year period. Advancing generation resources already in interconnection queues, using operational procedures to manage greater ramping needs and including fuel assurance in bulk power system planning are among the measures to assure reliability through 2028.

As reliance on natural gas-fired generation increases in some areas of North America, market operators and policymakers are developing fuel assurance mechanisms to mitigate supply disruptions caused by limited natural gas pipeline capacity and other factors, the [2018 Long-Term Reliability Assessment](#) concludes. While risks and the corresponding mitigations may be unique to each area assessed, industry and policymakers should continue to use and learn from proven planning mechanisms that support fuel assurance, such as integrated resource planning processes.

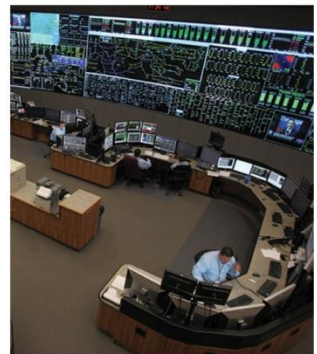
“With proper planning and considerations that address the changing characteristics of our generation supply, industry will successfully navigate the unique set of reliability challenges that flow from an evolving resource mix,” said John Moura, director of Reliability Assessment. “Through our technical committees, NERC continues to implement a variety of improvements to system planning and operations that are necessary to accommodate the expected increases in solar, wind and natural gas generation.”

The report’s other findings include:

- Florida, Texas, and California are projecting natural gas-fired generation to

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account for more than 60 percent of the on-peak generation.

- A total of 41 GW of new natural gas generation is planned through 2028.
- Fuel assurance mechanisms provide important reliability benefits, especially in areas with high levels of natural gas generation and constrained pipeline capacity.
- Stability analyses for the Eastern and Western Interconnections show that the projected generation mix has sufficient frequency response.
- Operational procedures are in place in Texas to address low levels of inertia.
- With the rapid growth of distributed solar, the California Independent System Operator's three-hour ramping needs have reached 14,777 MW and are expected to increase to 17,000 by 2022.
- Ramp forecasts allow the Electric Reliability Council of Texas to curtail wind production as needed and/or reconfigure the power system in response to significant and sometimes unexpected changes in wind output.
- More than 30 GW of new distributed solar photovoltaic is expected by the end of 2023, impacting system planning, forecasting, and modeling needs.

Based on the assessment's key findings, NERC recommendations include:

- Developing a common approach for assessing energy adequacy and appropriate metrics, given the increased natural gas generation and variable energy resources
- Developing a Reliability Guideline that establishes a common framework for assessing fuel disruptions of various types
- Improving frequency response modeling in the Eastern and Western Interconnections
- Incorporating distributed energy resources into system cases and studies
- Ensuring sufficient flexible ramping capability in California and other areas of North America where solar generation is increasing

NERC's role is to assure the reliability and security of the bulk power system. To that end, the annual Long-Term Reliability Assessment provides insight to help industry and policymakers manage potential reliability issues related to the changing resource mix.

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The vision for the Electric Reliability Organization (ERO) Enterprise, which is comprised of the North American Electric Reliability Corporation (NERC) and the seven Regional Entities (REs), is a highly reliable and secure North American bulk power system (BPS). Our mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid.