

Media Release

Changing Resource Mix, Environmental Rules, Declining Reserve Margins Pose Long-Term Reliability Challenges

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ATLANTA – Falling planning reserves, the rapidly changing resource mix, environmental regulations and increased levels of distributed energy resources are among the most significant reliability challenges for the long-term planning and operation of the bulk power system, the North American Electric Reliability Corporation’s 10-year assessment finds. The [2015 Long-Term Reliability Assessment](#) provides a forward-looking, independent North American perspective of the resource adequacy needed to maintain reliability over the next decade.

NERC examines key indicators of resource adequacy for the planning period, including demand forecasts, expected resources and transmission additions. For the first time, NERC also includes recommendations for measures to examine levels of essential reliability services needed to maintain reliability while integrating new wind, solar and other variable energy resources.

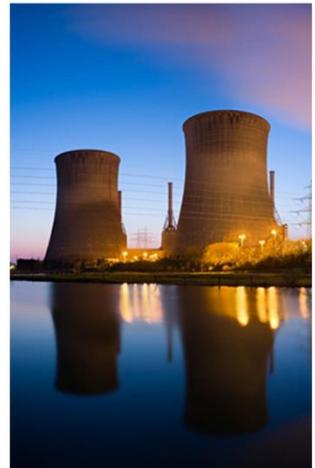
“This year’s LTRA shows the range of reliability challenges stemming from the ongoing and accelerated changes in the resource mix,” said John Moura, NERC director of Reliability Assessments and System Analysis. “While these changes are not necessarily harmful to the bulk-power system, the challenge to the electric industry and policy makers is how to make the transition in a reliable way.”

The assessment’s findings include:

- Planning reserve margins in all assessment areas appear sufficient in the short-term, in the next five years, but continue to trend downward.
- A changing resource mix requires additional measures and approaches for assessing future reliability.
- Operators and planners face uncertainty with increased levels of distributed energy resources and new technologies.

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- Environmental regulations are contributing significantly to the change in resource mix and are a large impetus behind the shift from coal and toward natural gas and renewables.

Retirements of coal-fired generation and other fossil-fired units drive projections of increased reliance on new natural-gas-fired and renewable capacity. Approximately 21 GW of coal-fired units were retired between 2012 and 2014, while an additional 27 GW are scheduled to retire by 2025, the assessment finds.

Across North America, 11 GW of natural-gas-fired generation were retired between 2012 and 2014, and an additional 10 GW are scheduled to retire by 2025. Renewable, petroleum, nuclear and less-efficient units that have reached the end of their lifespans amount to 6 GW of planned retirements by the end of the assessment period.

Natural gas generation capacity is projected to rise 10 percent, or by 42 GW, by 2019. Similarly, non-hydro renewable generation is projected to provide a larger contribution in the total capacity, increasing from 33 GW in 2015 to 40 GW by the end of the assessment period.

The assessment's recommendations include that the increase in renewable resources should be coupled with requirements that ensure an equal level of essential reliability services for the reliable operation of the bulk power system. Planning requirements and interconnection agreements should require sufficient amounts of essential reliability services during and throughout the transformation of the resource mix.

NERC assessments provide a high-level view of resource adequacy and identify long-term emerging issues and trends that will influence future Bulk-Power System planning, development and system analysis. NERC assessments also provides risk-informed recommendations and support a learning environment for industry to pursue improved reliability performance. These recommendations and the associated analyses provide a technical and policy basis for system planners, operators, and policy makers to understand reliability trends, future emerging reliability issues and the need for coordination among the electric industry, regulators and policy makers.

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The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to ensure the reliability of the bulk power system in North America. NERC develops and enforces Reliability Standards; annually assesses seasonal and long-term reliability; monitors the bulk power system through system awareness; and educates, trains, and certifies industry personnel. NERC's area of responsibility spans the continental United States, Canada, and the northern portion of Baja California, Mexico. NERC is the electric reliability organization for North America, subject to oversight by the Federal Energy Regulatory Commission and governmental authorities in Canada. NERC's jurisdiction includes users, owners, and operators of the bulk power system, which serves more than 334 million people.