

Media Release

Dependence on Natural Gas Infrastructure, Storage Requires New Planning Approach for Reliability

November 14, 2017

ATLANTA – The North American grid is experiencing a large shift in its electric generating resources with the ongoing retirements of coal-fired and nuclear capacity. The growth in natural gas, wind and solar resources and the increasing interdependence of the natural gas and electric infrastructure has resulted in bulk power system operational and planning reliability challenges.

NERC conducted an assessment – [*Special Assessment: Potential Bulk Power System Impacts Due to Severe Disruptions on the Natural Gas System*](#) – to analyze potential reliability impacts from disruption of natural gas delivery. NERC’s assessment found that the impacts vary depending on the location and infrastructure density, and that mitigation strategies to reduce potential impacts are available.

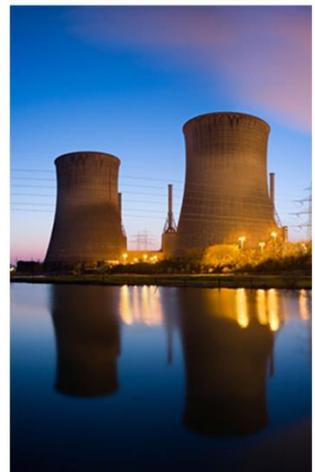
“The operating realities of renewables and other intermittent generation resources, when combined with ongoing coal and nuclear retirements, create a greater dependence on natural-gas fired generation,” said John Moura, director of Reliability Assessment and System Analysis. “In light of the power sector’s rising reliance on natural gas, the loss of gas facilities must be added to the list of potential extreme contingencies used to measure system reliability impacts,” Moura said.

The assessment looked at three broad categories:

- **Review of existing studies** to gain better understanding of existing planning approaches and best practices.
- **Evaluation of gas storage facilities** that are tightly coupled with electric generation and measure bulk power system implications when storage is not available.

CONTACT:
Kimberly.Mielcarek@nerc.net

3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com



- **Identification of generation clusters** for high density of natural gas generation and to determine potential vulnerabilities and risk factors for resiliency planning.

“NERC has evaluated how the loss of key natural gas infrastructure facilities could impact the reliability of the bulk power system,” said Thomas Coleman, director of Reliability Assessments. “Comprehensive planning by Planning Coordinators can significantly increase the grid’s resilience,” Coleman said.

Other findings include:

- Aliso Canyon has unique characteristics compared to other natural gas storage sites.
- Rising natural gas demand has altered storage dynamics.
- Natural gas supply sources have become more diversified.

The assessment’s recommendations include:

- In the event of an emergency, planning processes should include provisions for and be prepared to secure necessary air permit waivers.
- Regulators should address cyber and physical security needs related to fuel supply disruptions.
- The Department of Energy should consider collecting data to quantify dual fuel storage and seasonal on-site inventory.
- Owners and operators of dual-fuel generators must ensure their operability.
- Wholesale electric markets should continue to incentivize performance of natural gas generation.
- The natural gas and electricity industries should continue to strengthen their operational coordination.
- NERC should enhance its Generator Availability Data System for better granularity on the causes of generator outages.

###

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.