

**NEW YORK STATE RELIABILITY COUNCIL
MEETING 215: March 10th, 2017
Report for Agenda Item 8.1: Michael Forte
NPCC Board of Directors Report**

The upcoming NPCC Board of Directors (BOD) meeting will be held on March 10th. In lieu of a Board report, the following is a summary of the NERC 2016 Long-Term Reliability Assessment.

NERC 2016 Long-Term Reliability Assessment

NERC's 2016 Long-Term Reliability Assessment (2016 LTRA) provides a wide-area perspective of the generation, demand-side resources, and transmission system adequacy needed during the next decade. The 2016 LTRA found that (i) natural gas dependency, (ii) distributed energy resource (DER) challenges, and (iii) maintaining essential reliability services (ERSs) during a changing resource mix are among the most pressing emerging reliability issues facing Bulk Power System (BPS) reliability.

I. Natural Gas Dependency

a. Summary

- i. Over the past decade, several areas have significantly increased their dependence on natural gas.
- ii. NERC has identified that reliance on a single fuel increases vulnerabilities, particularly during extreme weather conditions.

b. NPCC Region

- i. For the NPCC-New England region, natural gas-fired generation will make up 52 percent of the on-peak anticipated capacity by 2021.
- ii. The risk in New England is increasing due to the limited addition of new interstate pipeline capacity and the fact that natural gas storage does not appear to be keeping pace with natural gas generation additions.
- iii. Additionally, recent winter experiences have created challenges in both maintaining back-up fuel inventories and successfully switching from gas to oil (dual-fuel switching).
- iv. However, emerging market rules in ISO-NE are expected to support reliability and the resilience of the generation fleet.

II. Distributed Energy Resource Challenges

a. Summary

- i. Increasing installations of DERs, including rooftop solar, present an emerging challenge to the reliability of the BPS and modify how distribution and transmission systems interact with each other.
- ii. Because these resources are located on the distribution system, they often lack sufficient visibility and operational control to reliably accommodate them on a large scale.
- iii. This visibility is a crucial aspect of power system planning, forecasting, and modeling that requires adequate data and information exchanges across the transmission and distribution interface.

b. NPCC Region

- i. The most significant growth in DER penetration is occurring in NPCC and WECC.
- ii. NERC's Distributed Energy Resources Task Force (DERTF) will release their initial report in the first quarter of 2017. This report will review the current impact to reliability and considerations for resource and transmission planning.

III. Maintaining Essential Reliability Services

a. Summary

- i. The addition of a large number of variable energy resources (VERs) onto the BPS has resulted in the need for operational flexibility to accommodate demand while also effectively managing the resource portfolio.
- ii. As VERs are becoming more prevalent, NERC is developing sufficiency guidelines in order to establish requisite levels of ERSs.
- iii. ERSs are comprised of primary frequency response (PFR), voltage support, and ramping capability, all needed for the continued reliable operation of the BPS.
- iv. Significant ramping capabilities are needed to address the challenges presented from VER operational impacts.

b. NPCC Region

- i. Several assessment areas, including NPCC-Maritimes, evaluated their respective area for ramping-related challenges. From their results, the ramping measure continues to be monitored, but does not currently pose a challenge to reliability.
- ii. Ramping issues requiring increased operational flexibility have been most notable in California, where they occurred four years earlier than originally projected.