



Federal Energy Regulatory Commission



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Grid Operators Have Sufficient 'Blackstart' Capability, Study Says

Operators of the nation's power grid have sufficient capability to quickly restore their systems using "blackstart" resources in the event of widespread outages, according to a new report by staff at the Federal Energy Regulatory Commission (FERC) and the North American Electric Reliability Corporation (NERC).

The study is a follow-up to a 2016 joint FERC-NERC-Regional Entity staff review that assessed the plans of utilities for restoration and recovery of the bulk power system following a widespread outage or blackout. That review identified for further study issues dealing with availability of blackstart resources - generating facilities that can be started without support from the grid or that are designed to remain energized without connection to the rest of the grid. These blackstart resources are critical to maintaining the reliability and resilience of the nation's transmission grid.

The study evaluated blackstart resources and planning by nine utilities registered with NERC and notes that while some utilities have seen a fall in the availability of blackstart resources due to retirement of blackstart-capable units over the past decade, they have identified sufficient blackstart resources in their system restoration plans, and have developed comprehensive strategies for mitigating against future loss of any additional blackstart resources.

The joint study team also found that some of the utilities have expanded testing of blackstart capability, including testing energization of the next-start generating units. These utilities have gained valuable knowledge used to modify, update and improve their system restoration plans. The utilities also used the knowledge gained to update and improve their existing steady state and dynamic models supporting their system restoration plans, as well as their system restoration drills.

Today's study also makes recommendations for industry-wide consideration regarding practices, procedures and methodologies aimed at improving system restoration overall, and blackstart capability planning and testing in particular. These recommendations include approaches to addressing single fuel-use constraints, validation of system models and expanded testing of system restoration plans.

All recommendations in the study are for voluntary consideration only. Registered entities are not subject to mandatory compliance with the recommendations, separate and apart from any obligations of the mandatory and enforceable Reliability Standards.