

Operating Committee – Special Cold Weather Resource Improvement Final Proposal Report

September 4, 2014

Issue Summary

During the January 2014 “Polar Vortex,” PJM experienced extreme cold temperatures in its region that required the use of emergency procedures on multiple days to maintain adequate supply to meet the demand and reserve needs of the system. Coincident with the cold weather and high demand, generator forced outages and failures to start were significantly higher than expected; as high as 22% (~40,000 MW) during the January 6 – 8, 2014 operating days. PJM’s Emergency Operations Manual M13, Section 3.3 includes a chart of potential generation unavailability due to cold weather based on historical performance; however the forced outage rates in January 2014 exceeded these estimates by greater than 200%.

A Problem Statement was brought forward by PJM. PJM believes that improvements in the performance of resources during extreme cold weather events is necessary and some level of performance verification or testing of certain resources during cold weather should be implemented.

The Problem Statement/Issue Charge was approved by the OC on May 6, 2014.

Stakeholder Group Assignment

This issue was addressed by the Operating Committee as part of its existing chartered responsibilities related to the overall operating reliability of the PJM bulk power supply facilities. Several special WebEx Conference calls were initiated to address this issue specifically as well as part of the regular OC meeting agendas.

Key Work Activities

1. Reviewed data on the PJM “Polar Vortex” event including items such as outage code analysis, fuel availability problems, effects on eFORd & eFORp, effects on energy market, etc.
2. Provided education on best practices for cold weather preparation and resource verification/testing requirements from other geographic areas such as ISO-NE, NYISO, and northern Midwestern states. Include a review of Southwest Cold Weather Event of February, 2011.
3. Reviewed prior requirements for generator winter capability testing and associated exemption programs.
4. Investigated the need to develop verification/testing requirements to ensure that resources such as traditional generation, variable generation, demand response and those that operate infrequently and/or have alternate fuel capability are prepared to operate during extreme cold weather conditions.
5. Considered guidelines for the use of a cold weather preparation checklist.
6. Drafted required Manual changes to implement new requirements for resource verification/testing under cold weather conditions.

There were **xx** meetings conducted to address this topic.

Summary of Work

The group followed the expedited / focused application of the Consensus Based Issue Resolution (CBIR) process – referred to as CBIR Lite to manage its efforts. Through education, discussion and debate, PJM staff and stakeholders reached Tier 1 consensus on a single PJM proposal that addressed the issue.

Recommended Proposal

The two part proposal focuses on enhancing unit performance during cold weather conditions and adequately scheduling units to meet systems conditions reliability and economically. While there was only a single PJM proposal brought forward, the stakeholders debated, modified and proposed new tenants to strengthen the proposal. A summary of the final proposal follows:

1. Generation Resource Cold Weather Checklist to be added as Attachment N to Manual 14D. The checklist, or a similar one developed and maintained by the generation owner, should be used annually prior to the winter season to prepare generation resources for extreme cold weather operations. Section 7.5.2 of M14D details the procedures.
2. Generation Resource Operational Exercise. A new section 7.5 will be added to Manual 14D. The exercise will be conducted prior to the onset of cold weather with the purpose of identifying and correcting start-up, operational and fuel switching problems. Not every unit will be exercised. Nuclear, wind and hydro units are excluded. PJM will provide a list of units to resources owners that have not run recently on either the primary or backup fuels. Section 7.5.1 of M 14D details the procedures.

Standing Committee Results

[Replace with voting results for all options at standing committee or senior task force.]

Appendix I: Supplemental Documents

Education and Presentations Reference document link to be provided here when it is completed and posted. Also, Manual 14D new section 7.5 and Attachment N will be attached.

Appendix II: Stakeholder Participation

A list of participants here including company and sector will be provided here.



DRAFT ONLY

[DM#]