

NEW YORK STATE RELIABILITY COUNCIL
MEETING 197: September 11th, 2015
Report for Agenda Item 8.1: Michael Forte
NPCC Board of Directors Report

The next NPCC Board of Directors meeting will be held on September 9th, 2015. The following is a summary of NERC's September 3rd webinar on *Winter Preparation for Severe Cold Weather*.

Winter Preparation for Severe Cold Weather

NERC hosted a webinar on *Winter Preparation for Severe Cold Weather* discussing recent cold weather events, lessons learned, and offering links to documents stored on its Reliability Risk Management website.

1. Southwest Cold Weather Event of February 2011

- *The Cold Weather Event:* 5-days in duration, severe wind chills, a dramatic increase in demands, and new winter peaks. 20,000MW generation unavailable, load shedding impacting 1.3 million customers.
- *Problems included:* Instrumentation freezing, failed heat tracing (due to lack of inspection and maintenance). Inadequate generator winter preparation. Wind breaks were ineffective and inadequate when used at open plant designs. Necessary insulation was missing, inadequate, and/or had not been improperly designed and/or maintained. This led to frozen pumps, frozen pipes, and frozen instrumentation, causing units to trip.

2. 2014 Polar Vortex of January 2014

- *The Cold Weather Event:* A widespread event, impacting areas that had not seen cold weather like this previously.
- Weather in MRO and NPCC much colder than normal, causing fuel jelling and frozen coal piles not seen before.
- New all-time winter electrical peak demands set ranging from 102% to 118% of the prior winter peak.
- New York was spared with a new winter peak of only 100.8% of the prior winter peak.
- Generation owners were prepared, load was still served, but reserve margins were materially impacted.
- Units that were started earlier in the event (and were kept warm) had a better chance of staying on line. Follow-up: New benchmarks, gap analyses, new procedures, new winter weather preparedness materials.

3. 2015 Winter Performance – Lessons Learned

- Generators that switched from natural gas to oil stayed on-line, avoided fuel loss. Keeping generators on-line overnight at minimum generation also helped to maintain continued operation during the two cold snaps.
- Freeze protection equipment tested, maintained and staged *before* the cold weather hit, assuring availability.
- Custom windbreaks were assembled from plywood or heavy plastics (rather than off-the-shelf tarps) were used to minimize the effects of wind chill and to prevent cold air vortices around equipment.
- Heat tracing was installed, monitored, maintained, tested and repaired in advance of the cold weather.

4. NERC Cold Weather Training Packet

- Applicable to all entities operating during the winter season.
- Assists in identifying potential gaps in current procedures.
- The packet is in Microsoft Word and may be customized for the entity's specific needs.