



FERC and NERC Release

Task Force Report on Southwest Outages

SOS Meeting
September 14, 2011

February 2011 Extreme Cold Weather Event in the Southwest

- Rolling Blackouts
 - Weather related mechanical problems such as frozen equipment, waterlines, and valves
- Natural Gas Curtailments
 - Production losses due to 'freezing' in gas wells, icy roads, and power outages
- 3.2 Million ERCOT Customers Impacted
- Reactive rather than proactive response

PJM Processes

- Cold Weather Alert
 - Based on 1994 PJM event and lessons learned, many of these items are addressed under existing PJM processes such as Cold Weather Alert and OATF.
- OATF Studies
 - Model discrete unit outages including CT start-failure rates
 - Scenario analysis of fuel supply events
- Note: Unlike PJM, many Southwest generators have outdoor boilers which contributed to the severity of this event.

Direct Consideration for PJM

- Augment winter assessments with real-time event data (2)
- Review distribution of reserves to ensure usable and deliverable (3)
- **Require accurate ambient temperature limit data from generators (8)**
- Obtain forecasted output capability (9)
- **Improve communications (21)**
- Examine emergency communication procedures (24)

Indirect Consideration for PJM

- Critical preparations for winter as for summer (1)
- Review of reserve requirements (5)
- Emergency lifting of emissions limitations (10)

Specific To Southwest

- Modify outage rules to allow for denial of outages as conditions dictate (4)
- State requirement for generator owner winterization plans (11)
- **Review and modify load management protocols (22)**
- Review notification procedures during system emergencies (23)

Direct Consideration for PJM and Members

- **Test fuel switching capabilities (6)**
- Test blackstart generators (7)
- Review of critical loads (25)
- Load shed training (26)

Direct Consideration for PJM Members (Generation Owners)

- Design generator plants to operate at lowest temperature (12)
- Assessment of temperature design parameters (13)
- Maintenance and inspection of:
 - freeze protection elements (14)
 - heat tracking equipment (15)
 - thermal insulation (16)
- Erect wind breakers and enclosures (17)
- Provide winter specific operator training (18)
- Ensure winterization supplies are in-place (19)

Direct Consideration for PJM Members (Transmission Owners)

- Ensure equipment can perform during extreme cold weather (20)
 - Low air in breakers
 - Low SF6 gas pressure
 - Failed heaters
 - Bad contacts
 - Gas leaks

2. **Avoidance of feeders or lines reserved for under-frequency load shedding (UFLS) requirements** - All transmission providers interviewed indicated that UFLS blocks are not generally included as available feeders for manual load shedding under their load shed procedures. However, one transmission provider discovered during the February 2 load shed event that **some lines designated as available for manual load shed were also designated for UFLS**. Except for this one overlap in blocks, the transmission providers interviewed were able to fully meet their load-shedding obligations while maintaining the required 25 percent of load reserved for UFLS.

- *PJM Manual 13 Attachment F List the overlap MW:*
 1. *Maximum Manual Load Shedding Capability*
 2. *Overlap of Load Shedding and Under Frequency Loads*

The FERC and NERC Release Task Force Report and Letter can be found at the following links:

- Click [here](#) for release.
- Click [here](#) for report.

