



# TOP-002-5 - Operations Planning New Requirement - R8

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Operations Committee, October 2024

**Standard:** TOP-002-5 – Operations Planning

**Purpose:**

Reliability Standard TOP-002-5 ensure that Transmission Operators and Balancing Authorities have plans for operating within specified limits.

**Summary:**

Reliability Standard TOP-002-5 adds a new requirement addressing how the Balancing Authority will prepare for operations during extreme cold weather conditions

Culmination of a joint inquiry among FERC, NERC and Regional Entity staff into February 2021 cold weather reliability event that affected Texas and the South-Central United States and reinforced in the WSE recommendations

**Enforcement Date:** October 31, 2025

Enforcement is in 2025, but PJM is evaluating processes to be compliant for Winter 2024/25

**R.8** Each Balancing Authority shall have an extreme cold weather Operating Process for its Balancing Authority Area, addressing preparations for and operations during extreme cold weather periods. The extreme cold weather Operating Process shall include, but is not limited to: [Violation Risk Factor: Medium] [Time Horizon: Operations Planning]

**8.1** A methodology for identifying an extreme cold weather period within each Balancing Authority Area;

Cold Weather Advisory/Alert

**8.2** A methodology to determine an adequate reserve margin during the extreme cold weather period considering the generating unit(s) operating limitations in previous extreme cold weather periods that includes, but is not limited to:

- 8.2.1 Capability and availability;
- 8.2.2 **Fuel supply and inventory concerns;**
- 8.2.3 Start-up issues;
- 8.2.4 Fuel switching capabilities; and
- 8.2.5 Environmental constraints.

Potential gap in existing practices

Markets Gateway/eDART

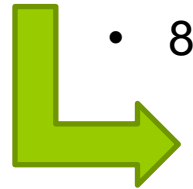
**8.3** A methodology to determine a five-day hourly forecast during the identified extreme cold weather periods that includes, but is not limited to:

- 8.3.1 Expected generation resource commitment and dispatch;
- 8.3.2 Demand patterns;
- 8.3.3 Capacity and energy reserve requirements, including deliverability capability; a
- 8.3.4 Weather forecast.

Load/generation forecasting tools and multi-day RAC

## Information required:

- 8.2.1 Capability and availability;
- 8.2.3 Start-up issues;
- 8.2.4 Fuel switching capabilities; and
- 8.2.5 Environmental constraints



PJM obtains information for the four items above from Markets Gateway (MG) via unit status, parameters, Cold Weather Operating Limits and eDART

- 8.2.2 Fuel supply and inventory concerns;
  - Coal/Oil: Periodic Data Requests and Fuel Limited reporting in MG
  - Hydro/storage: Real time telemetry pond/river info and DA/RT schedules
  - Gas: Seasonal Fuel and Emissions, **but no updated information reported during cold weather**



# Natural Gas Supply Assessments

- Winter 24-25 Plan
  - Given the just-in-time delivery of natural gas, PJM will proactively ramp up outreach to gas generation operators to assess gas availability during cold weather events
  - Focus of outreach will be on units that have not otherwise been committed in the Day ahead market in order to ascertain the availability of natural gas in the real time market to meet reserve requirements
  - Adjust reserve requirements and/or unit commitment based on the information provide and projected system conditions
- Beyond Winter 24-25
  - Utilizing experience from winter 24-25, implement permanent and more automated processes for gas supply availability assessments

NOTE: As always, PJM expects ALL market participants to update Markets Gateway and eDART as necessary to reflect unit limitations and availability

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<ul style="list-style-type: none"> <li>• TOP-002-5 R8 subject to enforcement October 2025</li> </ul>	<ul style="list-style-type: none"> <li>• PJM in the process of identifying               <ul style="list-style-type: none"> <li>○ additional data required</li> <li>○ gaps in current data submissions</li> <li>○ Process improvements to comply with the new requirement</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Winter 2024/25 preparation</li> <li>• PJM will proactively ramp up outreach to gas generation operators to assess gas availability during identified cold weather periods</li> </ul>

## 'Winter Storm Uri Report' Key Recommendation 1g

- Based on its understanding of the “full reliability risks related to the contracts and other arrangements [Generator Owners/Generator Operators] have made to obtain natural gas commodity and transportation for generating units,” each Generator Owner/Generator Operator should be required to provide the Balancing Authority with data on the percentage of the generating unit’s capacity that the Generator Owner/Generator Operator reasonably believes the Balancing Authority can rely upon during the “local forecasted cold weather”
- Each Balancing Authority should be required to use the data provided by the Generator Owner/Generator Operator, combined with its evaluation, based on experience, to calculate the percentage of total generating capacity that it can rely upon during the “local forecasted cold weather,” and share its calculation with the Reliability Coordinator.
- Each Balancing Authority should be required to use its calculation of the percentage of total generating capacity that it can rely upon to “prepare its analysis functions and Real-time monitoring,” and to “manag[e] generating resources in its Balancing Authority Area to address . . . fuel supply and inventory concerns” as part of its Capacity and Energy Emergency Operating Plans.



## Presenter & SMEs:

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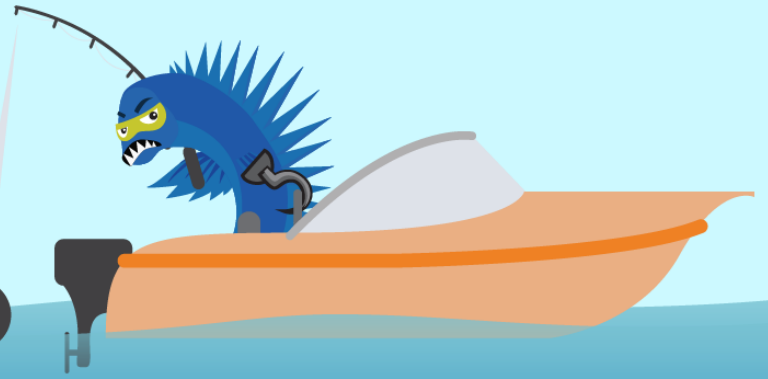


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