

Generation Resource Cold Weather Preparation

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Mechanisms for PJM Situational Awareness

Markets Gateway

Resource Limitation Reporting, Operational Restrictions, Max Run Time

Parameter Exceptions

For additional information on submitting exceptions for pipeline constraints, please refer to the <u>Temporary Operating Parameter Limit (PLS) Exceptions</u> due to <u>Pipeline Restrictions</u> document posted on the Energy Market page under the Parameter Limited Schedules section.

Real Time Values

- Joint Motion filed on 9/11/23 to Expedite Acceptance of PJM's Proposal on Real Time Values from September 15, 2021
- Periodic Fuel and Non-Fuel Consumables Inventory Data Requests
- eDART Outage and Informational Tickets



Cold Weather Advisory

- Provides early notice (3-5 days) that forecasted temperatures may call for a Cold Weather Alert
- Members are to take any necessary precautions to prepare generating facilities for cold weather operations

Cold Weather Alert

- Prepare personnel and facilities for expected extreme cold weather conditions
 - Erecting temporary windbreaks or shelters, positioning heaters, verifying heat trace systems, or draining equipment prone to freezing
- Update all parameters in Markets Gateway
- Report any limitations to PJM Dispatch



- Essential Actions to Industry Cold Weather Preparations for Extreme Weather Events - Link
 - Requires GO to provide cold weather data to its RC, BA, and TOP
 - Refer to Essential Actions #7 and #8 in NERC Alert
 - PJM is the NERC Registered RC, BA and TOP
 - Reporting for NERC Registered Entities required by midnight Eastern on October 6, 2023
 - PJM collecting information through an eDART Data Request
 - Issued to all eDART units only NERC Registered Entities must complete
 - GOs required to upload the responses provided to NERC
 - GOs required to answer some PJM-specific questions
 - Data Request open from August 1 though October 16



Enhancements to Winter Readiness

- Pre-winter generation resource site visits
 - PJM coordinating with IMM and RF to develop plan and schedule
 - Targeted start pre-winter in 2024/2025
- Electric Gas Coordination Sr. Task Force
 - Stakeholders continue to discuss short and long term solution options
 - Short term focus is on situational awareness improvements that can be implemented prior to winter of 2023/24
- Illinois Climate and Equitable Jobs Act: PJM Reliability Guidance
 - Guideline allows PJM to run units only for reliability reasons after emissions hours are reached
 - https://www.pjm.com/-/media/committees groups/committees/oc/postings/illinois-ceja-reliability-guidance.ashx



PJM Training Available to Enhance Winter Readiness

Upcoming In-person Training:

- Market Optimization Workshop 11/7 to 11/9
- Generation ITP 12/4 to 12/8

• LMS Courses:

- Generation ITP Part B PJM Markets and Real Time Ops
- Generation ITP Part D Emergency Procedures (Resource Limitations actions covered here)

Virtual Sessions Planned for Q4 of 2023:

- Generator Energy Schedules and Parameters
- Performance Assessment Intervals
- Winter Emergency Procedures Drill/Refresh (Drill date TBD)



Cold Weather Preparation Guideline and Checklist

- Provides generation resources with a guide to prepare units for cold weather operation
- All generation resources must be prepared for winter and respond accordingly to the data request
- Based on Manual 14-D, Attachment "N"
- Data Request in eDART
 - Open November 1st to December 15th
 - Option of using the PJM or equivalent GO developed checklist
 - GOs requested to identify any improvements or changes to preparation activities made since Winter Storm Elliott
 - GOs requested to share best practices not already documented in M-14D, Attachment "N"
- Results published at appropriate stakeholder and regulatory levels



Seasonal Fuel and Emissions Data Request

- Focused on fuel supply and delivery details, emissions limitations and gas supply/delivery information
- Required for reliable operations planning purposes
- Enhance PJM situational awareness in preparation for severe cold weather
- Data Request open in eDART mid-October through mid-November
- Data will be pre-populated where possible



NERC / RF / SERC Winter Prep Activities

NERC Winter Prep for Severe Cold Weather Webinar 9/7/23

- Preparation for the upcoming winter weather, including:
 - Lessons Learned from recent severe cold weather events & effects on generation resources
 - Review of Level 3 NERC Alert on Cold Weather Preparations for Extreme Weather Events III
 - Winterization best practices for Inverter Based Resources
- Link to Presentation
- Link to Webinar Recording



NERC / RF / SERC Winter Prep Activities

- RF Winterization Program and Standards Update Webinar <u>Link</u>
 - Webinar held on July 17, 2023
- SERC Winter Storm Elliot Recommendations and Lessons Learned
 - Scheduled for November 2, 2023 from 2:00 3:30 p.m.
 - Registration Link

Additional NERC Resources

- Project 2019-06 Cold Weather
 - To enhance the reliability of the BES during cold weather events by ensuring Generator Owners, Generator Operators, Reliability Coordinators, and Balancing Authorities prepare for extreme cold weather conditions.
- Project 2021-07 Extreme Cold Weather Grid Operations, Preparedness, and Coordination – Phase II
 - Address reliability related findings from the Federal Energy Regulatory
 Commission (FERC), NERC, and Regional Entity Joint Staff Inquiry into the
 February 2021 Cold Weather Grid Operations
 - Changes to EOP-011 Emergency Operations & TOP-002 Operations Planning
 - Webinar Link from August 30, 2023
 - Recording link from August 30, 2023



Cold Weather Exercise

- Generation resources strongly encouraged to self-schedule for testing
 - PJM will notify units that should conduct test that have not run in the previous 8 weeks
 - Day-ahead preferred, real-time acceptable with proper notice to PJM dispatch
 - During month of December
 - Temperature forecast below 35 degrees
 - Informational eDART ticket with cause "Cold Weather Preparation Exercise"
 - See Manual 14-D, Section 7.5.1 for details



Pre-Winter Reactive Capability Verification

- Pre-Winter Review: From October 1 through October 31
- Generation Owners review their unit reactive capabilities in eDART
- Update D-curves as necessary
- Provide acknowledgement via eDART





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