

# Manual 14-D: Generator Operational Requirements Periodic Review

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- (New) Section 8.4: Wind Farm Rebuild / Repower
  - Removed based on stakeholder feedback
  - Requirements now documented in pertinent sections
    - Attachment E and Section 8.2.1
- Attachment D: PJM Generating Unit Reactive Capability Curve Specification and Reporting Procedures
  - Changes to reactive capability must be reported within 30 minutes
- Attachment N: Cold Weather Preparation Guideline and Checklist
  - Minor language changes based on stakeholder feedback
  - Additional documentation posted with meeting materials

Manual 14D: Generator Operational Requirements, Revision 66



- Periodic cover-to-cover review
- Corrected typos, capitalization and references throughout
- References
  - Added reference to PJM Manual for Rules and Procedures for Determination of Generating Capability (M-21B)



# Section 4.3.4 Data Exchange and Management Requirements

 Updated communication protocol for registering Phasor Measurement Units (PMU)

#### Section 6.3.4 Other Requirements

- Clarified requirement for all Generating Facilities to provide reactive capability curves to PJM prior to commercial operation
- Clarified requirement for applicable Generating Facilities to complete reactive testing no later than 90 days after commercial operations



# Section 7.3.6 Generation Owner Periodic Tasks and Data Submittals

- Updated the Guideline: Generation Owner Periodic Tasks and Data Submittals
  - Added task to provide data in support of Black Start RFP
  - Removed the task covering Real Time Values no longer applicable
  - Updated Temporary Parameter Limits Exceptions to align with current business rules in PJM manuals

https://www.pjm.com/~/media/documents/manuals/manual-links/m14d/go-periodic-tasks.ashx



- Section 7.3.6 Generation Owner Periodic Tasks and Data Submittals
  - Currently accessed from Section 6.3.4 in M-14D or
  - The Generation Onboarding Section of PJM website <u>https://www.pjm.com/markets-and-operations/ops-analysis/generation-onboarding</u> or
  - New link that has been added to the Generation section of PJM website for ease of reference
  - https://www.pjm.com/markets-and-operations/ops-analysis



### Section 8 Wind Farm Requirements

 Removed specific references to wind speed and wind direction to generalize to other meteorological parameters

# Section 8.2.1 Data Requirements for Wind Forecast Set Up

 Added clarification regarding data needed for wind farm rebuild / repower



# Section 8.3.3 Real-time Operating Reserve Settlement

 Updated language to reflect the wind back cast usage in settlements for wind as well as the applicability to hybrid resources

#### Section 9.1.1 Generator Deactivation Notice

Updated information that may be posted publically



#### Section 10.1 Black Start Selection Process

 Added note to enhance awareness that Black Start information is CEII and Member Confidential

### Section 11.1 Generator Data Confidentiality Procedures

 Clarified language specifically naming cold weather operating limits in generator parameter data sharing procedures



- Section 12.3.3 Real-time Operating Reserve Settlement
  - Added new subsection with language to reflect the solar backcast usage in settlements as well as the applicability to hybrid resources
- Section 13.1 Marketing and Classification of Mixed Technology Facilities
  - Add reference to Manual 21B, Section 2.6



- Attachment D: PJM Generating Unit Reactive Capability Curve Specification and Reporting Procedures
  - Removed reference to AVR status from since it is already covered in Section 7: Generator Operations
  - Clarified requirements and process for submitting and updating reactive capability curves
  - Clarified requirements for wind farms that rebuilt/repowered to submit reactive capability curves within 6 months of rebuild/repower



- Attachment E: PJM Generator and Synchronous Condenser Reactive Capability Testing
  - Added reference to PJM Manual, 21B Rules and Procedures for Determination of Generating Capability
  - Added clarification that new reactive test is needed following wind farm rebuild / repower, even if wind farm previously performed a reactive test within the last 66 months



- Attachment N: Cold Weather Preparation Guideline and Checklist
  - Reformatted and reordered content into additional sections and subsections to increase readability and usability
  - Added the language taken from NERC Generating Unit Winter Weather Readiness Guideline:
- https://www.nerc.com/comm/RSTC\_Reliability\_Guidelines/Reliability\_ Guideline\_Generating\_Unit\_Winter\_Weather\_Readiness\_v4.pdf



- Attachment N: Cold Weather Preparation Guideline and Checklist
  - Section N.2 Management Roles and Expectations <u>new</u> language taken directly from the NERC Guideline
  - Section N.3 Pre-Winter Seasons Items All Generating Facilities,
     Safety combination of existing language and the NERC Guideline
  - Section N.4 Equipment Preparation Conventional Generating Facilities, Evaluation of Critical Components is combination of existing language and NERC Guideline
  - Section N.5 Equipment Preparation Inverter-Based Resources is combination of existing language and NERC Guideline



- Attachment N: Cold Weather Preparation Guideline and Checklist (continued)
  - Replaced references to "generator" with either generation resource or Generating Facility where applicable
  - References section updated to reflect latest industry best practices and lessons learned
  - Added footnote with link to NOAA map of locational first frost date
  - Copies of current and updated versions of Attachment N are posted with meeting materials



# Appendix A: Behind the Meter Generation Business Rules

- Revised multiple rules to reflect current business practices
  - Removed references to submitting changes using a template via email
  - Clarified methodology for determining Summer Net Capability for NRBTMG
  - Updated date for PJM posting NRBTMG from 11/30 to 10/31
  - Updated date PJM shall open the Coincident Peak Hours screen in the Capacity Exchange from 11/1 to 10/22
  - Clarified reporting dates associated with response to a performance compliance event
  - Updated rule #49 to reflect current method to determine summer rated ICAP based on historic capacity factors



# Manual 14-D: Gen. Op. Requirements Timeline

	Committee	Sep	Oct	Nov	Dec
Manual 14-D	SOS		10/2 10/31		
Generator Operational Requirements Revision 66	OC		10/10	11/08	12/05
	MRC			11/21	12/18
	RSCS		10/18		

- First Read
- **★** Endorsement
- O Info Only

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