

Manual 14-D: Generator Operational Requirements Periodic Review

Madalin How

Analyst I, Generation Department, PJM

System Operations Subcommittee

October 2, 2024

- **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 8 Wind Farm Requirements**

- Added new Section 8.4 Wind Farm Rebuild / Repower to clarify commissioning required for wind farms that do not go through the PJM queue (no change in CIR value)

- **Attachment D: PJM Generating Unit Reactive Capability Curve Specification and Reporting Procedures**

- Clarified requirements and process for submitting and updating reactive capability curves

- **Changes to Attachment N: Cold Weather Preparation Guideline and Checklist**

- Reformatted and reordered content into additional sections and subsections to increase readability
- Added the following language taken from NERC Generating Unit Winter Weather Readiness Guideline:
 - Incorporated bulleted list of critical components, grouped by conventional generation and inverter based generation
 - Added section covering Management Roles and Expectations
 - Added section focused on Evaluation of Potential Problem Areas with Critical Components

- **Changes to 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

- **Section 4.3.4 Data Exchange and Management Requirements**
 - Updated communication protocol for registering Phasor Measurement Units (PMU)
- **Section 7.1.1 Generator Real-Power Control**
 - Added language clarifying procedures for generation resources that lose remote control of MW output
- **Section 7.1.2 Voltage and Reactive Control**
 - Added language clarifying procedures for generation resources that lose remote control of MVAR output

- **Section 7.4 Synchronization and Disconnection Procedures**
 - Added language clarifying notification procedures in the event of a relay trip
- **Section 8 Wind Farm Requirements**
 - Removed specific references to wind speed and wind direction to generalize to other meteorological parameters

- **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

- **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

- Changes related to Hybrid Resource Phase 2
- **Section 8.3.3 Real-time Operating Reserve Settlement**
 - Updated language to reflect the wind backcast usage in settlements as well as the applicability to hybrid resources
- **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 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>

- **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 9.1.1 Generator Deactivation Notice**
 - Updated information that may be posted publically
- **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
- **Attachment E: PJM Generator and Synchronous Condenser Reactive Capability Testing, Section E.2**
 - Added reference to PJM Manual, 21B - Rules and Procedures for Determination of Generating Capability

Committee		Sep	Oct	Nov	Dec
Manual 14-D Generator Operational Requirements Revision 66	SOS		● 10/2 ★ 10/31		
	OC		● 10/10	★ 11/08	
	MRC			● 10/30 ★ 11/21	
	RSCS		○ 10/18		

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

Facilitator:

Kevin Hatch, Kevin.Hatch@pjm.com

Secretary:

Matt Wharton, Matthew.Wharton@pjm.com

Presenter:

Madalin How, Madalin.How@pjm.com

SME:

Vince Stefanowicz,
Vincent.Stefanowicz@pjm.com

**Manual 14-D: Generator Operational Requirements, Rev. 66
Periodic Review**



Member Hotline

(610) 666 – 8980

(866) 400 – 8980

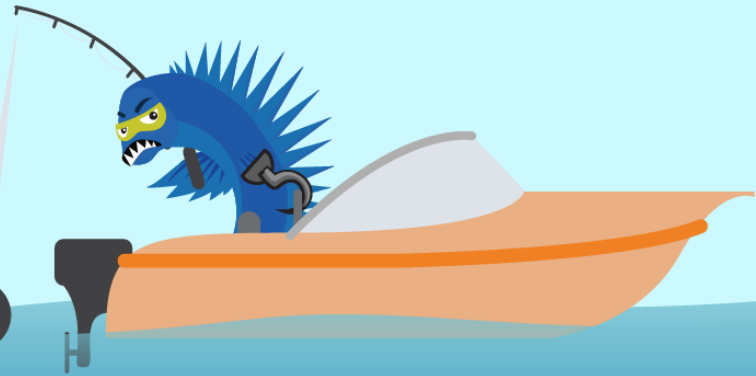
custsvc@pjm.com

**PROTECT THE
POWER GRID**

**THINK BEFORE
YOU CLICK!**



**BE ALERT TO
MALICIOUS PHISHING
EMAILS**



**Report suspicious email activity to PJM.
Call (610) 666-2244 or email it_ops_ctr_shift@pjm.com**