Manual 14-D
Generator Operational Requirements
Revision 51

Vince Stefanowicz
Sr. Lead Engineer, Generation
System Operations Subcommittee
December 6, 2019
<table>
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<th>Committee</th>
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<th>Jul</th>
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<td><strong>Rev. 49</strong> Non-Retail Behind the Meter Generation</td>
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<td><strong>Rev. 50</strong> Energy Storage Resource Participation</td>
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<td><strong>Rev. 51</strong> DER Ride-through</td>
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*Initially presented as Rev. 49

- ● First Read
- ★ Endorsement
- ○ Info Only
Administrative Change Since First Read

- Absent Ruling from FERC on Order 845, Generating Facility not yet defined in OATT
- In Definitions and Applicability section, defined Generating Facility for use in M-14D – removed reference to OATT

For purposes of this manual, “Generating Facility” shall mean Interconnection Customer’s device for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the interconnection customer’s Interconnection Facilities.
Distributed Energy Resource Ride-Through Guideline

Voluntary guidance developed through DER Ride-through Task Force

Applies to distribution-connected generators connected to radial distribution lines of voltage less than 50 kV

Directs Distributed Energy Resources to appropriate Transmission Owner Engineering & Construction Standards

- Stand alone document posted on PJM website

Added in Section 7.1.1 Generator Real-Power Control
7.1 Dispatching of Generation

7.1.1 Generator Real-Power Control

The Generator Generating Facilities must deliver the electric energy generated by the facility to PJM at the point(s) of interconnection in the form of 3 phase, 60-Hertz alternating current at the nominal system voltage at the point of interconnection.

Generators Generating Facilities and their protective systems (relaying, V/Hz, etc.) should meet the frequency guidelines listed in PJM Manual M-36, System Restoration, section 2.3, to coordinate with system preservation under-frequency load shedding. Additionally, generators Generating Facilities and their protective systems should be capable of operation at over-frequency up to 61.7 Hz for a limited duration. Refer to NERC Reliability Standard PRC-024, Generator Frequency and Voltage Protective Relay Settings. For Generating Facilities connected to radial distribution lines of voltage less than 50 kV, refer to the ride through guidance document posted at https://www.pjm.com/planning/design-engineering/tech-standards.aspx for additional guidance.

Link to draft guideline

Manual 14-D, Rev 51 Review / Approval Timeline

SOS
First Read
10/10/19

RSCS
Info Only
10/18/19

SOS
Endorsement
12/06/19

MRC
Endorsement
12/19/19

OC
First Read
10/15/19

MRC
First Read
10/31/19

OC
Endorsement
12/10/19

Effective Date
12/19/19