



PJM Manual 14D

Generator Operational Requirements, Revision 42



PJM Committees
Oct / Nov / Dec 2017
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- Periodic Review
- Replaced Local Control Center with Transmission Owner and replaced LCC with TO in multiple locations for consistency with other manuals
- Exhibit 1 and Section 6, replaced System Operator Certification with PJM TO Operator and Generation Dispatcher Certification for consistency with Manual 40
- Section 4.1.7 - SCADA - Supervisory Control and Data Acquisition - grammatical correction

- Added requirement that all generators shall be modeled in eDART consistent with the PJM EMS model.
 - PJM will notify those affected and will implement a mutually acceptable transition plan
- Added requirements for all **new** black start generators to be modeled individually in eDART and PJM EMS.
 - An example would be a combined cycle plant where one (or more) CTs are providing black start service
 - Needed for modeling consistency

- New section, relocated from Manual 10, Section 5.2

- Section 7.1.1 Generator Real Power Control
 - Revised over-frequency level per NERC Reliability Standard PRC-024-2
- Section 7.1.2 Voltage and Reactive Control
 - Added requirement that the Transmission Owner copy PJM via email on the voltage schedules assigned to the Generator Owner/Operator
 - Also included in new revision of PJM M-03, Section 3.11
 - Clarifies how Transmission Owners shall communicate generator voltage schedules to PJM per existing requirement.
 - Change is intended to facilitate VAR-001-4 compliance

- Section 7.1.2 Voltage and Reactive Control (continued)
 - Added the requirement for non-synchronous generating facilities which entered the New Service Queue on or after November 1, 2016 to provide dynamic reactive power and follow the assigned voltage schedule.
 - Consistent with FERC Order No. 827
 - Some existing non-synchronous generating facilities are currently providing dynamic reactive power:
 - As needed by Transmission Owner based on System Impact Studies.
 - Requirement can be met using smart inverters (Type III/Type IV inverter-based wind turbines), or dynamic reactive devices (e.g. SVCs).

- Section 7.1.2 Voltage and Reactive Control (continued)
 - Deleted voltage schedule exemption details and left the reference to the process as described in M3.
 - Clarified that AVR & PSS outage notifications must be made verbally and via eDART
 - Clarified the wording in the note related to Power System Stabilizers
- Section 7.1.6 Black Start
 - Clarified wording regarding the TO's capability and authority during system restoration
- Section 7.3.5 Fuel and Emissions Reporting
 - Removed references to capacity resources and added reference to specific EOP standard

- Section 11 Generator Data Confidentiality Procedures
 - Clarified wording and included parameter data to be provided to a Transmission Owner for system restoration planning purposes
 - See 9/12/17 OC meeting agenda item 7 for details
 - <http://pjm.com/-/media/committees-groups/committees/oc/20170912/20170912-item-07-0a-revs-gen-data-sos-oc-mtgs-sept-2017.ashx>
 - Exhibit 13: Generator Data Sharing Process Flow also revised accordingly
 - Attachment J: Generator Data Release Matrix
 - Revised to reflect changes in section 11; added column for restoration-related generator parameters

- Minor revisions based on Version 2 of NERC's Generating Unit Winter Weather Readiness Reliability Guideline.
- Updated the links to the NERC Guideline and the RF presentation

- **First Reads, Second Reads:**
 - SOS: October 4, 2017, November 2, 2017
 - OC: October 10, 2017, November 7, 2017 **(Endorsement)**
 - RSCS: October 20, 2017
 - MRC: October 26, 2017, December 7, 2017 **(Endorsement)**