



# PJM Manual 14D

## Generator Operational Requirements, Revision 42



PJM Committees  
Oct / Nov / Dec 2017  
Vince Stefanowicz  
Sr. Lead Engineer  
Generation Department



- 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



## Section 5.7 Generation Transfer Process

- 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





## Attachment N: Cold Weather Preparation Guideline and Checklist

- 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)**