

Manual 01 Revision 39

Second Read

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System Operations Subcommittee
September 6, 2018

- **Section 4.5.4: Communication Protocols**
 - Prior to taking actions to control thermal and voltage constraints, PJM and TO operators should verify:
 - Monitored element
 - Facility Ratings
 - Actual flow or voltage
 - Contingency flow or voltage



Changes since the First Read – Attachment A

- **Attachment A: Data Specification & Collection**
 - Communication of Protection System outages a required input to PJM
 - NERC Standard PRC-001 mentioning this requirement retired but TOP-003 still has this data specification.

	Information Services	PJM Member Regional Transmission Owner	PJM Member Generating Entity
Inputs to PJM			
B: EMS Services			
B.6	Protection System failures and unplanned outages via eDART or other communication methods	X	X
D: Transmission Maintenance Planning Services			
D.3	Protection System planned outages via eDART or other communication methods	X	X

Change Type	Sections
Revised for clarity & missing information	<ul style="list-style-type: none"> • 1.6: Markets Gateway • 2.2: PJM Member Data Exchange • 3: EMS and Synchrophasor Data Exchange • Attachment A: Data Specifications • “LCC” changed to “TO”
NERC Standard references updated	<ul style="list-style-type: none"> • 2.3.1: Transmission Monitoring Capability • 2.7: PJM Member Back Up Capability • 4: Interpersonal Communication Capability • Attachment B: Schedule of Data Submittals
New requirements	<ul style="list-style-type: none"> • 3.2: EMS Data Exchange • Attachment A: Data Specification and Collection

- **Second Read**
 - September 6 – SOS
 - September 11 – OC
 - September 27 – MRC
- **Effective Date:** September 27, 2018

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Appendix

- Section 1: PJM Systems
 - Brief definition of PJM Systems/Tools and what they are used for
- Old Language
 - Overview of DA and RT Markets, not the tool
- New Language
 - Defining Markets Gateway and tool capabilities
 - Referring to Manual 11 for business rules

- Section 2.3.1: Transmission Monitoring Capability
 - If PJM experiences a failure of its Real-time Assessment capability for longer than 15 minutes, PJM will notify TOs.
 - TOs shall conduct a Real-time Assessment at least once every 20 min during this time. (TOP-001 R13 and TO/TOP Matrix)
- Section 2.7: PJM Member Back Up Capability
 - NERC Standard references updated.
 - TOP-003 R1, R3, R5 on data requirements.
 - TOP-001 R1 on actions to maintain the reliability of PJM TOP area.
 - TOP-001 R12 and R14 on operating within the limits of IROL and SOL.

- Section 2.2: PJM Member Data Exchange
 - Removed the bulleted list of “Member Type” referencing Attachment A.
 - Attachment A has more detailed information on what type of entities the data is exchanged with.

- New language to cover DNP3 Communication Protocol.
 - PJM uses both ICCP and DNP3 to receive real-time EMS data from PJM Members.
- Bolstered the language explaining PJMnet.
- New subsection to define Jetstream system.
 - Used with DNP3 protocol to receive data from small generation assets over the internet.

- New requirement for ICCP data definition files.
 - Applies to **PJM Members with an ICCP connection** to PJM EMS.
 - ICCP dump file listing all measurements available to PJM.
 - ICCP Object ID and Measurement Description included.
 - PJM member shall provide an updated file **at least every 6 months or upon PJM's request.**

- Revised language for clarity.
- No requirement changes.
- Removed reference to Phasor Data Quality Task Force.
 - A maximum of 0.2% overall inaccuracy requirement remains.

- Per COM-001-3:
 - added Distribution Providers to the list of entities PJM has voice communications with.
 - Updated acronyms and definitions for clarity.

- Per COM-001 R4.3 and R9:
 - Transmission Owners shall designate an Alternative Interpersonal Communication capability.
 - This alternate method shall be tested once every calendar month.
 - If test is unsuccessful, initiate action to repair or replace within 2 hours.

- Added definition for what qualifies as an “Emergency”
- Provided a table that outlines the criteria for when an emergency starts and ends.
- Highlighted the importance of three part communication during emergencies in accordance with NERC Standard COM-002.

- Table A: Generation Scheduling Services
 - Removed the references to the data submission timelines.
 - These business rules are in M11 and M14D.
- Table B: EMS Services
 - Added Performance Assessment Interval (PAI) Trigger via SCADA/ICCP.
 - This is an optional service for Generating entities.

- Reworded EOP-008-1 R5 to ensure TOs are submitting the right evidence.

Standard Reference	To be Submitted	Frequency and Date
EOP 008-1 R7	Coordinate a backup test with PJM and submit the test documentation and the results indicating the performance. Submittal to be provided via PERCS website.	(Annual) Recommend September 30

- TOs submit to submit test documentation and results, not the test itself.

- References to “Local Control Center” (LCC) has been updated to “Transmission Owner Control Center” or “Transmission Owner” throughout the manual.
 - “LCC” was a defined term in Section 2.1 of M01.
 - Previously updated to “TO” in M40 and M14D.