Summary of Changes in Revision 39

• Revised sections for clarity and missing information
  – Section 1.6: Markets Gateway
    • Defining Markets Gateway and tool capabilities.
  – Section 3: EMS and Synchrophasor Data Exchange
    • Section 3.2: New language to cover DNP3 Communication Protocol.
    • Section 3.3: Revised language for clarity, no changes in requirements.
  – Attachment A: Data Specifications
    • Removed the references to the data submission timelines.
    • These business rules are in M11 and M14D.
Summary of Changes in Revision 39

- New and updated references to NERC Standards
  - Section 2.3.1: Transmission Monitoring Capability
    - TOP-001 R13
  - Section 2.7: PJM Member Back Up Capability
    - TOP-001 R1, R12, R14 and TOP-003 R1, R3, R5
  - Section 4.1: Dispatch Voice and Fax Communications
    - COM-001
  - Section 4.5: PJM Communication Protocol
    - COM-002
  - Attachment B: Schedule of Data Submittals
    - EOP-008
Summary of Changes in Revision 39

• New Requirements
  – **Section 3.2: EMS Data Exchange**
    • ICCP data dump files required from PJM members with an ICCP Connection
    • PJM member shall provide an updated file at least every 6 months or upon PJM’s request.
  – **Attachment A: Data Specification and Collection**
    • Added Performance Assessment Interval (PAI) Trigger via SCADA/ICCP to Table B.
    • This is an optional service provided from PJM to Generating entities.
Changes since the First Read in June

• **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.
Changes since the First Read in June

• **Section 4.2: Alternative Interpersonal Communication (Voice Communications) Capability**
  – 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.
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.
• **First Read**
  – August 2 – SOS
  – August 7 – OC
  – August 16 – RCSC
  – August 23 – MRC

• **Second Read**
  – September 6 – SOS
  – September 11 – OC
  – September 27 – MRC

• **Effective Date:** September 27, 2018
Contact Information

• Bilge Derin
  – Bilge.Derin@pjm.com
  – 610-666-3121
Section 1.6: Markets Gateway

• 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
Section 2: Computer Requirements

• 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 3.2: EMS Data Exchange

• 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.
Section 3.2: EMS Data Exchange

- 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.
Section 3.3: Synchrophasor System Data Exchange

- Revised language for clarity.
- No requirement changes.
- Removed reference to Phasor Data Quality Task Force.
  - A maximum of 0.2% overall inaccuracy requirement remains.
Section 4.1: Dispatch Voice and Fax Comms

• Per COM-001-3:
  – added Distribution Providers to the list of entities PJM has voice communications with.
  – Updated acronyms and definitions for clarity.
Section 4.5: PJM Communication Protocol

• 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.
Attachment A: Data Specification and Collection

• **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.
Attachment B: Schedule of Data Submittals

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

<table>
<thead>
<tr>
<th>Standard Reference</th>
<th>To be Submitted</th>
<th>Frequency and Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>EOP 008-1 R7</td>
<td>Coordinate a backup test with PJM and submit <strong>the test documentation and the results indicating the performance.</strong> Submittal to be provided via PERCS website.</td>
<td>(Annual) Recommend September 30</td>
</tr>
</tbody>
</table>

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