PJM TO/TOP Matrix V16

Gizella Mali, TTMS Chair
First Read
January, 2022
<table>
<thead>
<tr>
<th>Action Required</th>
<th>Deadline</th>
<th>Who May Be Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Read of TO/TOP Matrix V16</td>
<td>April 1, 2022</td>
<td>PJM Member Transmission Owners (TOs)</td>
</tr>
</tbody>
</table>
Review Future Standards Incorporation Plan and prioritize – Monthly at TTMS

1

Identify requirements to be added or edited in the Matrix

2

PJM develops “Strawman” for TTMS review

3

TTMS finalizes new or revised tasks (PJM and Member TOs)

4

Committee updates and TOA-AC approval prior to most pressing “Enforcement Date”

5
Revised Tasks
- COM-002-4 R4.1
- EOP-005-3 R1
- EOP-010-1 R3.2, R3.3
- IRO-001-4 R2
- PER-005-2 R1.3
- TOP-001-5 R1, R5, R6, R12, R13, R14
- TOP-010-1(i) R1, R1.3, R3, R3.2

New NERC Reliability Standards
- None

Changes Incorporated in V16

1. Revised Tasks
2. New NERC Reliability Standards
3. Administrative Changes
   - COM-002-4 R4.1 Revised from “assess adherence” to “adhere”
   - EOP-005-3 R1 Revised from “send” to “submit”
   - Updated reference documents
   - Spelling and grammar check
   - Aligned abbreviations
4. Standards Exiting Matrix
   - None
TO/TOP Matrix V16 Drafting Period

V15 Effective 4/1/2021

TTMS Finalized V16 November 19, 2021

SOS-T 1st Read 1/06/2022

PC 1st Read 1/11/2022

OC 1st Read 1/13/2022

RSCS 1/21/2022

SOS 2nd Read 2/03/2022

PC 2nd Read 2/08/2022

OC 2nd Read 2/10/2022

TOA-AC 1/27/2022

TOA-AC Approval 3/2022 via Email

V16 Posting Effective 4/1/2022
Facilitator: Monica Burkett, Monica.Burkett@pjm.com
Secretary: Ashwini Bhat, Ashwini.Bhat@pjm.com
SME/Presenter: Gizella Mali, Gizella.Mali@pjm.com
TO/TOP Matrix Version 16

Member Hotline
(610) 666 – 8980
(866) 400 – 8980
custsvc@pjm.com
TO/TOP Matrix Educational/Background Slides
• Index between the PJM Manuals / Governing Documents and NERC Reliability Standards applicable to PJM as the TOP
• Delineates the Assigned/Shared Tasks for Member TOs where PJM relies on its TOs to perform certain tasks
• Does not create any new obligations for PJM or its Member TOs
• An efficient and effective tool fundamental to a strong PJM Internal Control – the PJM TO/TOP Reliability Audit Program
TO/TOP Relationship

- Clear Responsibility and Authorities
  - Long Standing Relationship
  - Unity of Command and One Responsible Entity
  - Codified in PJM’s Agreements
- PJM Committees (OC, SOS, PC…)
- Strong and proven Internal Control
  - PJM Training
  - TO/TOP Matrix
  - PJM TO/TOP Reliability Audits
A Look at the TO/TOP Matrix

• **Delineation of Reliability Tasks**

<table>
<thead>
<tr>
<th>Category</th>
<th>Standard Number</th>
<th>Requirement Number</th>
<th>Approved BOT/FERC Standards</th>
<th>A/S</th>
<th>Assigned or Shared Member TO Tasks</th>
<th>PJM Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>EOP</td>
<td>EOP-008-2</td>
<td>R8</td>
<td>Each Reliability Coordinator, Balancing Authority, and Transmission Operator that has experienced a loss of its primary or backup functionality and that anticipates that the loss of primary or backup functionality will last for more than six calendar months shall provide a plan to its Regional Entity within six calendar months of the date when the functionality is lost, showing how it will re-establish primary or backup functionality. [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]</td>
<td>S</td>
<td>Each Member TO that has experienced a loss of its primary or backup functionality and that anticipates that the loss of primary or backup functionality will last for more than six calendar months shall provide a plan showing how it will re-establish primary or backup functionality to PJM so that PJM can meet its reporting requirements.</td>
<td>PJM will provide a plan to RFC or SERC, as necessary, within six calendar months of the date when the functionality is lost, showing how the Member TO will re-establish primary or backup functionality.</td>
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A Look at the TO/TOP Matrix

• TO/TOP Audit Phase

<table>
<thead>
<tr>
<th>Audit Questions</th>
<th>Evidence of Compliance</th>
<th>Reference Documents</th>
<th>Enforcement Date</th>
<th>Inactive Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you, in coordination with PJM as appropriate, obtain and utilize status,</td>
<td>Exhibit evidence that you, in coordination with PJM as appropriate, obtain and</td>
<td>M3-Transmission Operations, Section 1.3-Transmission Operating Guidelines</td>
<td>4/1/2021</td>
<td>None</td>
</tr>
<tr>
<td>voltages, and flow data for Facilities outside your TO area as necessary to</td>
<td>utilize status, voltages, and flow data for Facilities outside your TO area as</td>
<td>M3A Energy Management System (EMS) Model Updates and Quality Assurance (QA),</td>
<td></td>
<td></td>
</tr>
<tr>
<td>determine System Operating Limit (SOL) exceedances within your TO area?</td>
<td>necessary to determine System Operating Limit (SOL) exceedances within your TO area.</td>
<td>Section 3.2.1-Explanation of Consideration for External Modeling in the PJM EMS Model</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
• TO/TOP Matrix Subcommittee (TTMS), a PJM subcommittee with participation limited to Member TOs, develops and maintains the TO/TOP Matrix
• The TTMS reports to the Transmission Owners Agreement-Administrative Committee (TOA-AC), which approves the Matrix
• Monthly meetings to collaborate on new or existing NERC Reliability Standards applicable to PJM as the TOP
Typical Roadmap to a Version Approval

1. **Review Future Standards Incorporation Plan** and prioritize accordingly.
2. **Develop Assigned and/or Shared Tasks for NERC Reliability Standard Requirements** where PJM relies on Member TOs.
3. **Conduct an annual review of the Matrix** and agree to a final version for updates to various stakeholders.
4. **Take finalized version to PJM SOS, OC, PC, and RSCS**, seeking their recommendation to TOA-AC to approve the Matrix.
5. **TOA-AC approves the Matrix. Publish the approved Version.**
PROTECT THE POWER GRID
THINK BEFORE YOU CLICK!

Report suspicious email activity to PJM.
(610) 666-2244 / it_opsCtr_shift@pjm.com

Be alert to malicious phishing emails.