



PJM TO/TOP Matrix V16

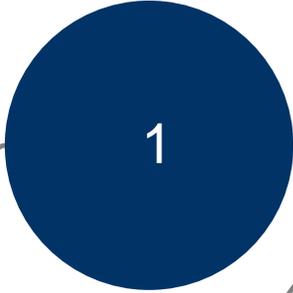
Gizella Mali, TTMS Chair
First Read
January, 2022

Action Required	Deadline	Who May Be Affected
First Read of TO/TOP Matrix V16	April 1, 2022	PJM Member Transmission Owners (TOs)

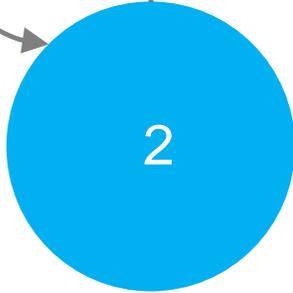
TO/TOP Matrix Update Process



Review Future Standards Incorporation Plan and prioritize – Monthly at TTMS



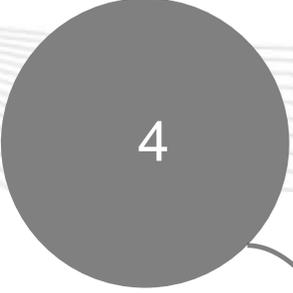
Identify requirements to be added or edited in the Matrix



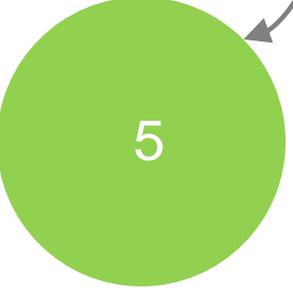
PJM develops “Strawman” for TTMS review



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



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



Changes Incorporated in V16

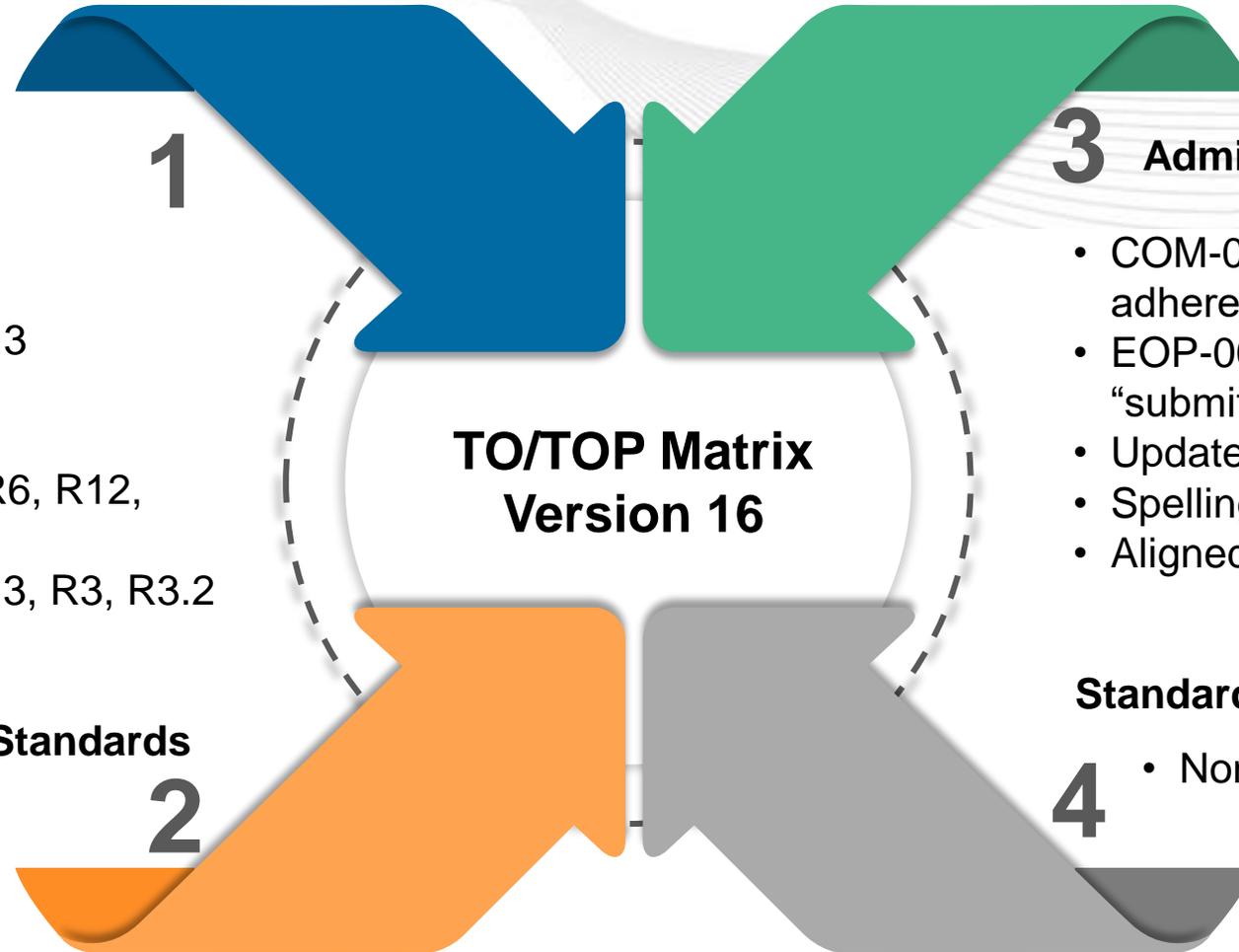


Revised Tasks

- 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



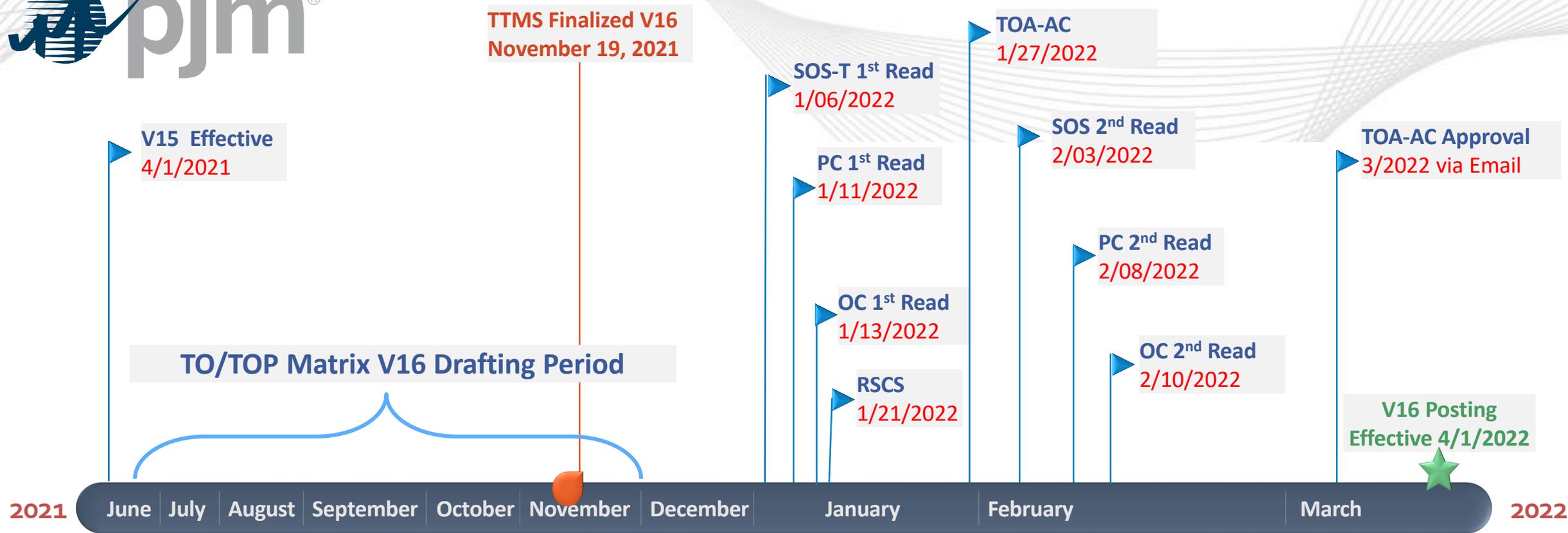
Administrative Changes

- 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

Standards Exiting Matrix

- None

Timeline





Presenter:
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TO/TOP Matrix Version 16



Member Hotline

(610) 666 – 8980

(866) 400 – 8980

custsvc@pjm.com

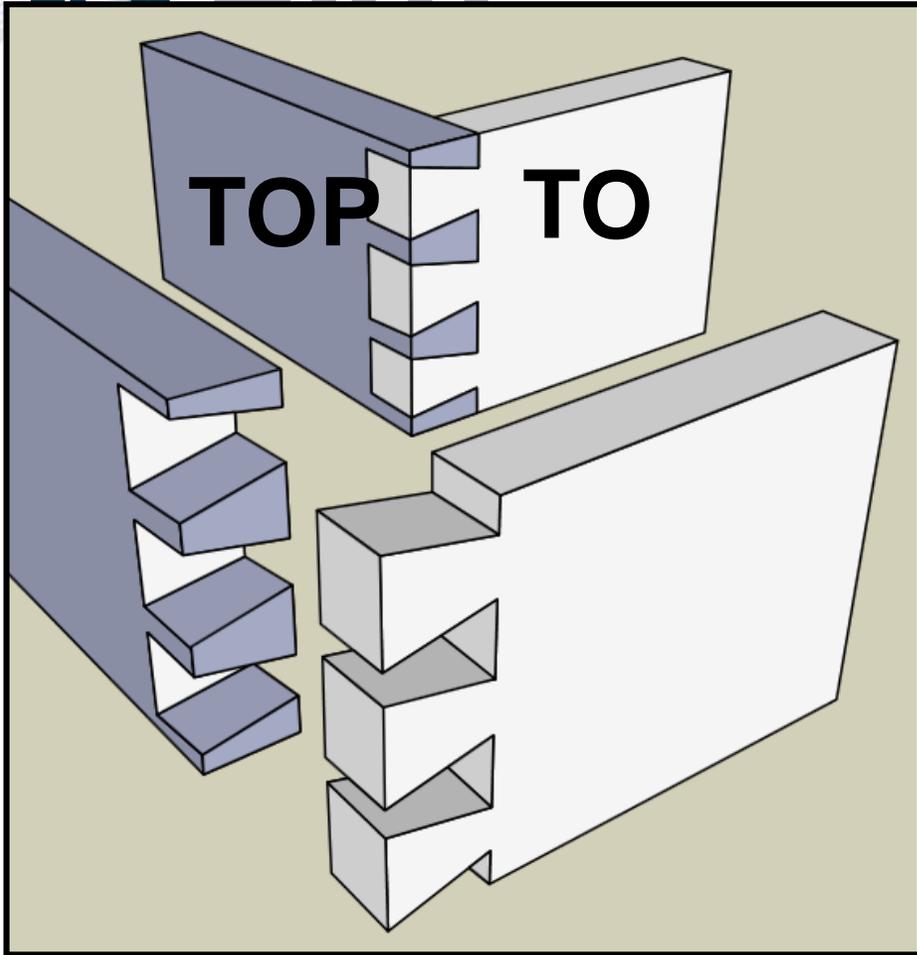


TO/TOP Matrix Educational/Background Slides

PJM TO/TOP Matrix

- 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

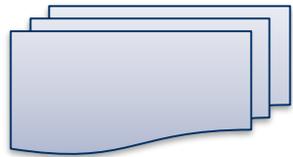
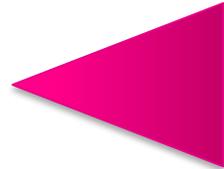
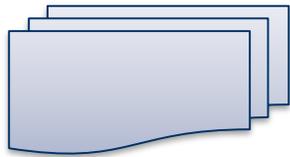
TO/TOP Relationship



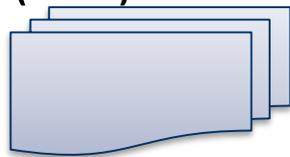
- Clear Responsibility and Authorities
 - Long Standing Relationship
 - Unity of Command and One Responsible Entity
 - Codified in PJM's Agreements
- PJM Committees (OC, SOS, PC...)
- Strong and proven Internal Control
 - PJM Training
 - TO/TOP Matrix
 - PJM TO/TOP Reliability Audits



PJM Operating Agreement (OA)



PJM Consolidated Transmission Owners Agreement (TOA)



Filed with FERC



Reliability Coordination
M-37 Reliability Coordination
M-36 System Restoration

Transmission Operator
M-1 Control Center and Data Exchange
M-3 Transmission Operations
M-3A Energy Management System (EMS)
Model Updates and Quality Assurance (QA)
M-13 Emergency Procedures
M-38 Operations Planning

Member Training
M-40 Certification & Training Requirements

Planning Authority
M-14D Generator Operational Requirements

1 Delineation of Reliability Tasks

Standard/ Requirement information

NERC Reliability Standard Requirement Text

Tasks Assigned to Member TOs or Shared between PJM and Member TOs

Tasks PJM performs to ensure Reliability Requirement is met in combination with TO Assigned/Shared Tasks

Category	Standard Number	Requirement Number	Approved BOT/FERC Standards	A/S	Assigned or Shared Member TO Tasks	PJM Tasks
EOP	EOP-008-2	R8	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. <i>[Violation Risk Factor = Medium] [Time Horizon = Operations Planning]</i>	S	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.	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.

2 TO/TOP Audit Phase

Questions asked to demonstrate compliance	Examples of evidence auditors look for	PJM documents that describe PJM/TO responsibilities	Enforcement and Inactive dates of the NERC Reliability Standard	
Audit Questions	Evidence of Compliance (What auditors will be looking for)	Reference Documents	Enforcement Date	Inactive Date
Do you, in coordination with PJM as appropriate, obtain and utilize status, voltages, and flow data for Facilities outside your TO area as necessary to determine System Operating Limit (SOL) exceedances within your TO area?	Exhibit evidence that you, in coordination with PJM as appropriate, obtain and utilize status, voltages, and flow data for Facilities outside your TO area as necessary to determine System Operating Limit (SOL) exceedances within your TO area.	M3- Transmission Operations, Section 1.3-Transmission Operating Guidelines M3A Energy Management System (EMS) Model Updates and Quality Assurance (QA), Section 3.2.1-Explanation of Consideration for External Modeling in the PJM EMS Model	4/1/2021	None



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



Review Future Standards Incorporation Plan and prioritize accordingly

Develop Assigned and/or Shared Tasks for NERC Reliability Standard Requirements where PJM relies on Member TOs

Conduct an annual review of the Matrix and agree to a final version for updates to various stakeholders

Take finalized version to PJM SOS, OC, PC, and RSCS, seeking their recommendation to TOA-AC to approve the Matrix

TOA-AC approves the Matrix. Publish the approved Version.

**PROTECT THE
POWER GRID
THINK BEFORE
YOU CLICK!**



Be alert to
malicious
phishing emails.

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

