

Manual 03A, Rev. 23

Energy Management System (EMS) Model Updates and Quality Assurance (QA)

Eliseo Carrasco, Sr. Engineer I
Power System Modeling Department
Operating Committee
Oct 05, 2023

- Periodic Review
- Section 3.2
 - Clarify data collection process for Transmission Owners submitting modeling data
- Appendix C
 - Monitored Priority definition clarification
 - Updated monitored facilities that get screened for Security Analysis

Manual 03A: Energy Management System Model Updates
and Quality Assurance, [Revision 23](#)



Section 3.2: PJM Transmission System Model Update/Data Collection Procedures

3.2 PJM Transmission System Model Update/Data Collection Procedures

PJM holds an internal cut-in meeting quarterly. This meeting is used to identify future outages not yet linked with a Network Model Ticket, or any future projects in question to ensure they are added in the appropriate upcoming model builds - topics include: 1) Projects in-service near term; 2) Major Projects; 3) Model Schedule; and 4) Tie Lines. In addition to the outages, there is a review of any critical internal Model Issue Tracker (MIT) requests and phased projects, which captures upcoming projects included in the RTEP report. Each summer and winter update schedule follows a similar timeline pattern. Prior to the scheduled model change-over production date, TOs are notified several months in advance of the target due date that the PJM EMS model will be updated, and specific requirements are clarified for topics including: 1) Projects in-service near term; 2) Major Projects; 3) Model Schedule; 4) Complete Model Submissions; and 5) Tie Lines. These notices are typically emailed by January for the summer update, and by July for the winter update.



Appendix C: Bulk Electric System (BES) Definition Implementation at PJM

Exhibit 14: List of Monitored Priorities

Priority	Name	Description
2	Reliability BES	Applies to facilities defined as part of the Bulk Electric System (BES) or facilities PJM is responsible for as NERC Security/Reliability Coordinator. These facilities are not included in priority 1, Reliability & Markets . May also apply to internal PJM facilities impacted by switching/phase shifter operations on parallel PJM facilities which are under Congestion Management. TOs are required to report all outages under this classification. If actual or calculated overloads occur, operators follow appropriate procedures to remediate the problem. Facility owners are responsible for any off-cost operation incurred. PJM's EMS maintains ratings/limits for these facilities.
3	Status Only	TOs are required to report outages on facilities that are not in Congestion Management but may impact the reliability and/or economics of the system. TOs are required to follow applicable outage reporting procedures for facilities classified as Reportable Yes and Reportable Low in the Reportable Transmission Facility column of the PJM Monitored Facilities list. The primary difference in these classifications is that for Reportable Yes facilities, TOs are required to call before and after taking outages, whereas TOs are not required to call PJM before taking an outage on Reportable Low facilities. TOs are not required to report outages on facilities classified as Reportable No to PJM. PJM can require that any, or all, OATT facilities be Outage Reportable. PJM's EMS does not maintain ratings/limits for these facilities.
4	External Reliability	Similar to priority 2 but non-PJM facilities. These external facilities could impact the PJM system as part of Market-to-Market Congestion Management flow-gate coordination between adjacent RTOs. PJM's EMS maintains ratings/limits for these facilities.
5	External Status Only	Similar to priority 3 but applies to external, non-PJM facilities. PJM's EMS does not maintain ratings/limits for these facilities.
6	Reliability Non-BES	Similar to priority 2 but applies to facilities that may be monitored for loading by PJM but are not included as priority 1, Markets & Reliability or BES facilities. Facilities



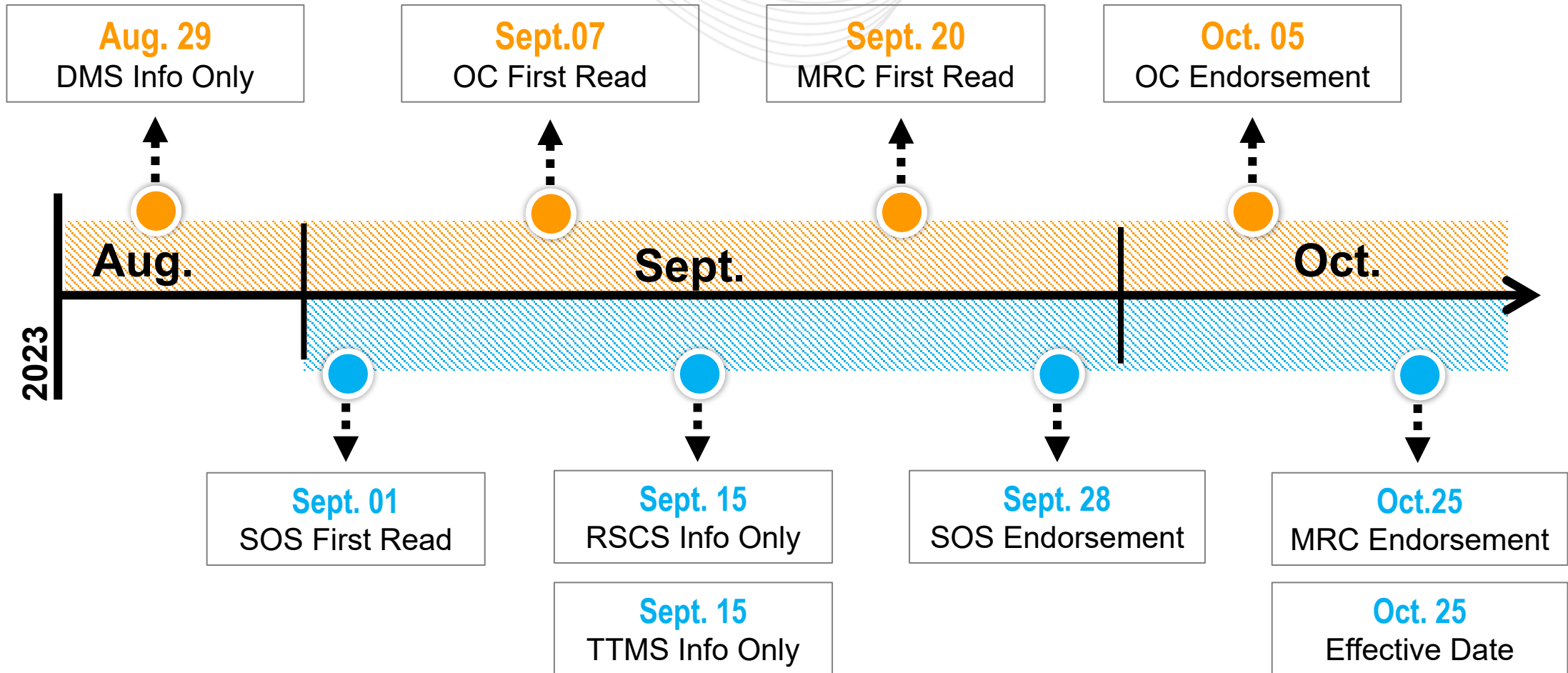
Appendix C: Bulk Electric System (BES) Definition Implementation at PJM

Exhibit 14: List of Monitored Priorities

Priority	Name	Description
		are generally included in this category at the request of the transmission owner. TOs are required to follow applicable outage reporting procedures for facilities classified as Reportable Yes and Reportable Low in the Reportable Transmission Facility column of the PJM Monitored Facilities list. If actual or calculated overloads occur, operators develop remedial strategies in cooperation with the facility owner. Corrective strategies are implemented as approved by the owner. Owners assume responsibility for off-cost operation. PJM's EMS maintains ratings/limits for these facilities.
7	Generation Equipment	Similar to priority 2, but applies to generation equipment. Facility owners are responsible for costs incurred to remediate problems. TOs are required to follow applicable outage reporting procedures for facilities classified as Reportable Yes and Reportable Low in the Reportable Transmission Facility column of the PJM Monitored Facilities list. PJM's EMS maintains ratings/limits for these facilities.
8	Pending	Applies to facilities that are candidates for, but not yet approved, inclusion in priority 1 Reliability & Markets or facilities that are modeled but not yet in-service.
	General Notes: Doc #331840	For Security Analysis, PJM the EMS is typically set to monitor all facilities with priority 1 through 45 and 6 . As required, these settings are changed to include the remaining facility categories. These facility classifications are utilized in PJM planning and operations.

Exhibit 14: List of Monitored Priorities

Manual 03A, Rev 23 Review / Approval Timeline



SME/Presenter:
Eliseo Carrasco,
Eliseo.Carrasco@pjm.com

Manual 03A, Rev 23



Member Hotline

(610) 666 – 8980

(866) 400 – 8980

custsvc@pjm.com