



# PJM Manual 12: Balancing Operations v52 Revision Summary

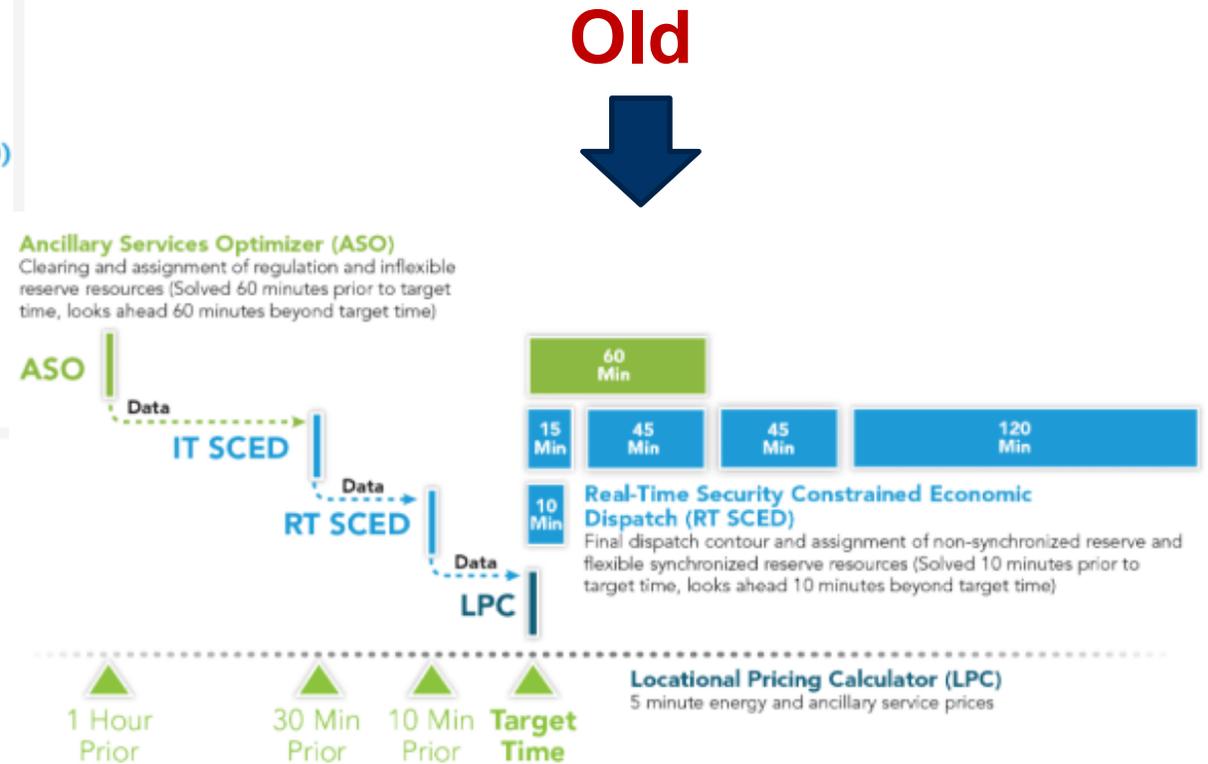
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- Periodic Review
- Impacted sections:
  - Section 3.1.2
    - Diagram on next slide
    - Minor change from “solar or wind” to “solar and wind”
  - Section 4.3.3
  - Section 4.4.8
  - Section 4.5.4 (deleted duplicate “and meets”)
  - Section 4.5.15 (typo- changed reference to 4.6.9 to 4.5.9)
  - Attachment B
  - Attachment F

• Updated Exhibit 5: Real Time Market Application Process Flow to match M-11



**New**



**Old**

- Added:
  - For bilateral transactions, refer to M-11 section 3.2.3
- Deleted:
  - Old information related to markets timing & regulation
    - ~~One PJM Member may sell Regulation to another PJM Member. The two members participating in the Bilateral Transactions must operate in accordance with PJM Manual 11, Section 3.2.3, Regulation Bilateral Transactions. If purchasing Regulation from another entity, the buyer and seller negotiate the transaction and the buyer submits the transaction through the Regulation Bilateral page of Markets Gateway. The seller must then confirm the transaction via Markets Gateway by 4 p.m. the day after the operating day. The rules for these transactions are described in more detail later in this section of the manual.~~

- Deleted reference to compensation to regulation resources during Synchronized Reserve Events

#### **4.4.8 Performance Scores for Regulation Resources During a Synchronized Reserve Event**

~~Regulation resources choosing to respond to a Synchronized Reserve Event will receive Synchronized Reserve compensation based on Manual 11, Section 4.2.11.~~

Resources that choose to respond to a reserve event for their reserve zone in an hour when they are cleared or assigned Regulation are expected to return to their regulating band within 10 minutes of the end of the Synchronized Reserve Event. From the start of the event, through the

- Notes modified to include hybrid resources

3: An intermittent or hybrid resource's Economic Minimum shall represent the lowest operating MW point of the resource.

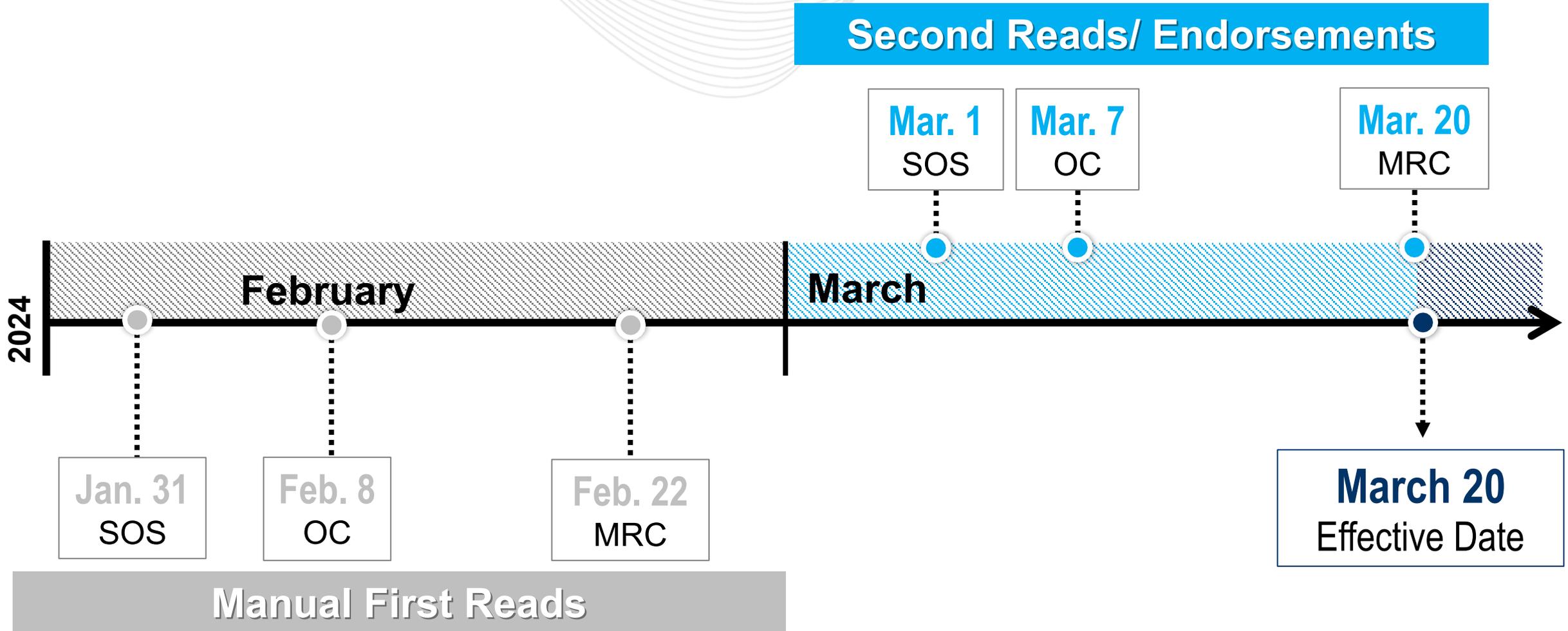
4: An intermittent or hybrid resource's Emergency Minimum should be set to 0.

- Notes added

- Note 5: The output of a hybrid resource should achieve its dispatch point within 5 minutes or consistent with the resource's ramp rate bid. PJM should be notified if the response time is expected to exceed 5 minutes
- Note 6: : The operator of a hybrid resource that is dispatchable must indicate to PJM the hours for which the plant is operating in "intermittent-only" mode, during which time the battery is not providing power for the purpose of maintaining hybrid output consistent with PJM dispatch. Dispatchable hybrids must follow dispatch in both "intermittent-only" mode and all other hybrid modes.

- Minor changes to reflect change in PJM manuals
- Page 98 of red line under “Planning Eligibility Criteria”

The initial study of generation inside the PJM footprint is conducted under procedures as outlined in PJM Manual 14HA, New Services Request Cycle Process, under the Phase I and Phase II feasibility and sSystem Impact Study requirements of sections 4.32-1.6 and 4.52-2.2, as well as the general study procedures as outlined in Section C.7 of Attachment C and Attachment G of PJM Manual 14B, PJM Region Transmission Planning Process. Ongoing study requirements for the study of generation in the PJM footprint must be maintained under these same standards as is conducted in the annual RTEP studies.



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## **M-12 Version 52 Revisions**



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