

Recap of May 21, 2020 Reserve Price Formation Order

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Markets & Reliability Committee

1. Three primary components to Order:
 - a. FPA 206 component of PJM's filing (Reserve Market)
 - b. FPA 205 component of PJM's filing (Reserve Market)
 - c. Separate FPA 206 action by FERC (Capacity Market)
2. PJM must submit a compliance filing by July 6, 2020, addressing the Tariff and Operating Agreement revisions ordered.
3. Effective date/implementation schedule to be proposed in PJM's July 6, 2020 compliance filing.

1. PJM has met its burden under FPA section 206 to demonstrate that its existing reserve market design is unjust and unreasonable.
 - a. PJM presents record evidence that its reserve market is systematically failing to acquire within-market the reserves necessary to operate its system reliably, to yield market prices that reasonably reflect the marginal cost of procuring necessary reserves, and to send appropriate price signals for efficient resource investment.
 - b. PJM also demonstrates that the reserve products it procures in the day-ahead and real-time markets produce poor incentives for resource performance and inhibit efficient procurement of the types of reserves needed to address various operational uncertainties. (P 74)

1. The Commission largely adopts PJM's proposal as the just and reasonable replacement rate, subject to certain modifications. (P 99)
 - a. Consolidate the existing Tier 1 and Tier 2 reserve products into a uniform Synchronized Reserve product with a single clearing price. (P 115)
 - b. Establish a Reserve Penalty Factor of \$2,000/MWh for all reserve products. (P 153)
 - c. Modify ORDCs to establish a downward-sloping portion to the right of the applicable MRR, and construct that portion as a function of the Reserve Penalty Factor and the probability of experiencing a reserve shortage in real-time at varying reserve procurement quantities. (P 219)
 - d. Align day-ahead and real-time reserve markets. (P 254)
 - e. Impose on some resource types a must-offer requirement for reserves, and determine resources' eligibility for providing reserves in a manner similar to PJM's current practice with regard to Tier 1 reserves. (P 271)



*Compliance
Directives*



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1. By April 1 of each year, for at least eight years, PJM is required to post to its website the following data for each reserve product (i.e., Synchronized Reserve, Primary Reserve, and Secondary Reserve) coincident with its posting of the revised ORDCs:
 - a. the forecast error data and other factors used to estimate the probability of a reserve shortage that are inputs to the ORDCs, in a format similar to what PJM provided to stakeholders previously; and
 - b. interval data for the previous year indicating the instantaneous reserve quantity, the shortage probability indicated by the ORDC for that reserve quantity, and whether the PJM system was in shortage.
- (P 240)

2. For at least eight years, within a reasonable timeframe after the conclusion of each calendar month, beginning with the month in which the modified ORDCs are implemented, PJM is required to post to its website monthly summary statistics demonstrating the average positive operator bias and average negative operator bias applied at different levels of Synchronized Reserve surplus, similar to the analysis PJM presented in its March 29, 2019 filing. (P 241)

1. Revise the Tariff and Operating Agreement to clarify the process through which PJM will determine resource eligibility to provide reserves. These revisions should clearly describe:
 - a. resource classes that PJM has designated as incapable of providing reserves, for each reserve product;
 - b. the exemption process PJM will use to determine reserve eligibility if a resource is automatically deselected from providing reserves; and
 - c. the process by which PJM will communicate this information and determination to the Market Seller. (P 272)

2. Revise the Tariff and Operating Agreement to provide for a process whereby Market Sellers can work with PJM to establish the reserve capability for certain resource types (e.g. resources with duct burners).
 - a. PJM should provide a mechanism, within the Tariff, to help guide the determination of reserve capability that PJM will use as an input when determining the Synchronized Reserve maximum. (P 273)
3. Revise the Tariff and Operating Agreement to remove the cap on the percentage of MRRs that can be met by demand resources. (P 278)

1. We find that a forward-looking methodology for determining the E&AS Offset will allow changes to energy and ancillary services revenues stemming from energy market design modifications to be more readily incorporated into capacity market parameters and prices. Further, a forward-looking methodology is consistent with project valuation methods used by market participants.
 - a. PJM must revise its Tariff to implement a forward-looking E&AS Offset that reasonably estimates expected future energy and ancillary services revenues for all Tariff provisions that rely on a determination of the E&AS Offset (e.g., Net CONE). (P 320)

1. As part of its 45-day (July 6, 2020) compliance filing, PJM is required to:
 - a. Propose an effective date as early as practicable that will allow it sufficient time to implement both sets of revisions (reserve market and E&AS Offset), including any necessary software changes.
 - b. Present an implementation schedule for the revisions that appropriately harmonizes with ongoing revisions in the MOPR compliance proceeding, while minimizing any auction delays.
 - c. The Commission will set the effective date for the revisions in its order on PJM's July 6, 2020 compliance filing. (P 22)

- PJM is currently developing its implementation timeline, and will inform stakeholders when finalized.
- Additional Stakeholder Meetings:
 1. June 3, 2020 – MIC
 2. June 10, 2020 – MIC Special Session
 3. June 17, 2020 – MIC Special Session
 4. June 30, 2020 – MIC Special Session