

# Synchronized Reserve Capability and Performance Proposal

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- PJM currently has two Markets Gateway changes in progress to allow Market Sellers to better represent break points in the offer curves for CC configurations, changes in duct burner operation due to ambient conditions, coal unit mill points, and pump storage pump operation.
  - Increase the number of segments on the energy offer curve from 10 to 20, and
  - Provide market participants with the ability to submit Hourly Differentiated Segmented Ramp Rates for resources in the Day Ahead and update them in Real Time

- Market Sellers will be able to provide PJM hourly differentiated segmented ramp rates and update them intraday to reflect changing conditions on the operations of their units.
- For on-line resources, PJM will utilize the hourly differentiated ramp rates to determine the unit's current capability for providing reserves. Synchronized Reserve Maximum is still under discussion.
- For synchronous condensers, PJM will utilize condense to gen time, ramp rate, and Eco Min to calculate 10-minute and 30-minute MW reserve capability.

- PJM will allow hourly differentiated segmented ramp rates in both the Day Ahead and Real Time Markets
- Provide the ability to change segmented ramp rate Intraday
- Follow existing Intraday logic rules
  - Updates permitted after the Reliability Assurance Commitment (RAC) run up to 65 minutes prior to operating hour
  - Intraday updates can be submitted for multiple hours
- Hourly differentiated segmented ramp rates provide PJM the capability to perform more accurate reserve calculations

- In order to address unit operating conditions when the hourly differentiated segmented ramp rates do not reflect the unit's reserve capability:
  - PJM will allow approved units to telemetry to PJM the times when they are incapable of providing reserves.
  - Market Sellers must obtain prior approval through a unit specific parameter like process where they submit supporting documentation to PJM and the IMM to identify operating conditions where they are incapable of providing reserves.

- For on-line resources, PJM will utilize the applicable hourly differentiated ramp rates to determine the unit's performance during any Synchronous Reserve Event.
- For Synchronous condensers, PJM will use the parameters condense to gen time, ramp rate, and Eco Min to determine 10-minute and 30-minute MW performance during any Synchronous Reserve Event.
- PJM will also verify that all resources telemetering they are incapable of providing reserves during the event have an approved exception.