# Operating Reserve Clarifications: CT Rule Removal

Lisa Morelli

Director, Market Settlements Initiatives

Market Implementation Committee

September 7, 2022

PJM and the IMM recommend moving forward with the Manual 28 revisions to remove the CT Rule in advance of other changes that may stem from the issue charge on Operating Reserve Clarifications

| September 2022 | MIC and MRC First Reads |
|---|---|
| October 2022 | MIC endorsement, MRC approval |
| November 2022 | Implementation |

- Resources are made whole to the lesser of their Actual MW or Desired MW via Balancing Operating Reserve Credits.  CTs are the exception to this rule.

- CTs are always made whole to their actual MW, regardless of how well they follow dispatch (the "CT Rule").

  – While this special treatment made sense at the time of implementation, it is no longer warranted. CTs now have sufficient flexibility to be treated in the same manner as other resources.

- Removing the CT Rule will provide CTs with a stronger incentive to follow PJM's dispatch signal – a core principle in the approved issue charge.

    - They will no longer be guaranteed cost recovery for any MW produced in excess of what is desired by PJM.

    - They will become subject to deviation charges for any output that deviates from the Desired MW.

- Simulations show the CT Rule has a significant impact on the level of uplift payments

    - Uplift payments to CTs were a total of $1.3M or ~10% lower over the 8 highest CT uplift days in the summer of 2021 when recalculated without the CT Rule.

- PJM determines the resource's five minute interval Operating Reserve Desired MW based on its ramp-limited desired MW or UDS basepoint MW, when available. If available, UDS basepoint MW is used when 1.) the UDS basepoint MW are less than or equal to the ramp-limited desired MW or 2.) the UDS basepoint MW is greater than the ramp-limited desired MW and the resource's Real-time MW is greater than the ramp-limited desired MW.

- PJM determines the resource's percent off dispatch for each five minute interval as the lesser of the difference between the resource's Real-time MW and the UDS basepoint MW or the Real-time MW and the ramp-limited desired MW, if available. UDS LMP desired MW is used to calculate a resource's percent off dispatch when 1.) data is unavailable due to technical difficulties or 2.) a resource's real-time economic minimum is greater than its day-ahead economic minimum by 5% or 5 MW, whichever is greater, or its real-time economic maximum is less than its day-ahead economic maximum 5% or 5MW, whichever is lower.

- If the resource's UDS basepoint MW and ramp-limited desired MW are not available or the percent off dispatch is greater than 20%, PJM determines the resource's five minute interval UDS LMP Desired MW based on its dispatch rate, applicable schedule's offer data, where the applicable schedule's offer is the Final Offer and minimum and maximum energy limits for that five minute interval. For steam units, the lesser of the day-ahead scheduled and real-time economic minimum limits and the greater of the day-ahead scheduled and real-time economic maximum limits are used. ~~For Combustion Turbine units, operating at PJM direction, the actual five minute interval real-time output is used as the Operating Reserve Desired MW value.~~

- PJM calculates the resource's five minute interval real-time energy offer amount based on its applicable schedule's offer data, where the applicable schedule's offer is lesser of the Committed Offer and the Final Offer, and its Real-time MW for that five minute interval. However, for any five minute interval where the resource's Real-time MW is greater than 110% of its Operating Reserve Desired MW, Operating Reserve Desired MW is used to determine the five minute interval real-time energy offer amount.

Operating Reserve Clarifications Facilitator/Secretary:
Nick DiSciullo, nicholas.disciullo@pjm.com

SME:
Lisa Morelli, lisa.morelli@pjm.com

**Operating Reserve Clarifications:
CT Rule Removal**

Member Hotline

(610) 666 – 8980

(866) 400 – 8980

custsvc@pjm.com