

Synchronized Reserve Event Actions and Expectations Problem Statement & Issue Charge

First Read

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Operating Committee
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| Action Required | Deadline | Who May Be Affected |
|---|------------|---|
| First read at February OC | 02/11/2021 | |
| Second and endorsement at March OC | 03/11/2021 | |
| Review problem statement and issue charge | 03/11/2021 | Generation Owners, Market Operation Centers |



- Synchronized reserve events are emergency procedures triggered by PJM to maintain grid reliability in accordance with NERC BAL standards.
 - Caused by a variety of conditions including loss of generation and sudden influx of load
- An All-Call message is sent to units with an instruction to raise to full output.
 - Message is not limited to units with reserve commitments
- RTSCED cases are not consistently used during an event.
 - Cases that align with dispatch instructions are not readily available
 - No expectation to follow case instructions

- The level of unit response is not controlled and hard to predict.
 - Mixture of over and under response across various units
 - Slow initial recovery followed by extended over response
 - Transition period for units to deviate from the dispatch signal to comply with the manual All-Call instruction
- Tools like RTSCED are not utilized during an event.
 - Pricing and dispatch signals are from a pre-event RTSCED case and often conflict with All-Call instructions
 - Transmission constraints are not proactively controlled and require manual operator actions
 - Inefficient dispatch of units, no economic order

- Controlled deployment of synchronized reserves throughout events.
 - Utilize tools like RTSCED to have consistent pricing and dispatch signals
 - Ensure NERC BAL compliance during recovery and coming out of synchronized reserve events
 - Reliable system constraint control transition in and out of events
- Clear rules and expectations addressing the process of approving RTSCED cases around a synchronized reserve event.

- Review education on existing actions and expectations for synchronized reserve events.
- Provide education on synchronized reserve deployment practices by other ISOs/RTOs.
- Provide education on impacts of upcoming market changes including Price Formation.
- Analyze metrics and data on historical events.
- Development of solutions and timelines for the overall synchronized reserve deployment process.

- In scope:
 - Reserve deployment method
 - Expectations of resources
 - Evaluation of performance
 - Pricing in aftermath of event
- Out of scope:
 - Penalty rate for nonperformance
 - ORDC/Price Formation changes
 - Reserve procurement changes

- Issue assigned to the OC.
- Convene Task Force to work on issue.
 - Updates to be provided to MIC and MC Webinar
 - Recommend potential changes to resource expectations during synchronized deployment events
 - Review manuals and governing documents for potential revisions
- Estimated 6-12 months of effort to begin shortly after issue approval.

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