



# Synchronized Reserve Event Actions and Expectations Problem Statement & Issue Charge


## Second Read

Chris Piong  
Director, Operations Planning  
Operating Committee  
March 11, 2021

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.



SME/Presenter:  
Michael Zhang

[Michael.Zhang@pjm.com](mailto:Michael.Zhang@pjm.com)

## **Synchronized Reserve Event Actions and Expectations Problem Statement & Issue Charge**



### **Member Hotline**

(610) 666 – 8980

(866) 400 – 8980

[custsvc@pjm.com](mailto:custsvc@pjm.com)