

Synchronized Reserve Event Actions and Expectations

Issue Source

Issue charge being brought forth by PJM.

Issue Content

When synchronized reserves need to be deployed, PJM operators initiate the event through an All-Call and not RT SCED cases. The All-Call to members instructs all resources to manually increase their output to full. The Market tools for dispatching resources based on economic order are not consistently utilized during a synchronized reserve event. Furthermore, with the lack of clear rules addressing the process for approving RT SCED cases around a synchronized reserve event, the following challenges and inefficiencies materialize which should be mitigated or corrected via rule and process changes:

1. The pre-event RT SCED case dispatch signals and prices may remain in effect, when a new RTSCED case that reflects the unit loss is not yet approved. The RTSCED case approved prior to the event does not adequately reflect the verbal instructions from the PJM operator, nor do they adequately reflect the system conditions during the synchronized reserve event.
2. New and existing transmission system constraints are not controlled, which can result in constraints being briefly violated and require manual operator intervention to correct.
3. The level of unit response is not controlled or limited by PJM in any manner. This results in a mix of over and under response across different units depending on how they respond.
4. As generators shift from following RT SCED dispatch signals to manual control, PJM tends to experience a slow initial recovery, followed by an extended over response.

Key Work Activities and Scope

1. Review education on existing synchronized reserve event triggers, practices, and scenarios. This includes both PJM actions and expected Member actions during a synchronized reserve event.
2. Provide education on synchronized reserve deployment and measurement practices used by other RTOs.
3. Provide education on how the implementation of long term SCED changes will affect options around synchronized reserve events.
4. Provide education on how upcoming Reserve Price Formation changes will impact synchronized reserve events.
5. Use historical examples and metrics as well as expectations under the new Reserve Price Formation changes to analyze identified inefficiencies and discuss improvements in performance and pricing during synchronized reserve events.
6. Propose solutions and timelines to enhance the overall synchronized reserve deployment process.
7. Areas in scope:
 - a. Method by which PJM deploys synchronized reserves, including determining the quantity and location of reserves deployed and communication methods.

Issue Charge

- b. Expectations of resources during synchronized reserve events
 - c. Evaluation of performance during a synchronized reserve event for reporting and settlement purposes and for evaluating the optimal signal to generators.
 - d. Evaluation of pricing in the immediate aftermath of a synchronized reserve event.
8. Areas not in scope:
- a. The penalty rate for nonperformance penalties during synchronized reserve events.
 - b. ORDC changes, Reserve Price Formation changes.
 - c. Reserve procurement changes.

Expected Deliverables

- 1. Potential changes to PJM expectations of resource response during a synchronized reserve event.
- 2. Potential manual and governing document revisions.

Decision-Making Method

Tier 1, consensus

Stakeholder Group Assignment

New task force reporting to the OC with updates provided to the MIC and MC Webinar.

Expected Duration of Work Timeline

It is estimated the effort could take between 6 and 12 months. The task force would be assembled as soon as the Issue Charge is approved. Due to the rarity of reserve deployment events, timeline could be extended to gather additional data.

Start Date	Priority Level	Timing	Meeting Frequency
2/1/2021	<input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low	<input type="checkbox"/> Immediate <input checked="" type="checkbox"/> Near Term <input type="checkbox"/> Far Term	<input type="checkbox"/> Weekly <input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Quarterly

Charter

(check one box)

<input checked="" type="checkbox"/>	This document will serve as the Charter for a new group created by its approval.
<input type="checkbox"/>	This work will be handled in an existing group with its own Charter (and applicable amendments).