

Tier 1 Compensation

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	Status Quo	PJM Proposal
Price credited to Tier 1 resources outside of an event	SRMCP when NSRMCP > \$0	Status quo
Tier 1 MW calculation	Amount of 10 min ramping capability from economic basepoint to Eco Max or Spin Max, limited by ramp rate and adjusted by DGP	Status quo, but discontinue estimation of Tier 1 MW on resources self-scheduled and dispatched at min
Obligation to respond during an event	No	Yes – obligated to respond in the amount of the Tier 1 Estimate Resources may opt out of accepting an obligation, but then forgo payment outside of an event when NSRMCP > \$0
Refund owed for non-performance	No	Yes (same as existing Tier 2 refund for non-performance)
Frequency of Spin Max Update	Can only be updated up to 60 min prior to the start of the operating hour	Can be updated intra-hour to allow more accurate Tier 1 estimation

For settlement purposes, the performance of Tier 1 resources during a synchronized reserve event will be measured identically to the performance of Tier 2 resources

- This is independent of any differences in the reporting of Tier 1 and Tier 2 performance for informational purposes at the Operating Committee

No additional changes were needed to Manual 11 to account for this detail

- Existing language in Manual 11 – Section 4.2.11 Verification
The magnitude of each resource's response to a synchronized reserve event (**both Tier 1 and Tier 2**) is the difference between the resource's output at the start of the event and its output ten minutes after the start of the event. In order to allow for small fluctuations and possible telemetry delays, resource output at the start of the event is defined as the lowest telemetered output between one (1) minute prior to and one (1) minute following the start of the event. Similarly, a resource's output ten minutes after the event is defined as the greatest output achieved between nine (9) and eleven (11) minutes after the start of the event.

- Section 4.1 – edits addressing compensation for Tier 1 Synchronized Reserve Resources that do not opt out of a Tier 1 Performance Obligation
- Sections 4.2.1, 4.2.4, and 4.2.6 – edits addressing the determination and communication of Tier 1 availability and Tier 1 estimates
- Section 4.2.10 - edits detailing compensation for Tier 1 resources that accept a Tier 1 Performance Obligation
- Section 4.2.12 – edits detailing penalties for non-performance by Tier 1 resources with a Tier 1 Performance Obligation
- General clean up revisions, including:
 - Revised reference to Non-Synchronized Reserve Penalty Factor in table in section 2.5
 - Cleaned up references to other manuals in sections 3.2.1 and 3.2.4

- Section 6.1 - Updated overview of how Tier 1 reserves are compensated
- Section 6.2 – Updated details for Tier 1 credit calculations including:
 - Specified that only Tier 1 resources that accept a Performance Obligation will receive the Synchronized Reserve Market Clearing Price when NSRMCP > \$0.
 - Added language around making resources that respond to synch reserve events whole to their cost to respond (Tier 1 or Tier 2) .
 - Moved the refund payment for underperformance during a synchronized reserve event from section 6.3 to this section.

- Added the following definitions:
 - Tier 1 Performance Obligation
 - Tier 1 Synchronized Reserve Actual Estimate
 - Tier 1 Synchronized Reserve Estimate
 - Tier 1 Synchronized Reserves
 - Tier 2 Synchronized Reserves
- Section 3.2.3A Synchronized Reserve
 - Specified compensation of Tier 1 resources that both accept and opt out of performance obligations both when spin events occur and do not occur and when the NSRMCP is both greater than and equal to \$0.
 - Added Tier 1 Performance Obligation and Opt Out