



PJM-MISO
Stakeholder
JCM Briefing
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Operating Reserves

PJM Overview

- Preserves incentive for demand and supply to bid and offer into the day-ahead market based on their actual expectations
- Preserves incentive for generation to follow real-time dispatch signals
 - Generation guaranteed to make bid
- Performed on a daily basis
- Somewhat complex and volatile



- Separate Operating Reserves for Day-ahead and Balancing Markets
- Cleared offers for pool-scheduled generation in the day-ahead market are guaranteed to be made whole for the day
- Accepted offers for pool-scheduled generation operating in the real-time market as requested are also made whole
- Additional payments provided for generator cancellations, and generation reduced for reliability
- Charge allocations based on day-ahead load + exports, and real-time deviations from day-ahead market scheduled quantities (unless following dispatch)
- Separate charge allocations for PJM and PJM West

- Day-ahead Operating Reserves payments are allocated proportionately by MW to
 - all cleared day-ahead demand
 - cleared decrement bids
 - exports that submit day-ahead schedules (not including dynamically scheduled transactions)
- Rates posted on pjm.com

- Allocated proportionately to all deviations from day-ahead scheduled quantities, including:
 - “load” , internal sales, and export transactions
 - (not including dynamically scheduled transactions)
 - generation (for self-scheduled generation and generation not following real-time dispatch instructions and signals)
 - cleared inc offers, internal purchases, and import transactions
- Transactions curtailed in real-time operations by PJM are not included

Midwest ISO Overview

- RSG is a mechanism that ensures that Generation Resources committed by the Midwest ISO are guaranteed cost recovery of their three part offer as appropriate.
 - The three part offer is described as Start-Up costs, No-Load costs, and the Incremental Energy offer, collectively referred to as Production Costs.
- These payments are reflected as part of the Day-Ahead and Real-Time RSG Make Whole Payment Amounts, and funded through the Day-Ahead and Real-Time RSG Distribution Amounts.

Day-Ahead RSG Make Whole Payment Amount (DA RSG MWP)

- Ensures that cleared resources in the Day-Ahead Market will recover Production Costs when appropriate.

Day-Ahead RSG Distribution Amount

- Funds the Day-Ahead RSG Make Whole Payment for Generation Resources that were committed by the Midwest ISO and scheduled in the Day-Ahead Energy Market.
- Charged to each Asset Owner in proportion to its load obligation

Real-Time RSG Make Whole Payment Amount

- Ensures that Production Costs are recovered during a Midwest-ISO commitment Period

Real-Time RSG First Pass Distribution Amount

- Based on volume discrepancies between the Real-Time and the Day-Ahead Energy Markets

Real-Time RSG Second Pass Distribution Amount

- Calculated if the First Pass Distribution Amount does not fully cover the costs associated with the Real-Time volume

- MISO Second Pass RT RSG distribution – PJM distributes all Balancing Operating Reserves according to deviations from DA schedule.
- Others?