IMM Reserve Market Proposal

MRC
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Consolidated Synchronized Reserve Market

- PJM and IMM share most aspects of the proposal to consolidate the synchronized reserve market.
- Strong must offer requirement enforced by PJM
  - IMM also includes must offer penalty
- Lower offer margin for cost-based reserve offers
  - IMM eliminates the offer margin altogether
- Penalties for nonperformance during reserve events
  - IMM penalty is stronger than status quo PJM penalty
IMM ORDC Proposal

• Simple ORDC: vertical demand with penalty factor
  • Consistent with precedent of other RTOs
  • Used for both synchronized and primary reserve
• No sloped curve, no extension beyond MRR
• Identical curves in day ahead market
• Max price equal to energy offer cap
  • $1,000 per MWh, unless PJM has approved a higher cost-based offer, per FERC rules
  • Increases at $250 per MWh increments with higher approved cost-based offers, up to $2,000 per MWh
Operator Actions

- Operators may increase the minimum reserve requirements under predefined conditions.
  - Change in the largest contingency (Synch., Primary)
  - Extreme weather (Synchronized, Primary)
  - Gas contingencies (Secondary)
- The increased requirements will have defined start and end times.
- PJM will post on its website:
  - The active minimum reserve requirements
  - The reason for any increased reserve requirements
  - The beginning and end times for the increased reserve requirements
Secondary (30 Minute) Reserves

• Eliminate Day Ahead Schedule Reserves
• Default requirement is zero
  • Consistent with no NERC requirement
• Secondary reserves may be created with an ORDC based on a PJM defined contingency
  • such as a gas contingency
  • defined under the operator actions provisions for increasing a minimum reserve requirement
• Penalty factor is $1,000 to $2,000 per MWh, as with synchronized and primary reserves.
IMM Proposed ORDCs with Approved Cost Offer of $1,100 per MWh and Defined Gas Pipeline Contingency
Reserve Subzones

• Additive reserve prices across products and zones, without a cap
• The IMM recommends multiple subzones, but PJM says it cannot model multiple subzones.
• The IMM proposal includes only one subzone.
• If PJM cannot model multiple subzones, it should not use a subzone for secondary reserves.
  • Secondary reserves only RTO wide
Scarcity Revenue True Up Mechanism

- IMM proposed true up mechanism returns energy market scarcity rents to customers during the four transition years.
- The true up mechanism continues until adequate capacity market changes
  - VRR curve capped at Net CONE
  - Forward looking E&AS offset
- True up delivery year capacity payments by scarcity rents calculated for the reference CT using actual delivery year energy prices to determine the accurate E&AS offset.
Settlement Rule Preventing Double Payment

• The IMM proposes a new settlement rule that a resource cannot receive payment for reserve MW in excess of its applicable economic maximum output limit for the dispatch interval.

• Pay the full value for metered energy produced, but would cap the settlement of reserve MW so that payment does not exceed the resource’s stated capability.

\[ \text{Metered Energy MW} + \text{Reserve MW} \leq \text{Eco. Max.} \]
One Energy and Reserves Uplift Payment

• Market incentives do not require a five minute negative balancing reserve uplift payment.
• The IMM proposes one daily uplift calculation that prevents resources that follow dispatch from operating at a loss without creating overcompensation.
• The calculation should include costs and revenues in all short term markets (energy, regulation, reserves).
• Incorporating reserves in the existing Balancing Operating Reserve Credit accomplishes this.