

Proposed RPM Reforms to Encourage Commitment of Physical Capacity Resources

PJM Capacity Senior Task Force

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RPM Design Premises

RPM was designed to be a physical forward market with prices set by physical resource offers, from both existing resources and new entry, to satisfy forecasted load requirements

- Structuring RPM to accommodate new entry – both supply and demand – is an important design objective
- But an equally important objective should be to discourage financial speculation which can both undermine reliability and artificially suppress capacity prices

Indicators for RPM Reform

Current market design does not discourage financial speculation – indeed the current rules could be said to encourage financial speculation:

- Speculative offerors have easy access to the BRA
- Speculative offerors can readily “trade out” of their BRA commitment in subsequent Incremental Auctions which, under current rules, will most often clear at lower prices than the BRA
- Speculative offerors have a capped downside equal to 20% of the BRA clearing price in the unlikely event that Incremental Auctions do not clear at a lower price
- The IMM has reported that for the 13/14 Planning Year the substitution rate was 30.7% for DR, 19.7% for imports, and 11.9% for internal generation not in service

Specific Aims of the Proposed Reforms

1. Prevent arbitrage of resources committed in forward RPM market and neighboring short-term capacity markets due to timing differences
Example: Generator clears BRA. Purchases cover capacity in an IA and resells unit capacity to neighboring market that does not have a forward market
2. Prevent financial cover of purportedly physical commitments
Example A: An external resource without firm transmission clears in the BRA, but later determines that cost of obtaining firm transmission is greater than the profit from the capacity commitment. The resource owner either purchases cover capacity or defaults.

Example B: A Market participant clears a resource [Generation or Demand Response], but is unable to develop the resource. The resource owner either purchases cover capacity or defaults.

Failure to deliver resources committed in the BRA, thwarts reliability outcomes and auction competitiveness by supplanting existing resources or less risky new entry

Proposed Preconditions for BRA Participation

- Require Non-Diversion Agreement
 - New tariff provision that bars cover and resale of committed capacity resources to another market
 - Planned resources must commit to PJM
 - Existing resources that wish to sell off-system could obtain a must-offer exemption *prior to the BRA* under current tariff provisions, but cover for the purpose of off-system resale after the BRA commitment would be prohibited [See, OATT, Att. DD, §6.6]
- Require Letter of Non-Recallability for Imports signed by both the resource owner and the host balancing authority
 - PJM currently relies upon the affirmation of the resource offeror that a third party (i.e., the host balancing authority) will not attempt to recall the resource capacity
 - Resource owner cannot bind the host balancing authority, so the current Letter is merely indicative, not actionable
 - Execution by the host balancing authority provides much greater certainty that all relevant parties (resource owner, PJM and host balancing authority agree regarding the capacity designation of the resource prior to RPM commitment
 - PJM *pro forma* Letter of Non-Recallability available at: <http://pjm.com/~media/markets-ops/rpm/generic-non-recallability-letter.ashx>

Prevents diversion of committed RPM capacity to other markets

Capacity Deficiency Penalty and Credit

- Capacity Deficiency Penalty restored to the higher of the resource weighted average clearing price or \$20/mw-day (i.e., 2.0X BRA or \$20)
 - Generally, the CDP equals the BRA clearing price, assuming the resource cleared entirely in the BRA
 - Penalty is static
- Pre-auction credit equals $[1.5 \times \text{Net Cone} \times \text{MW} \times 365]$
 - If met *prior to the BRA*, then proposed development milestones would lower the pre-auction credit and carry through to post-auction credit

Pre-Auction Credit Discount	Pre-Auction Milestone
	Maintains all pre-ISA milestones
20%	Fully negotiated EPC (or similar) and purchase contracts for primary movers
20%	Major permits/approvals to construct/operate have been issued
20%	Executed ISA
20%	Agreements for access to utilities and fuel

Encourages development of planned resources prior to commitment

Post-Auction Credit and Milestones

- Post-auction credit for all cleared resources equals:
Applicable Resource Clearing Price X MW X 365 X Adjustment Factor

- Adjustment Factor
 - Effectively a milestone provision

“RPM Credit Adjustment Factor for a given resource depends on its status in becoming a fully qualified resource” *M-18, Sec. 4.8.2*

- DR & EE = 1-[Certified DR or approved EE/Nominated Capacity]
 - Potential for Post-Auction Credit Incentives as Planned Resources are certified or approved, as applicable
- Planned Generation
 - Potential for Post-Auction Credit Incentives for meeting development milestones
 - Financial Close
 - Substantial Site Work
 - Major Equipment Purchases
 - Equipment Testing and Commissioning
 - Interconnection Service Commencement
- QTU = Status Quo pending PJM stakeholder deliberations

Incremental Auctions

- One Incremental Auction approximately equal to timing of current 3rd IA
 - Multiple IAs could be accommodated if
- PJM sell offer price equal to BRA clearing price
- **Only existing resources, or planned resources meeting strict development criteria, would be able to cover through the purchase of replacement capacity in Incremental Auctions**
 - Planned Generation
 - Developers must have tested all major equipment and commissioned the asset
 - Failure to achieve this milestone results in PJM entering a replacement capacity purchase offer on the offeror's behalf at the Capacity Deficiency Penalty Rate
 - Credit Forfeited
 - Resource barred from future all subsequent RPM auctions until milestone is satisfied
 - If additional IAs are retained, then preliminary construction milestones should be applicable for participation in such IA (see prior page)
 - DR & EE
 - Developers may purchase replacement capacity to cover an enforceable commitment from a specific end user site at a price consistent with their BRA offer
 - Such resource commitment would be terminated upon obtaining replacement capacity
 - Such substituted end user sites could not be used to fulfill other capacity obligations for the same delivery year
 - Such sites could engage in peak shaving or economic load response programs.
- Prior “PJM-only” IAs for PJM purchase if significantly short

Questions or Comments

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