Package A: Summary of Proposed Revisions to the Market Seller Offer Cap (MSOC)

Patrick Bruno, Market Design

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MSOC Objective / Principles

- Objective of capacity market power mitigation is to return the capacity market to outcomes that would prevail in a competitive market

- This requires mitigation of uncompetitive offers to competitive levels

- Competitive offer level includes all costs a competitive market seller would consider when making an offer; *reflects the level below which costs of accepting capacity obligation exceed benefits and seller would prefer not to clear*

Package Objectives

- Address the shortcomings identified in the current unit-specific offer cap calculation and allow market sellers to submit a competitive offer that reflects their economic costs of taking on a capacity commitment

- Provide clarity and improvements to the unit-specific review process

Current MSOC Design

- The current **Net ACR** formula in the Tariff reflects the competitive offer, or avoidable costs and revenues, for capacity resources that may otherwise not operate and mothball or retire if not cleared in the capacity market
  - **Avoidable Cost Rate (ACR):** Considers the costs avoidable by not operating or having a capacity commitment for the year, consistent with a mothball or retirement decision
  - **Net ACR**: ACR net of the expected profits from the energy and ancillary services (E&AS) markets determines the minimum capacity price needed to economically support continued operation of the unit and having a capacity obligation

Simple Example:

- A unit has an ACR of $200/MW-day and E&AS offset of $120/MW-day
- The competitive and profit-maximizing offer is the Net ACR value of $80/MW-day. If the clearing price falls below this value, the costs incurred by operating the unit and taking on a capacity obligation ($200) exceed E&AS profits ($120) plus capacity revenues (< $80), such that a competitive seller would prefer not to operate or clear, and the opposite is true for any clearing price above the $80.

Current MSOC Design (cont'd)

- The current Net ACR calculation does **not** correctly capture the competitive offer level, or avoidable costs, for capacity resources that would otherwise continue operating and stay active in the E&AS markets if not cleared in the capacity market
  - In this instance, a competitive seller would not consider the costs avoided by not operating the plant, nor the loss of E&AS net revenues by not operating, as the unit is profitable and will be operating and earning profits in the E&AS markets regardless of clearing in the capacity market
  - Instead, the relevant avoidable costs are solely those incremental costs of taking on the capacity obligation, such as CP risk and CP opportunity cost (i.e. the foregone bonus revenues of a resource with a capacity performance commitment)

Unit-Specific Offer Cap Calculation

1. Update the current unit-specific MSOC calculation to allow for avoidable costs and revenues to be determined relative to the unit's operating state if not cleared in the capacity market, whether that be mothball or retirement, or continued operation as a non-committed capacity resource for the year
   - **For Mothball or Retirement**: MSOC set by Net ACR = ACR – E&AS Offset (status quo), where avoidable costs in ACR includes the costs that would be avoided by not operating for the year and mothballing or retiring, as applicable. Requires officer certification of intention to proceed with mothball or retirement in the event the resource does not clear capacity market.
   - **For Continued Operation:** MSOC set by ACR + CP Opportunity Cost, where avoidable costs in ACR only include the incremental costs of taking on a capacity obligation relative to continued operation and solely participating in E&AS markets (e.g. CPQR), and CP Opportunity Cost reflects the foregone CP bonus revenues

Simple Example

A unit has the following avoidable costs and revenues ($/MW-day)

- ACR - Labor: $30
- ACR - Fixed Expenses: $20
- ACR - CPQR: $10
  - e.g. CP penalty insurance cost
- Net E&AS Offset: $100
- CP Opportunity Cost: $15
  - i.e. Foregone CP Bonus Credits

In this example, unit would **continue operating** absent a capacity obligation

MSOC: Status Quo

Net ACR = ACR – E&AS Offset

Net ACR = ($30 + $20 + $10) - $100 = -$40

MSOC = **$0 / MW-day**

MSOC: Proposal

Unit would continue operating absent a capacity obligation; therefore, costs solely reflect incremental cost of having a capacity obligation (CP risk + CP opportunity cost in this example)

MSOC = ACR (CPQR) + CP opportunity cost

MSOC = $10 + $15 = **$25 / MW-day**

Seller is better off not clearing this unit if capacity price falls below $25 (would avoid paying $10 in expected penalties and gain $15 in expected bonus payments with no obligation)

Package Summary (cont'd)

<u>Unit-Specific Offer Cap Calculation</u>

2. Allow for sellers to voluntarily choose segmented offer caps to reflect incremental costs when able to provide reasonable justification and support for the segmented cap

3. Capacity Performance Quantifiable Risk (CPQR)
   - Update current Tariff language from "costs of mitigating the risks" to "mitigating, retaining, or otherwise managing the risks" to be clear that sellers may opt to retain the risk, or "self-insure", and may generally reflect costs tied to managing CP risk; also make clear that sellers may reflect costs of risks beyond net expected outcomes
   - In addition to allowing sellers to use company-specific models and analytical support of CPQR:
     - Allow for CPQR to be reasonably supported with officer certification and evidence that their risk model, inputs, and costs have been reviewed by an independent third party in the insurance industry to confirm their risk valuation is consistent with actuarial practices

Package Summary (cont'd)

Unit-Specific Review Process

1. Move IMM deadline to provide unit-specific E&AS offsets to 150 days prior to the auction for preliminary values & 135 days prior for final values effective with the 27/28 BRA, and determine unit-specific E&AS offsets for the MSOC based on the 3 years or prior 36 months with available data at the time of the BRA calculation
   – 150 and 135 day deadlines for preliminary and final values consistent with current requirements for the delayed auctions up through the 26/27 BRA
2. Shorten time between the IMM deadline to provide unit-specific offer caps & market seller's deadline to agree or disagree with caps from 10 days to 5 business days
   – Provides an earlier indication to PJM of disagreements to increase the time to work with market sellers on those disagreements
3. Change PJM determination from a simple accept or reject to allow for approval of alternative values based on review and discussions with market sellers

Package Summary (cont'd)

Unit-Specific Review Process – Improved Transparency

4. Provide documentation that further describes the calculation and inputs of the net E&AS offset values provided to market sellers
5. Provide or allow market sellers to request details of the E&AS offset results to better understand the final value (e.g. run hours, total gross revenues, etc.)
6. If rejecting a market seller's requested offer cap, provide the Gross ACR template to the seller that supports the IMM or PJM approved offer cap value

Unit-Specific Review Process – Improved Guidance

7. Develop a default methodology and/or guidelines for calculating CPQR that sellers *could opt in to use*

8. Provide further guidance on how sellers can provide reasonable support that costs going into the ACR calculation do not include those allowable in energy market cost offers

Next Steps

- ~~**Aug. 24:** MRC first read~~
- **Sept. 21:** MRC seeking endorsement
- **Oct. 26:** MC seeking endorsement