PJM MSOC Package Summary

Pat Bruno, Sr. Lead Market Design Specialist – Market Design & Economics

RASTF

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Package Objectives

- Provide a targeted set of reforms to MSOC rules in the near-term for implementation in upcoming auctions
- Address certain shortcomings of the current unit-specific offer cap calculation to better allow market sellers to reflect the full costs and risks a competitive seller would consider when making a capacity offer
- Provide improvements to the unit-specific review process

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*

Unit-Specific Offer Cap Calculation

1. Allow market sellers to reflect avoidable costs and revenues relative to those they would face given the unit's operating state if not cleared in the capacity market (Tariff change)
   - **Mothball or Retirement**: MSOC set by Net ACR = Gross ACR – E&AS Offset,

     where avoidable costs in Gross ACR are determined relative to those incurred if the unit were to not operate for the year and mothball or retire, as applicable
   - **Continue Operating:** MSOC set by Gross ACR + CP Opportunity Costs,

     where avoidable costs in Gross ACR only include the incremental costs of taking on a capacity obligation relative to continuing to operate and participating solely in E&AS markets (e.g. CPQR)

Addresses:

- The scenario where the current formula results in a $0 offer cap for units that have non-zero CP risk by allowing sellers to reflect just the incremental costs of taking on a capacity obligation
- The absence of CP opportunity cost in the current formula
- Ambiguity between using mothball vs. retirement avoidable costs

Illustrative Example

Gen X 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: $20
  - 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 + opportunity cost in this example)

MSOC = ACR (CPQR) + CP opportunity cost

MSOC = $10 + $20 = **$30 / MW-day**

Seller is better off not clearing this unit if capacity price falls below $30 (would avoid paying $10 in expected penalties and gain $20 in expected bonus payments with no obligation)

Package Summary (cont'd)

Unit-Specific Offer Cap Calculation

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 (Tariff change)

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 (Tariff change)
   - 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 (Tariff change)
     - Develop a default methodology and/or guidelines for calculating CPQR that sellers *can opt in to use* and that is generally consistent with actuarial practices in the industry to model & value risk

Package Summary (cont'd)

<u>Unit-Specific Review Process</u>

1. Effective with the 27/28 BRA, move the IMM deadline to provide unit-specific E&AS offsets from 90 days to 125 days prior to the auction (Tariff change)
   - Ensures sellers can rely on posted E&AS offsets prior to the unit-specific request deadline (120 days prior to the auction)
   - Note: For the revised auction schedules through the 26/27 BRA, preliminary and final values must be provided 150 and 135 days, respectively, prior to the auction
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 (Tariff change)
   - 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 (Tariff change)

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

Package Summary (cont'd)

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

Contact

SME/Presenter:
Pat Bruno
Patrick.Bruno@pjm.com

RASTF Facilitation:
Dave Anders
David.Anders@pjm.com

RASTF KWA#9 Targeted Reform of MSOC

Member Hotline

(610) 666 – 8980

(866) 400 – 8980

custsvc@pjm.com