

Offer Cap Proposal

P3

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Ability to Recover Actual Costs

- Resources Must Be Able to Recover Actual Costs
 - Cost based offer mitigation that fails to provide the opportunity for actual cost recovery is unjust, unreasonable, and results in confiscatory rates
- The Market Signals and Pricing Must Produce Desired Reliability Effects and Actions
 - *“In the case of some Capacity Resources, which are required to offer into the Dayahead Energy Market every day, Market Sellers of such resources were in effect being forced to either sell energy into the market at prices that did not reflect their marginal costs to produce that energy or take a forced outage on their unit. This was never the intent of the offer cap. In fact, it is contrary to basic principles of PJM’s energy market design because the purpose of the market design is to provide the financial incentives for physical asset owners to act in a manner that supports reliable system operations.”*⁴
 - *“An offer cap that would incentivize an asset owner to take a forced outage on their unit when it is most needed for system reliability is clearly inconsistent with the intent of the market design.”*⁴

Why LMP Must Reflect Marginal Cost

- Transparency for Market Solutions to Develop Correctly, Including Efficient Resource Entry and Exit
- Incentivize Reliable Operations, Where Higher Price Equates to Resource Being More Needed
- Avoid Unnecessary Uplift and Allow Load to Hedge Volatility Lowering Prices Offered to End Users

Avoid Uplift- Form Proper Prices

- Generators Must Be Allowed to Capture Costs in Offers
- Uplift Method:
 - Bad Idea
 - Offers are prevented from setting LMP
 - Unhedgeable
 - Extra risk added to load prices that cannot be bilaterally hedged with a supplier
- Allow Offers to Set LMP
 - Higher prices create more incentive for generators to perform.
 - Inframarginal revenues critical to recovery of long-run, capital costs
 - Reduces dependence on capacity market
 - Energy market better incents generators when needed (granularity) than capacity market
 - There is an E&AS offset that lowers capacity costs when due to higher energy revenues

Marginal Offers in LMP Disincentives Generator Non-Performance

- If Recover Through Uplift:
 - Bad idea
 - There would be an artificial LMP cap below resource offer cap
 - i.e. LMP capped at \$1,500 and marginal resource paid at \$3,000
 - Any resource failing to perform, penalty capped at LMP cap
- If Recover Through LMP:
 - Good idea, especially on high-stress system days
 - LMP would match offer cap
 - i.e. LMP ~\$3,000 at reference bus
 - Any resource failing to perform, penalized at LMP
 - Ex. Clear DA at \$900, RT LMP at \$2,000, then resource \$1,100 in red if fails to perform
 - Performance failure increases RT LMP

DA Cap Must Equal RT Cap

- Asymmetric Treatment Between Day-ahead And Real-time Would Hinder Ability to Hedge Higher Prices (Offer Cap Related) in The Day-ahead Market
- *“The potential difference in maximum prices between the Day-ahead and Real-time markets may also set up unintended incentives for demand and supply offer behavior into the Day-ahead Market”¹*

1. PJM Proposal to Facilitate Hedging in the Day-ahead Energy against Real-time Shortage Prices, 02/18/2010

Market Based Offer Cap

- MBO Cap Must Always Be at Least as High as Cost-based Offers
 - Should be multiple of highest cost-based offers
 - *“While the market-based offer cap has been fixed at \$1,000/MWh in the past, a better approach may be to set a market-based offer cap on an annual basis at some percentage above the highest cost-based offer from previous Delivery Years.”²*
 - Current cap based on a multiple of 3x actual cost (many years ago)
 - The highest offer on an available generation resource was \$1,795/MWh
 - Calculated Market Based Offer Cap: \$5,385/MWh
 - Proposed Market Based Offer Cap: \$2,700/MWh
- Competitive Forces Will Discipline Market Based Offers
 - PJM Three-Pivotal-Supplier (TPS) ensures only MBO allowed when competitive discipline exists
 - When there is shortage, prices are supposed to be high. And again, the capacity and energy revenue streams net.

Cost Based Offers

- *Proposed Cost-Based Offer Cap*
 - *Actual Costs (Current Cost Development Methodology) + 10%*
 - *“...PJM believes it is appropriate to eliminate the cap on cost-based offers.”*³
- *10% Needed Due to Extra Risk in Offers Being Too Low*
 - *Riskier starting April 2016 making electric offers in DA without adequate gas price discovery (impending Market Timing Changes)*
 - *Real-time prices currently locked down day before, which is not reflective of real-time fuel price cost*
 - *If hourly offers implemented:*
 - *Increased risk of TPSing*
 - *Fuel offer prices not volumetrically valid*

Scarcity Pricing Adders

- Need to Ensure That Units Are Indifferent to Providing Reserves or Energy
 - Since during scarcity, the adder is added to backing-down the least expensive unit, the adder should equal the offer cap
- Proposed Scarcity Penalty Factor:
 - Reserve Shortage Penalty Factors: \$1,350/MW
 - Same adders for Sync and Primary reserves
 - Both add up to Market Based offer-cap
 - Excess Reserves Shortage Adder: \$750/MW

Summary of Proposal

- DA and RT Cost Based Offers Capped at Cost + 10%
- DA and RT Market Based Offers Capped at Higher of \$2,700/MW or Cost Based Offer
- Synchronized Reserve Penalty Factor: \$1,350/MW
- Primary Reserve Penalty Factor: \$1,350/MW
- Excess Synchronized Reserve Penalty Factor: \$750/MW
- Excess Primary Reserve Penalty Factor: \$750/MW