

Long Term Capacity Market Changes – Stage 4 Meeting

Capacity Coalition 2

August 23, 2023

Why the Market Needs to Change

- Legacy 'Annual' resources are retiring and will not be replaced in kind by units with similar characteristics.
- Market rules were designed specifically for these declining exiting units.
- New capacity is needed to fill both the anticipated retirement gap and increasing load growth
- 24/7 price signal will no longer attract replacement resources since new resources have very different performance characteristics
- Developing a market that builds on the foundation of RPM but importantly sends granular/interval prices will attract new resources and technologies.
- PJM needs many new types of resources to maintain system reliability

Interval Pricing Solution

- By 2030, move to monthly seasons with 4 intervals/day pricing
- Sends the right price to incentivize appropriate market responses for high demand and/or low supply periods.
- Supports and integrates solar, wind, storage, DERs to provide needed and timely supply to contribute to system reliability needs.
- Recognizes actual availability of intermittent supply - Units must bid what they can actually offer.
- Allows PJM to apply today's ELCC model, including weather and outage correlations to capacity demand intervals and eliminates need to try to annualize intermittent resources output.

Concept Can Solve Offer and Commitment Issues

- Units must offer for intervals they can perform
 - *PJM can clear flexible output units in key intervals*
- Eliminates ELCC need on supply side:
 - *Allows PJM to adjust demand base on unit performance during weather extremes*
 - *Units offer seasonal and interval adjusted output*
- Market sets prices for each season/interval through auction.
- It sends the right price to the market for each interval time period, creates incentives for any type of technology that is capable of providing reliable capacity for discrete times to increase system reliability.
- Signal for new resource entry for times that most need additional resources
 - *Send right price to market. Match prices with supply and demand outcomes.*
 - *New storage entry for peak system needs*
 - *Growing DER market for capacity during peak needs*
 - *Proper and common-sense valuations for both intermittents and annual resources*
 - *Allow Market Mechanisms and innovation to satisfy reliability needs*

Long Term Solution

- Annual price signal will not get future technology capacity built for the times when it is needed most.
- RPM is not aligned with actual resource availabilities, capabilities and risk and ELCC adjustments fail to match real capabilities
- Maintain the framework of the current structure, while adopting and implementing a sub-annual/hourly framework
 - Can likely accommodate basic structures of several proposed alternative frameworks
- Encourage competitive market response by utilizing a market established dynamic supply/demand granular prices
- We propose to target establishing a four-season product with four time of day intervals by delivery year 2030

Summary and Next Steps

- A transition is necessary to fully implement a more granular market. For example, two seasons are just a start towards incentivizing and accommodating flexible and intermittent units
- Our request is for PJM to initiate a subsequent 'CIFP' type effort to appropriately design a more granular market with an actionable end date.
- Stakeholder support for this long-term proposal at the Stage 4 MC meeting would send a signal to PJM to continue to pursue an improved capacity market that incents the appropriate types and amounts of needed new capacity.