

Potential Approach to RPM reform

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Takeaways From Last Week



- Nearly everyone agreed some form of capacity market should be retained as a resource adequacy backstop.
- Most agreed MOPR unsustainable.
- Many supported rights of states, public power, or large consumers to choose their own resource mix outside of PJM markets.
- Many saw a tension between current market designs and the future resource mix.
- Some recommended incorporating environmental attributes into PJM markets.

Reforms and Sequencing

MOPR Planning Fix

Incorporate out-of-RPM resources into resource adequacy planning

By Sept. 2021
for 23/24 BRA

Voluntary Residual Market

Reform RPM to allow out-of-RPM supply to count for resource adequacy

By early 2022
for 24/25 BRA

Overprocurement

Fix through planning, market rules, and terms of Quad Review

Forecast improvements ongoing. Tariff changes by early 2022 for 24/25 BRA and Quad Review

Changing Resource Mix

Update RPM to meet the needs of a decarbonizing economy

Work in 2022 for 25/26 and subsequent BRAs

Integrated Attributes

Consider incorporating environmental attributes into PJM markets

Future work that builds on Voluntary Residual Market



MOPR Planning Fix



Update planning rules to consider out-of-RPM resources when setting IRM.

- Reliability contributions of MOPR'ed resources should be considered to get an accurate IRM
- Implements RAA requirement to meet 1-in-10 considering “generating unit capability...for every existing and proposed unit”
- Similar to current treatment of behind the meter solar
- Alternative is to run RPM on an IRM known to be incorrect
- Requires no tariff filing; Planning Committee develops details in time for 23/24 BRA

Voluntary Residual Capacity Market



- Purchasing capacity through the residual auction is *voluntary*, meeting PJM's reliability requirement is *required*.
- PJM would still set rules for capacity qualification, capacity performance, and the like. Won't adversely affect reliability.
- Buyers have a choice of whether to buy through the centralized auction, enter into separate bilateral contracts, or otherwise self-supply.

Current **Mandatory** PJM Capacity Market



Voluntary PJM Capacity Market Approach



Why a Voluntary Residual Capacity Market?



- Straightforward to implement; relatively little disruption for LSEs and state regulators content with RPM.
- Not a new concept for PJM – in many ways a return to the original design of RPM (Base *Residual* Auction).
- Goes one step further than rolling back the MOPR expansion— structural change to RPM to reflect state primacy in determining the generation mix, right to self-supply.

Are there ways to allow load-serving entities to meet their resource adequacy needs through bilateral contracts rather than mandate that they go to the capacity markets? I'd like to look at alternatives that maybe keep the integrity of the capacity markets while at the same time allowing states that have individual policies they want to pursue to pursue those policies. . . . It may be the capacity market becomes residual or a fallback. Or it becomes a primary source for states to choose to make it a primary source.

*Commissioner Mark Christie
Law360 Interview (February 26, 2021)
<https://www.Law360.Com/articles/1358580>*

Compatible with Competitive Procurement Designs



- Bilateral markets are markets.
- States could use this new flexibility to implement integrated or co-optimized procurement of clean energy attributes and capacity, possibly in combination with other states.
- PJM could still offer a centralized procurement for clean capacity—state and buyers that prefer that option can use it, or a combination of both.
- Option to buy from residual market helps protect against exercise of seller market power in an FRR.

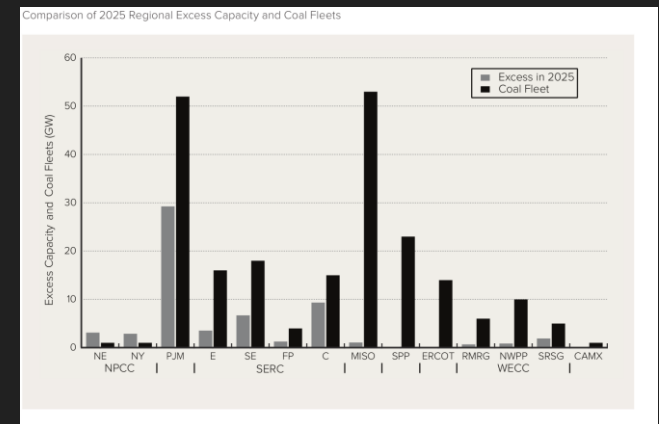
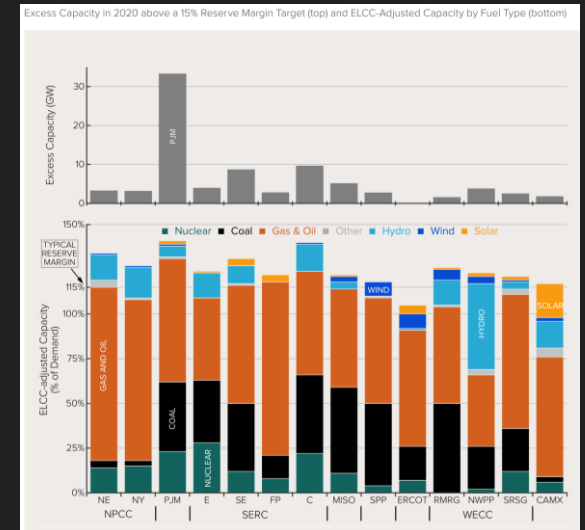
Why Overprocurement Matters



Overprocurement increases emissions.

- PJM is an outlier both in excess reserve margin and remaining coal
- Close to 30GW of PJM's coal fleet is ripe for retirement. As much as 18GW of this is supported by excess capacity spend.
- Total potential for ~95MTons/year CO₂ savings, as much as half could be realized through tighter RPM procurement.

Source: Rocky Mountain Institute, [Cutting Carbon While Keeping the Lights on.](#)



Addressing Overprocurement



Overprocurement has at least three drivers that need to be addressed in the near term:

- Net CONE inconsistent with RPM design
- Load forecast error
- Lack of tools to manage forecast risk

Lack of seasonal market and treatment of energy efficiency may also play a role.

Setting up the Quadrennial Review for Success



Issues related to the VRR curve should be addressed in the next Quadrennial Review.

- PJM needs to ensure that fundamental changes to the VRR curve are all “on the table” in the next Quad Review – may require changes to the RAA.
 - In 2018, PJM took the position that parties advocating for a change to a different reference resource as part of the Quad Review were “challenging that status quo in the Tariff, which would require action under FPA section 206.”
 - Agree to reevaluate shape of the demand curve—this was excluded from the 2018 Brattle analysis
- PJM needs to gather and share data necessary for robust assessment of E&AS methodology.

Load Forecast and Forecast Risk



Load forecast error remains a major issue in RPM. Efforts to improve forecasting should continue. Additionally, RPM should incorporate methods to reduce the impact of forecast errors:

- Reinstate the holdback or other means of delaying some capacity procurement.
- Allow low-capital, quickly deployable resource types to benefit from flexibility value provided.
- Embrace liquid capacity markets and allow limited participation by financial products to reduce consumer risks.

Adapt to a changing resource mix



Address shortcomings in RPM's product definitions and approach to reliability:

- Winter and summer needs, supply, and risks are simply different. They cannot be efficiently met by a single annual product.
- Continue to develop ELCC to best incorporate new technologies and leverage PJM's size to manage risk.
- Prepare for a much greater role for imports.
- Continue to expand role of demand side, including flexible demand and DERs.

Contact Information



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