CRA Insights: Energy

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Since issuing our newsletter on October 13, on October 15 FERC issued a further order on compliance in this proceeding. We have updated this Insights to reflect the most recent information.

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PJM's Capacity Market: Where are we now?

After simmering as an issue since 2016, and after the Federal Energy Regulatory Commission (FERC) in June 2018 made a finding on the alleged impact of state-sponsored resources on capacity prices, proposed changes to PJM's capacity market structure remain in limbo. This *Insights* follows our **initial assessment** of FERC's mandate to PJM in December 2019 to apply its Minimum Offer Pricing Rule (MOPR) to state-subsidized resources. Here, we review the current status of the market rule changes, present a best case scenario for when capacity auctions might restart, and describe the litany of uncertainties that still face the market and market participants. We conclude that ambiguity is likely to persist around the Reliability Pricing Model (RPM) for some time, and market participants will need to carefully frame expectations and structure decisions to be robust for a range of possible future scenarios.

How did we get here, and where is here?

Since 2016, FERC and PJM have been grappling with stakeholder concerns regarding alleged "price suppressive" impacts on capacity market prices resulting from state subsidies for favored generation resources, both existing and new. In June 2018, FERC determined that the prevailing market rules were problematic. However, owing to a shifting Commission makeup, to issues with quorum and recusal, and to the challenging economic, political, and legal substance of the proceeding, FERC did not articulate a path forward until December 2019. At that time, FERC ordered that PJM expand its MOPR to a broad range of subsidized resources, both existing and new.[1] The Commission reasoned that this change would protect the competitiveness of the PJM capacity market by producing capacity prices similar to what would have prevailed in the absence of any state subsidies.

As of the date of this *Insights*, PJM has made progress towards fulfilling FERC's mandate, but a complete set of market rules has yet to be finalized. In March 2020, PJM filed a complete proposal aimed at satisfying FERC's directives. In mid-April, FERC acted on clarification and rehearing

[1] Exemptions were included for certain existing subsidized resources, but not extended to conventional, non-self-supply resources (e.g., coal and nuclear units benefitting from state action in Illinois, Ohio, and New Jersey).

related to several prior orders in the RPM reform docket, which created further compliance obligations – on a 45-day clock – for PJM. Accordingly, on June 1, PJM filed further proposed rule changes incremental to its March 2020 compliance filing.

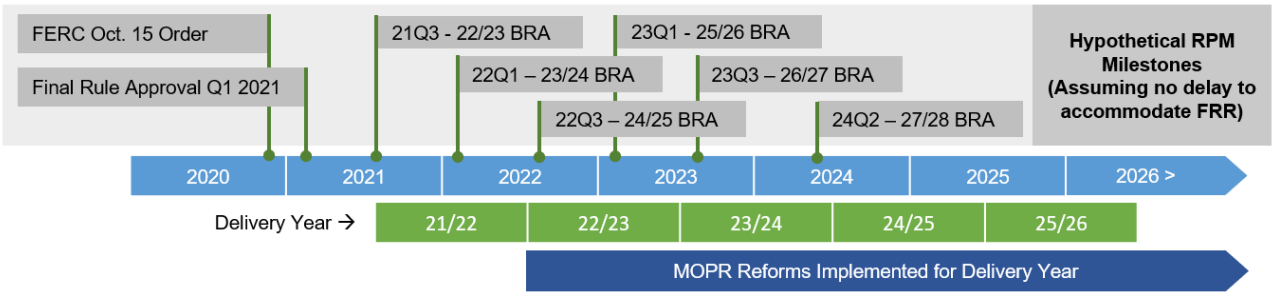
In its most recent order, issued October 15, 2020, FERC moved this docket incrementally forward by accepting some compliance revisions and addressing various requests for rehearing and waivers. At the same time, FERC established *further* compliance requirements – to be filed by PJM within 30 days – and established that, for RPM auctions to resume, FERC would also have to approve related changes in a separate proceeding on the topic of reserves pricing (Docket No. EL19-58), for which PJM's compliance is pending before the Commission. Thus, both a complete set of rule changes and a revised RPM auction calendar remain elusive.

When will we have an auction? What will have changed?

In its March 2020 filing, PJM proposed a timeline for restarting RPM auctions and running successive auctions on an accelerated schedule sufficient to eventually return to the standard three-year forward auction calendar. While the specific timeline – which would have seen the 2022/23 base residual auction (BRA) run in Q1 2021 – is now obsolete, it remains informative as we know PJM's request in terms of auction spacing. We can therefore speculate as to when auctions could restart.

At this point, the soonest FERC could approve a new set of market rules would be after the current further compliance timeline (i.e., 30 days), plus time for comment by intervenors (likely at least 30 days), plus time for the Commission to act after receiving feedback, which could be months if prior experience in this docket is a guide. There could be further delay if the reserves proceeding is not sufficiently concluded. Once FERC approves a set of market rules, PJM has asked for six-and-a-half months before the first BRA under the new rules, with further BRAs every six months thereafter. FERC appears to support this auction spacing. Incremental auctions would be scheduled to accommodate the compressed forward periods, though fewer would be required owing to the shorter forward period for some of the "catch-up" auctions. Of course, this assumes no further extensions to accommodate implementation of the Fixed Resource Requirement (FRR) alternative, an option that is currently under consideration by several states. At this point, we surmise that RPM will not be able to return to its "normal" schedule until the 2027/28 BRA.

Hypothetical RPM calendar assuming FERC approval in 2021 Q1



In terms of what will change in the first auction under the reformed MOPR rules, it is possible the answer is "very little." In terms of *new* subsidized resources that could be subject to the MOPR and excluded via mitigation (i.e., MOPR'ed), most that could have been MOPR'ed will be grandfathered in, owing to having been sufficiently far along in the interconnection process at the cutoff date (December 19, 2019).

In terms of *existing* subsidized resources that face mitigation, those include certain nuclear and coal-fired generators in Illinois, New Jersey, and Ohio. The nuclear units receiving zero emissions credits in Illinois and New Jersey (Quad Cities, Hope Creek, and Salem) are all to be treated as multi-unit nuclear resources,[2] a designation that results in lower assumed ongoing fixed costs than single-unit nuclear plants and a likely minimum bid floor of $0 / MW-day or, effectively, no mitigation at all.

On the other hand, the currently subsidized Perry and Davis-Besse nuclear plants are single-unit resources with higher expected minimum bid floors that will be subject to mitigation and likely prevent them from clearing the auction. However, the other recipients of state subsidies under Ohio House Bill 6 (HB6), two coal plants owned by Ohio Valley Electric Corporation, are unlikely to face a mitigation threshold that impedes their ability to clear the auction. While the Perry and Davis-Besse plants constitute a meaningful quantity of capacity supply (approximately 2,100 MW nameplate combined), their failure to clear could be largely offset by new renewables and gas entry as well as declining peak load expectations driven by the economic recession following the COVID-19 pandemic. Furthermore, with the fate of HB6 uncertain owing to ongoing investigations and allegations of fraud and corruption, it is possible that *no existing resources* will be precluded from clearing in the BRA following the implementation of MOPR reforms.

As a result, it seems likely that most impacts of the RPM reforms are confined to the future. With the acceleration of state renewables targets and the propagation of state clean energy programs, and the expected high mitigation thresholds for new renewables – particularly for storage and wind resources – the volumes of MOPR'ed resources will expand over time. Excluding these resources from participating in RPM will lead to increased customer costs stemming from duplicative capacity procurement.[3] Likewise, the secondary effects from aggregate over-procurement of capacity in the PJM footprint will also grow.

After all this time, more unknowns than knowns?

Even if implemented as proposed, pending further revisions as mandated by FERC, the MOPR reforms and related uncertainties seem to give rise to more questions than answers with regard to their long-term impact on the PJM market. Factors related to RPM and the MOPR reforms that could affect long-term market participant expectations include:

- **Impacts of oversupply:** While the MOPR changes are specific to the capacity market, we expect the results to spill over into the energy market. Though PJM is already somewhat long on capacity, creating a new, growing class of generating capacity that exists in excess of what RPM procures, will lead to more acute oversupply. This will not only suppress energy market prices and dampen associated price signals; it will also diminish the efficacy of positive reforms that have been implemented around reserve pricing and capacity performance (CP). With an over-supplied market, instances of reserve shortages and CP events will likely arise less frequently and be less severe, thus reducing the efficacy of those market design features.
- **Further RPM rule changes:** PJM is likely to switch to an effective load carrying capacity (ELCC) approach to determining the quantity of unforced capacity contributed by energy-limited and intermittent capacity resources. This will affect the magnitude of duplicative procurement and associated cost. PJM has also been required to implement a forward-looking energy and ancillary service (E&AS) offset, which is likely to drive up net CONE and net

[2] PJM Interconnection March 25, 2020 letter to Kimberly D. Bose, Secretary, FERC, re: PJM Interconnection, L.L.C., Docket Nos. EL16-49, EL18-178, ER18-1314 Errata to PJM Compliance Filing re: Hope Creek Nuclear Plant.

[3] One set of resources will be procured by RPM, while another will be procured to meet state clean energy policies.

Avoidable Cost Rate (ACR) values owing to overall market conditions and low expected gas prices. PJM's independent market monitor (IMM) has also pointed out several shortcomings in the current seller market power mitigation rules and filed complaints before FERC. While these have not been acted on, should FERC take them up it could result in increased offer constraints and downward pressure on market prices.[4]

- **State reactions:** Under the FRR rules provided under the umbrella of the PJM reliability assurance agreement, states and individual utility service territories have the option to bilaterally procure capacity outside of the PJM auction process. Several states with more ambitious environmental goals are considering this option, including Illinois, Maryland, New Jersey, and Virginia. While we do not comment on the likelihood of such decisions and respective state politics, departure of one or more of these states would likely put downward pressure on market prices and, per IMM scenario analyses, the impact could be considerable. States could also take more drastic measures to protect their ability to guide electric generation outcomes, including departing PJM entirely.
- **Political uncertainty:** The result of the 2020 general election is likely material. Should there be a change in Administration, there could likely be a Democratic majority at FERC by early 2021. Commissioner Glick, currently the lone Democrat on the Commission, has been highly critical of the ongoing RPM reforms. Under a FERC with Democratic chair and majority, it is likely that action would be taken to unwind the MOPR rule changes.
- **Legal challenges:** Upon issuing Orders on Rehearing in April 2020, the window to appeal the Commission's position in this docket opened. Numerous parties filed on review in both the US Court of Appeals for the DC Circuit and for the Seventh Circuit. Consolidated legal challenges will ultimately be heard in the Seventh Circuit. This development was expected and will likely take several years to resolve. It is unclear whether the appeals courts will stay implementation of the MOPR rule reforms while the legal challenge unfolds.
- **PJM support for RPM:** Following the pressures experienced by PJM as part of the MOPR docket, and given the expectation that states will only increase their support for environmentally conscious generation sources over time, we understand that PJM is reconsidering the future of its markets in a high-renewables environment and with an increased role of state-supported resources. This *could* include an overall reassessment of the mechanism of capacity procurement. While we are not yet aware of any concrete proposals for wholistic change, we see no reason to take that possibility off the table.

What can we conclude? Not much for now.

The purpose of capacity markets is to provide a supplemental revenue stream, in addition to revenues available from energy and ancillary service markets, that can serve as a *reasonably predictable*, long-term price signal for efficient entry and exit of supply. Particularly for new entrants, investors and developers should, and do, look to capacity revenue expectations as a key supporting factor to evaluate resource economics. In building the business case for investments that may run into the hundreds of millions of dollars, the more certainty around market rules and structure that can be afforded by the market operator and its regulator, the better. Unfortunately, as we have described in this *Insights*, the current circumstances surrounding RPM are far from ideal in this regard.

For the sake of long-term system reliability and cost-effective provision of resource adequacy, the coming years will hopefully see a steadier grounding for RPM. In the meantime, generation

[4] Given timing issues and other areas of focus by FERC and PJM, any adjustments to seller market power mitigation rules may have to wait until the BRA for the 2026/27 delivery period.

investors and developers in PJM need to take a view of the capacity market opportunity that accounts for the full range of uncertainties. They must employ decision-making frameworks that are robust to a range of future scenarios while constantly adjusting expectations with new regulatory developments.

About CRA's Energy Practice

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