

FirstEnergy's Perspective on PJM's Wholesale Electricity Markets: 2021

Q3 2021 ISSUES

This report will be updated on a quarterly basis (December 1, March 1, June 1, and September 1). The purpose of this report is to provide an overview of key FERC and PJM initiatives active in each quarter.

Executive Summary

With the completion of the Critical Issue Fast Path process that was employed to address Minimum Offer Price Rule ("MOPR") changes, PJM stakeholders have shifted their focus from the MOPR to broader capacity and energy market reforms. Phase II capacity market issues to be discussed include evaluating the appropriate level of capacity procurement, examining the need to strengthen the qualification and performance requirements on capacity resources, considering clean capacity/energy auctions as an option to allow for procurement of clean resources, and evaluating the need for PJM's procurement of additional reliability-based services, with a particular focus on reliability needs in the face of the changing resource mix. PJM has also resumed the Energy Price Formation Senior Task Force which will be discussing changes to the Operating Reserve Demand Curve and Transmission Constraint Penalty Factor rules. Additionally, PJM has initiated its Quadrennial Review to examine the shape of the Variable Resource Requirement curve.

Capacity Market Initiatives

PJM MOPR Filing: PJM completed the Critical Issue Fast Path ("CIFP"), an accelerated stakeholder process, to take the next steps in developing a Minimum Offer Price Rule ("MOPR") reform proposal. CIFP meetings were held from April 9, 2021 to June 30, 2021. At the conclusion of the process, stakeholders presented and voted on nine packages; PJM's was the only package that passed. On July 30, 2021, PJM submitted its proposal to FERC to reform the application of the MOPR in PJM's capacity market. Under the PJM proposal, market participants will be asked to sign attestations declaring they are not receiving state subsidies conditioned upon clearing in any PJM capacity auction and that they are not exercising buyer side market power. PJM and the IMM will conduct "fact-specific, case-by-case reviews" if market power is suspected, and referrals will be made to FERC for a final determination. PJM requested an effective date of September 28, 2021.

PJM Capacity Workshops: During this period, PJM held two capacity workshops to discuss the scope of their second phase of broader capacity market reforms. PJM is proposing to establish a Capacity Market Design Senior Task Force (CMDSTF) and potentially distribute some of the issues to be addressed to other stakeholder groups who would report back to the CMDSTF. The PJM Board identified the following issues as topics that should be pursued: (i) evaluating all aspects surrounding the appropriate level of capacity procurement; (ii) examining the need to strengthen the qualification

and performance requirements on capacity resources; and (iii) evaluating the need for PJM's procurement of additional reliability-based services, with a particular focus on reliability needs in the face of changing resource portfolio and increased penetration of intermittent resource technologies.

2022/2023 Base Residual Auction: On June 2, 2021, PJM released the results of the 2022/2023 Base Residual (Capacity) Auction ("BRA"). Overall, the BRA, held from May 19 to 25, 2021, cleared 144,477 MW of capacity resources for the June 1, 2022 through May 31, 2023 delivery year, at a total cost of \$3.9 billion. When adjusted for changes in Fixed Resource Requirement ("FRR") elections, that total is \$4.4 billion less than in the previous auction for 2021/2022 delivery year. The auction cleared resources that provide PJM a 19.9% Installed Reserve Margin of Capacity Performance resources, above the 14.5% requirement, including load and resource commitments under FRR. The majority of PJM cleared at \$50/MW-day, a decrease of \$90/MW-day, or 64%, from the prior auction results for delivery year 2021/2022 which was held three years ago, in May 2018. The \$50/MW-day clearing price is the lowest since the \$27.73/MW-day clearing price for the 2013/2014 delivery year. The next PJM capacity auction for the 2023/2024 delivery year will be held in December 2021.

Quadrennial Review: PJM's Open Access Transmission Tariff ("OATT") requires PJM to review the shape of the Variable Resource Requirement ("VRR") Curve, the calculation of the Cost of New Entry ("CONE") used in the VRR Curve, and the methodology for determining the Net Energy & Ancillary Services ("E&AS") revenue offset used to calculate Net CONE every four years. PJM has retained The Brattle Group to facilitate this review. Based on the results of Brattle's review, PJM will prepare a recommendation to either modify or retain the existing VRR Curve shape. PJM will present its Staff proposals no later than May 15, 2022. Members will have the opportunity to vote on proposals no later than August 31, 2022 and PJM will submit its FERC filing by October 1, 2022. Any updates to the VRR Curve parameters will apply for planning years 2026/2027 through 2029/2030. PJM held three meetings to discuss the Quadrennial Review with stakeholders this period.

Energy Market Issues

Energy Price Formation Senior Task Force: After a two-year hiatus, PJM resumed the Energy Price Formation Senior Task Force, holding two meetings in August 2021. Stakeholders are exploring potential "circuit breaker(s)" or other stop loss approach(es) that could limit extreme pricing whose cost may exceed the value of its contribution to preserving grid reliability, citing recent events in ERCOT as support for a "circuit breaker" in PJM's Operating Reserve Demand Curve ("ORDC") and Transmission Constraint Penalty Factor rules. As part of this work, stakeholders will explore enhancements to the PJM's ORDC rules to address the impact of recent changes in PJM's dispatch protocols on forecast uncertainty embedded with the approved curve shape that are set to go into effect in May 2022.

Fast Start Pricing: On February 16, 2021, PJM submitted its compliance filing in accordance with the December 17, 2020 FERC Order to implement fast-start pricing in the PJM region. This compliance filing revised PJM's process for determining fast-start pricing eligibility, that is the mechanism which compensates units that are able to ramp up quickly. On May 20, 2021, FERC issued an order accepting PJM's compliance filing and set an effective date for fast start pricing implementation of July 1, 2021. At PJM's request, FERC moved the effective date to September 1, 2021 to avoid implementing the new pricing structure during the summer peak period.

FTR Forfeiture Rule: On May 20, 2021, FERC issued an order rejecting PJM's compliance filing revising PJM's implementation of the Financial Transmission Rights ("FTR") Forfeiture Rule. While accepting the majority of PJM's forfeiture rule revisions, the Commission specifically held that the test was unjust and unreasonable and ordered PJM to submit another compliance filing. On July 19, 2021, PJM filed proposed revisions to the Tariff and Operating Agreement related to the FTR Forfeiture Rule, in compliance with the Commission's order. In its filing, PJM proposed a revised approach to triggering forfeiture of applicable FTR-related revenues when appropriate, and provided additional related information requested by the Commission. PJM has proposed that FERC set an effective date of the first day of the month after FERC issues an order approving the filing.

Ancillary Services Market Initiatives

Operating Reserves Demand Curve ("ORDC"): As noted above, PJM and its stakeholders will be evaluating potential enhancements to the PJM's ORDC rules as part of the work of the Energy Price Formation Senior Task Force. Additionally, the ORDC that is set to go into effect in May 2022 is facing challenges at FERC. On August 13, 2021, FERC filed a Motion for Voluntary Remand of its Order approving PJM's Reserve Pricing Proposal (FERC Docket No. EL19-58, ER19-1486) with the District of Columbia Circuit Court of Appeals. In its motion, FERC cited leadership of a new Chairman as having "motivated a reconsideration of the Commission's prior determination." The Court granted the remand on August 23, 2021. At the August Markets & Reliability Committee, PJM updated stakeholders on the matter and advised that the present order remains in effect until FERC acts on the remand. In a related matter, the Supplemental Notice has been issued for the upcoming FERC Technical Conference Regarding Energy and Ancillary Service Markets, scheduled to occur on September 14, 2021. The agenda includes a panel entitled Revising Existing ORDCs to Address Operational Flexibility Needs in RTOs/ISOs that poses several questions related to reserves, shortage pricing and ORDCs.

Emerging Technologies

Electric Storage Participation: On July 16, 2020, FERC issued an order accepting certain PJM Electric Storage Resource ("ESR") compliance proposals to remove barriers from the participation of ESRs in wholesale markets. FERC further directed PJM to make an additional compliance filing by October 30, 2020 to clarify how its proposed tariff provisions prevent all distribution-connected ESRs from paying twice for the same charging energy or submit a new proposal to ensure such an outcome. PJM filed its stakeholder approved Effective Load Carrying Capability ("ELCC") proposal on October 30, 2020 that included variable resources such as wind and solar, in addition to electric storage. The ELCC construct determines the relative amount of capacity that variable, limited duration, and combination resources may offer into PJM's capacity market or provide in a Fixed Resource Requirement ("FRR") capacity plan. On April 30, 2021, FERC issued an order rejecting PJM's ELCC filing. FERC was supportive of the ELCC concept but rejected PJM's filing due to the inclusion of a transition mechanism that could potentially give existing resources a higher capacity value than newer resources. FERC ordered PJM to either file a new plan or begin a paper hearing; PJM submitted its revised ELCC filing to FERC with the transition mechanism removed and additional definitions added on June 1, 2021. On July 30, 2021, FERC accepted PJM's revised ELCC filing with an effective date of August 1, 2021. ELCC will set the capacity value of renewables and storage starting with the 2023/2024 Base Residual Auction.

[Distributed Energy Resource \(DER\) Aggregation](#): On March 18, 2021, FERC issued an order on rehearing of its Order 2222, which enables distributed energy resources (“DERs”) to participate alongside traditional resources in the regional organized wholesale markets by allowing them to aggregate to satisfy minimum size and performance requirements that they might not meet individually. The rehearing order largely affirmed Order 2222 but set aside, in part, the finding that the participation of demand response (“DR”) in DER aggregations is subject to an “opt-out” provision. Under a prior order, state regulators could prohibit grid operators from accepting offers from aggregated DR by “opting out.” The rehearing order held that the opt-out will continue to apply to DER aggregations that are comprised solely of DR resources, but that it will not apply to DR resources that participate in RTO/ISO markets through an aggregation that includes other non-DR resources. On June 17, 2021, the Commission issued Order 2222-B, setting aside its prior decision not to extend the opt-out to DR resources that participate in an aggregation that includes other non-DR resources. On April 9, 2021, FERC accepted PJM’s request to extend its compliance filing deadline on Order 2222 from July 19, 2021 to February 1, 2022. PJM continues to engage with stakeholders as it works toward developing its compliance filing through twice monthly meetings of its DER & Inverter Based Resources Subcommittee.

In a separate but related action, FERC initiated a rulemaking proceeding to determine whether the opt-out provision should be removed completely. FERC issued a Notice of Inquiry (“NOI”) asking whether the circumstances relevant to this DR opt-out provision have changed since the opt-out was established, and what are the potential benefits or burdens of removing it. Initial comments were filed July 23, 2021 and reply comments on August 23, 2021. The nearly three dozen responses illustrated a bifurcation amongst state commissions and DR participants, with states arguing against FERC waiving the opt-out rule citing state’s rights and DR providers arguing that barriers such as this should be removed.

Other

[PJM Members Elect David Mills to Board of Managers](#): On July 14, 2021, PJM Members voted to add David Mills to the PJM Board of Managers, filling a vacant seat created by the April resignation of Neil Smith. Mills has most recently been working as an energy consultant and is the former Senior Vice President of Policy and Energy Supply with Puget Sound Energy, where he was also Chief Strategy Officer. Prior to Puget Sound, Mills spent time with the Department of Energy’s Bonneville Power Administration. Mills will serve a three-year term.

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Summary: Report Quarterly Update Report Pursuant to Section V.C.2. of the Third Supplemental Stipulation and Recommendation electronically filed by Ms. Christine E. Watchorn on behalf of Ohio Edison Company and The Cleveland Electric Illuminating Company and The Toledo Edison Company