FirstEnergy's Perspective on PJM's Wholesale Electricity Markets: 2022

Q1 2022 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

PJM and its stakeholders continue to discuss broad, holistic reforms in PJM's capacity, energy, and ancillary services markets. PJM's Base Residual Auctions have been delayed due to FERC orders affecting the calculation of the Energy & Ancillary Services Offset and the elimination of the 10% adder. PJM's Resource Adequacy Senior Task Force and Quadrennial Review are underway and tackling a wide range of capacity market reforms. After a lengthy stakeholder process, PJM submitted a balanced compliance filing for FERC Order 2222 and implementation efforts will continue via the DER and Inverter-Based Resources Subcommittee. PJM members may have to pay for another financial marketer default; PJM worked with stakeholders to explore options for the disposition of the portfolio positions.

Capacity Market Issues

PJM Capacity Market Auction Schedule Delayed Again: PJM's upcoming 2023/2024 Base Residual Auction ("BRA") will be delayed again following FERC's December 22, 2021 Order on Voluntary Remand in which the Commission partially reversed its May 2020 decision on PJM's proposed energy price formation revisions (see below for detail). FERC accepted PJM's proposed amendments to the auction schedule for the 2023/2024 and subsequent BRAs on February 22, 2022. The amended schedule is as follows: 2023/2024 auction to be held June 8, 2022, the 2024/2025 BRA to be held in December 2022, the 2025/2026 BRA to be held in June 2023, the 2026/2027 BRA to be held in November 2023, and the 2027/2028 BRA to be held in May 2024.

<u>PJM Capacity Reforms</u>: The Resource Adequacy Senior Task Force ("RASTF") was formed in Q4 2021 and tasked with Phase II Capacity Market reforms. The RASTF's Issue Charge encompasses potential Capacity Market reforms that were identified in the Capacity Market Workshops held in early 2021. Targeting holistic capacity market reform, the scope includes Performance Assessments; Capacity Resource Qualification and Accreditation; Procurement Process, Timeframes, and Levels; Capacity Resource Obligations; Supply-Side Market Power Mitigation Rules; Fixed Resource Requirement Rules; and Procurement of Clean Resource Attributes and Inclusion of the Social Cost of Carbon in Markets. Work is scheduled to continue through the end of 2023.

Quadrennial Review: PJM's Tariff 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 will present its Staff proposals in the stakeholder process 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.

10% Adder Reversed: As part of the 2018 Quadrennial Review, PJM filed changes at FERC to include a 10% adder to modeled energy market offers, along with other changes to the VRR curve, which were approved by FERC in 2019. In July 2021, the D.C. Circuit Court found that the Commission's prior approval of the 10% Adder was arbitrary and capricious and further remanded the issue to the Commission. On January 20, 2022, the Commission modified the remanded VRR Orders and rejected PJM's 10% adder in the determination of the VRR Curve for the BRA 2023/2024 Delivery Year and subsequent auctions and directed PJM to submit a compliance filing within 30 days. This change will not further delay the 2023/2024 auction from the proposed June 8, 2022 date.

Energy Market Issues

Energy Price Formation: On December 22, 2021, FERC partially reversed its May 2020 decision on PJM's proposed energy price formation revisions, requiring tariff and Operating Agreement revisions within 60 days. In a 3-1 vote, the Commission reaffirmed its previous decision directing PJM to consolidate its tier 1 and tier 2 reserve products, but it said it erred in its approval of changes to the shape of the RTO's operating reserve demand curve (ORDC). FERC ordered PJM to maintain its currently effective reserve penalty factors of \$850/MWh for the synchronized reserve requirement and primary reserve requirement and \$300/MWh for the extended requirements. FERC also reversed its decision on PJM's forward-looking energy and ancillary services ("E&AS") offset, a key variable in calculating the net cost of new entry ("CONE") for resources in capacity auctions. PJM must now revert to the previous, backward-looking E&AS offset. FERC recognized that PJM would need to delay the BRA for the 2023/2024 delivery year, originally scheduled for January 25, 2022, to implement the revised E&AS offset; prior auctions run using the forward-looking calculation will not need to be rerun. See above for detail on capacity market schedule.

<u>Transmission Constraint Penalty Factors:</u> On February 18, 2022, FERC accepted PJM's proposed revisions to the Tariff and Operating Agreement to temporarily suspend Transmission Constraint Penalty Factors ("TCPF") in Virginia's Northern Neck Peninsula. One of the three lines serving the area was placed on outage at the beginning of the year, creating price fluctuations of the TCPF to its default rate of \$2,000/MWh in the real-time energy market. PJM believes the TCPF rules caused unjust and unreasonable rates for consumers in the area, contributing to the Hill Energy Default (see below). FERC agreed that the current rules were resulting in higher costs to ratepayers without a commensurate benefit and directed PJM to submit informational filings on congestion patterns in the area every 90 days until the outage is complete.

Ancillary Services Market Issues

Reactive Power Compensation: At the FERC meeting on November 18, 2021, FERC Staff introduced a Notice of Inquiry ("NOI") proceeding regarding reactive power compensation. The Commission is seeking comment on various aspects of the AEP methodology-based compensation, potential alternative methodologies, and reactive power compensation through transmission rates for resources that interconnect at the distribution level. The Commissioners voted unanimously to approve the proceeding. Comments were filed by 34 parties, covering a range of subjects, including, but not limited to, treatment of previously approved rates, possible modifications to the AEP methodology and alternatives to the AEP methodology.

Emerging Technologies

PJM's Order 2222 Compliance Filing: On February 1, 2022, PJM submitted its compliance filing in response to FERC Order 2222, requesting an effective date of February 2, 2026. A few highlights from PJM's compliance filing include the following: the PJM tariff establishes DER Aggregators as Market Participants and a DER Aggregation Participation Model for wholesale market participation, allowing for both homogeneous and heterogenous aggregations; state processes and interconnection jurisdiction is preserved; PJM proposes a nodal model for energy market participation and simultaneously a multi-nodal model for capacity and ancillary services-only DER Aggregation Resources; telemetry shall be required for each DER Aggregation Resource, but not at the individual Component DER level; DER Aggregators must provide all individual Component DER meter data necessary to facilitate the settlement of the DER Aggregation Resource; state implementation process will occur at State/Local levels. PJM anticipates dialogue on various issues and implementation efforts will continue with stakeholders through the DER and Inverter-Based Resources Subcommittee. Comments on PJM's compliance filing are due on April 1, 2022.

Other

Hill Energy Default: Hill Energy Resource and Services defaulted on a \$921,000 margin call in the Financial Transmission Rights market on January 11, 2022. The amount has been partially satisfied by PJM withholding settlement payments. Additionally, PJM holds \$6.1 million in collateral against the defaulted portfolio. PJM worked with stakeholders to determine a course of action that will produce the least financial impact on market participants. Based on stakeholder feedback, PJM will attempt to sell the positions in the upcoming regularly scheduled FTR auctions; positions through March 2022 will go to settlement. After accounting for the collateral, market participants will have to cover any cost of the default.

<u>FERC Commissioner Update</u>: On November 16, 2021, the U.S. Senate unanimously confirmed D.C. Public Service Commission Chairman Willie Phillips as the newest member of the Federal Energy Regulatory Commission. On December 3, 2021, Phillips was sworn in, beginning his role as FERC Commissioner. Phillips is serving a five-year term that ends June 30, 2026.

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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