

FirstEnergy's Perspective on PJM's Wholesale Electricity Markets: 2018

ADDENDUM: Q4 2018 ISSUES

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

Executive Summary

FERC and PJM are once again at a crossroads in contemplating major capacity market rule changes. On behalf of the long-term best interest of customers, FirstEnergy strongly believes that FERC should comprehensively and holistically evaluate changes to PJM wholesale market construct in order to make them just and reasonable, and to ensure that they properly value generation that provides key attributes to the grid, such as fuel security, fuel diversity and resilience. FERC's efforts regarding the proposed market changes and timing associated with their implementation are unclear due to numerous changes in the Commission's composition. Commissioner Robert Powelson resigned from FERC in August 2018, and his slot remains unfilled until nominee Bernard McNamee is confirmed by the US Senate. In addition, Commissioner Neil Chatterjee was recently named FERC Chairman in October 2018 after Kevin McIntyre stepped down from the Chairmanship due to health issues, though Commissioner McIntyre remains on the Commission.

Capacity Market Initiatives

Fuel Security: On November 1, PJM released a summary of its long-awaited fuel security analysis titled "Phase I report" and reviewed its analysis results with stakeholders. PJM's study found that there is no immediate threat to fuel security in the PJM region. PJM's study found that the grid was reliable in both retirement scenarios for all typical winter load scenarios, and the announced retirement cases were reliable under all extreme winter load scenarios. However, the grid was not reliable in certain extreme weather, escalated retirement scenarios which resulted in load shed. The study noted that these stressed scenarios resulting in a loss of load and high LMPs were extreme but plausible. PJM conceded that while there is no imminent threat to fuel security in the PJM region, the issue of fuel security is an important component of ensuring reliability that deserves additional study and discussion. PJM will release a comprehensive white paper on this analysis in mid-December, which will be reviewed at a December 20, 2018 meeting. PJM expects to introduce a stakeholder process regarding fuel security in Q1 2019 with any potential market changes (including "proactive measures to value fuel security attributes") to be filed at FERC in early 2020. If any solution is determined to be necessary for the capacity market, the earliest those would take effect would likely be for the 2023/2024 Delivery Year.

Minimum Offer Price Rule: On October 2, 2018, parties filed initial comments in response to FERC's June 29, 2018 order ("June 2018 Order") on the PJM Minimum Offer Price Rule ("MOPR"). Specifically, the June 2018 Order found that the existing PJM Tariff is not just and reasonable because it does not protect the wholesale capacity market from price distortion caused by certain State subsidies. The FirstEnergy

Utilities submitted initial comments that recommended that FERC issue an order finding that all of the PJM wholesale markets are unjust and unreasonable and invite comments addressing what holistic reforms are needed to fix them, rather than implementing yet another “Band-Aid” fix. PJM submitted initial comments that suggested MOPR’s for all fuel types and both new and existing resources if they are receiving an “actionable” subsidy. From there, PJM proposed exclusions from the MOPR based on certain filters. One of those exclusions is resources owned by self-supply entities, such as vertically integrated utilities or public power. Further, PJM proposed to exclude any resources receiving federal subsidies that were initiated before March 21, 2016 from the MOPR, and to apply the MOPR to any resources receiving federal subsidies enacted after that date unless legislation expressly provides otherwise. On November 6, 2018, parties filed reply comments in the same proceeding. The vast majority of reply comments focused on the benefits or harms of PJM’s expanded MOPR and associated Fixed Resource Requirement/opt-out issues. Additional comments and analysis were submitted regarding other proposals, including the Sustained Market Rule (proposed by the PJM Independent Market Monitor), the Capacity Performance with Sponsored Supply (proposed by Vistra/Dynegy and similar to what has been adopted in ISO-NE), the Clean MOPR (proposed by the PJM Power Providers Group and EPSA), the carbon pricing proposal (proposed by Eastern Generation), and the Competitive Carve-Out (proposed by the Maryland Public Service Commission).

[Quadrennial Review](#): On October 12, 2018, PJM filed proposed revisions to its tariff resulting from the stakeholder process around the Quadrennial Review performed every four years. The filing proposes revisions to certain auction parameters, including adjustments to the Variable Resource Requirement (VRR) curve which will have the effect of significantly lowering the prices on that curve at all capacity levels. The PJM proposal also updates the technology assumed for the reference unit, which reduces Gross Cost of New Entry by over 20%. PJM requests that the proposed revisions become effective January 17, 2019. On November 19, 2018, the FirstEnergy Utilities submitted initial comments that requested the Commission deny the PJM proposal and to instead perform a comprehensive and holistic review of all of PJM’s wholesale markets resulting in just and reasonable rules that retain fuel-secure and resilient baseload generation needed for grid stability, which is in the best interest of customers.

Energy Market Issues

[Energy Market Price Formation](#): PJM has continued working through its price formation proposals at the Energy Price Formation Senior Task Force (EPFSTF). PJM currently proposes to: (i) Consolidate tier 1 and tier 2 into one product with uniform compensation, obligation and penalty and to enhance the must offer for reserves; (ii) Develop more flexible reserve zone modeling, using the regional model that exists today and define additional regions; and (iii) Implement ORDC enhancements where reserve value beyond the minimum requirement is based on statistical representation of uncertainty. PJM plans to have all stakeholder voting on these proposals complete by end of January 2019.

[Transmission Constraint Penalty Factors](#): On November 9, 2018, PJM submitted revisions to its Tariff and Operating Agreement around Transmission Constraint Penalty Factors. PJM proposes to (a) specify the circumstances under which the Transmission Constraint Penalty Factor may be used to determine the Marginal Value of a transmission constraint, (b) provide the default Transmission Constraint Penalty Factor values, and (c) explain the procedure for temporarily changing the default Transmission Constraint Penalty Factor values. PJM is requesting an effective date of February 1, 2019.

Gas-Electric Coordination: On November 8, 2018, PJM submitted proposed revisions to its Tariff and Operating Agreement around the Day-Ahead market timeline. The revisions extend the deadline for all Market Participants submitting bids and offers into the Day-ahead Energy Market by thirty minutes and will provide additional time for Market Participants with generation units that rely on natural gas to engage in additional price discovery each day in natural gas markets, thereby increasing fuel price certainty when they submit bids and offers. The filing is a further step in PJM's ongoing work to enhance gas/electric coordination.

Ancillary Services Market Initiatives

No major activity this reporting period.

Emerging Technologies

Electric Storage Participation and Distributed Energy Resource (DER) Aggregation: No major activity this period; PJM has been preparing for its December 3 filing at FERC which will be covered in next quarter's report.

Other

PJM Credit Policy Changes/Financial Transmission Rights (FTR) Credit Requirements: On September 26, 2018, FERC issued two orders in proceedings that stem from the GreenHat Energy FTR default. First, FERC approved PJM's proposal to revise its credit policy to apply a minimum credit requirement of \$0.10/MWh to FTR market participants. FirstEnergy was supportive of this proposal. While the PJM proposal would not have prevented or covered the entire cost associated with the GreenHat Energy default, had the Proposal been in place at the time of GreenHat's default, there would have been an extra \$89 million available to offset the costs of the default. Second, the Commission issued an order in response a complaint filed by DC Energy that alleged the PJM Tariff is not just and reasonable because it failed to impose credit or collateral requirements to FTR market participants, which led to the GreenHat default. The Commission found that additional briefing on the issues is necessary and instituted a paper hearing to determine whether additional measures on top of the minimum credit requirements discussed above are needed to ensure the Tariff is just and reasonable. Parties filed initial comments on November 9, 2018.

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Summary: Notice of Quarterly Update Pursuant to Section V.C.2. of the Third Supplemental Stipulation and Recommendation electronically filed by Mr. Scott J Casto on behalf of The Cleveland Electric Illuminating Company and The Toledo Edison Company and The Ohio Edison Company