UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.	)))	Docket No. ER26-455-000

MOTION FOR LEAVE TO ANSWER AND ANSWER OF
PJM INTERCONNECTION, L.L.C.

PJM Interconnection, L.L.C. ("PJM"), pursuant to Federal Energy Regulatory Commission ("Commission" or "FERC") Rules of Practice and Procedure 212 and 213,[1] submits this Motion for Leave to Answer and Answer to the protests[2] filed in response to PJM's November 7, 2025 filing of proposed revisions to its Open Access Transmission Tariff ("Tariff")[3] to update certain Reliability Pricing Model ("RPM") auction parameters as required by the Tariff at least every four years through an analysis and stakeholder process ("2025 Periodic Review").[4] The 2025 Periodic Review proposes updates to the Cost of New Entry ("CONE") for the Reference Resource and adjusts the existing Variable Resource Requirement ("VRR") Curve used to clear RPM Auctions and secure capacity commitments for future Delivery Years. As further discussed below, the proposed updates in the 2025 Periodic Review, which account for circumstances that were not previously considered in the last quadrennial review that led up to PJM's current temporary price

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[1] 18 C.F.R. §§ 385.212, 385.213.

[2] *PJM Interconnection, L.L.C.*, Protest of the Independent Market Monitor for PJM, Docket No. ER26-455-000 (Dec. 8, 2025) ("Market Monitor Protest"); *PJM Interconnection, L.L.C.*, Protest of the Maryland Office of People's Counsel, Docket No. ER26-455-000 (Dec. 8, 2025) ("Maryland OPC Protest").

[3] The Tariff is currently located under PJM's "Intra-PJM Tariffs" eTariff title. *See* PJM Interconnection, L.L.C. - Intra-PJM Tariffs, https://etariff.ferc.gov/TariffBrowser.aspx?tid=1731. Terms not otherwise defined herein shall have the same meaning as set forth in the Reliability Assurance Agreement ("RAA"), the Tariff, and the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. ("Operating Agreement").

[4] *PJM Interconnection, L.L.C.*, Periodic Review of Variable Resource Requirement Curve Shape and Key Parameters, Docket No. ER26-455-000 (Nov. 7, 2025) ("2025 Periodic Review Filing").

collar filing,[5] will provide needed improvements to the future performance of the capacity market. The Commission should therefore accept the 2025 Periodic Review Filing to be effective January 23, 2026, as requested.

I. INTRODUCTION AND SUMMARY

The 2025 Periodic Review Filing proposed Tariff revisions that update the shape of the VRR Curve and certain key inputs, e.g., technical specifications for the Reference Resource and the CONE of that Reference Resource. Similar to past reviews, PJM's proposed changes are supported by a detailed, independent review of those parameters by expert outside consultants (The Brattle Group and Sargent & Lundy), who determined that the proposed updates are appropriate for RPM to continue to meet its primary purpose to "provide reasonable prices over time to retain existing efficient generation and to attract new entry when needed."[6] The proposed modifications are amply supported by (i) the consultants' two comprehensive reports that detail their analyses, review, and recommendations and (ii) the supporting affidavits. Accordingly, the Commission has

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[5] *PJM Interconnection, L.L.C.*, Proposal for Revised Price Cap and Price Floor for the 2026/2027 and 2027/2028 Delivery Years, Docket No. ER25-1357-000 (Feb. 20, 2025).

[6] *PJM Interconnection, L.L.C.*, 128 FERC ¶ 61,157, at P 24 (2009); *see also Calpine Corp. v. PJM Interconnection, L.L.C.*, 171 FERC ¶ 61,034, Glick Dissent at P 84 (2020) ("The purpose of a capacity market, the whole reason the market exists, is to ensure resource adequacy at just and reasonable rates."); *Calpine Corp. v. PJM Interconnection, L.L.C.*, 171 FERC ¶ 61,035, at P 230 (2020) ("The objective of the capacity market is to select the least cost resources to meet resource adequacy goals."); *PJM Interconnection, L.L.C. v. PJM Interconnection, L.L.C.*, 155 FERC ¶ 61,157, at P 112 (2016) ("The purpose of the capacity market is to ensure PJM has adequate resources during an emergency."); *PJM Interconnection, L.L.C.*, 143 FERC ¶ 61,090, at P 56 (2013) ("The purpose of RPM is to clear the least-cost set of resources needed to meet reliability needs."), *order on reh'g*, 153 FERC ¶ 61,066 (2015), *remanded sub nom. NRG Power Mktg., LLC v. FERC*, 862 F.3d 108 (D.C. Cir. 2017); *see also ISO New England, Inc.*, 162 FERC ¶ 61,205, at P 21 (2018) ("A capacity market should facilitate robust competition for capacity supply obligations, provide price signals that guide the orderly entry and exit of capacity resources, result in the selection of the least-cost set of resources that possess the attributes sought by the markets, provide price transparency, shift risk as appropriate from customers to private capital, and mitigate market power. Ultimately, the purpose of basing capacity market constructs on these principles is to produce a level of investor confidence that is sufficient to ensure resource adequacy at just and reasonable rates."), *order on reh'g*, 173 FERC ¶ 61,161 (2020), *reh'g denied*, 174 FERC ¶ 62,041 (2021).

substantial evidence in this record on which it can find just and reasonable the proposed updates to the VRR Curve, Reference Resource, and CONE in the 2025 Periodic Review Filing.

Additionally, PJM's 2025 Periodic Review Filing is supported by the Pennsylvania Public Utility Commission, LS Power Development, LLC ("LS Power") and the PJM Power Providers Group ("P3").[7] Only two entities protested the 2025 Periodic Review Filing: the Market Monitor and the Maryland Office of People's Counsel ("Maryland OPC").[8] This answer and accompanying affidavit rebut all material objections raised in the Market Monitor and Maryland OPC's protests to the 2025 Periodic Review filing.

II. MOTION FOR LEAVE TO ANSWER

Although Commission Rule 213(a)(2) does not generally permit answers to protests,[9] the Commission permits answers for good cause shown, such as when an answer contributes to a more accurate and complete record or provides useful information that assists the Commission's deliberative process.[10] This Answer will aid the Commission's

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[7] *PJM Interconnection, L.L.C.*, Comments of the Pennsylvania Public Utility Commission, Docket No. ER26-455-000 (Dec. 8, 2025) ("PA PUC Comments"); *PJM Interconnection, L.L.C.*, Supporting Comments of LS Power Development, LLC, Docket No. ER26-455-000 (Dec. 8, 2025) ("LS Power Comments"); *PJM Interconnection, L.L.C.*, Comments of the PJM Power Providers Group, Docket No. ER26-455-000 (Dec. 8, 2025) ("P3 Comments").

[8] *PJM Interconnection, L.L.C.*, Protest of the Independent Market Monitor for PJM, Docket No. ER26-455-000 (Dec. 8, 2025) ("Market Monitor Protest"); *PJM Interconnection, L.L.C.*, Protest of the Maryland Office of People's Counsel, Docket No. ER26-455-000 (Dec. 8, 2025) ("Maryland OPC Protest"). While the New Jersey Board of Public Utility Control also filed comments that discussed the concerns with market conditions and affordability, the Board's comments expressly state that it "does not contest the[] inputs or parameters for the VRR Curve." *PJM Interconnection, L.L.C.*, Comments of the New Jersey Board of Public Utilities, Docket No. ER26-455-000, at 1 (Dec. 8, 2025).

[9] 18 C.F.R. § 385.213(a)(2).

[10] *See, e.g.*, *N.Y. State Pub. Serv. Comm'n v. N.Y. Indep. Sys. Operator, Inc.*, 158 FERC ¶ 61,137, at P 29 (2017) ("We will accept the Companies' and the Complainants' answers because they have provided information that assisted us in our decision-making process."), *order on reh'g*, 174 FERC ¶ 61,110 (2021); *Colonial Pipeline Co.*, 157 FERC ¶ 61,173, at P 23 (2016) ("In the instant case, the Commission will accept the Protestors' Answers and Colonial [Pipeline Co.]'s Answer because they have provided information that assisted us in our decision-making process.").

decision-making process by providing responses to the various comments and protests filed in response to PJM's 2025 Periodic Review Filing. PJM therefore asks that the Commission accept this Answer.

III. ANSWER

A. The Updated Values Associated with the Cost of New Entry for the Reference Resource Technology are Just and Reasonable.

As a threshold matter, no party disputes PJM's proposed selection of a combustion turbine ("CT") with updated technical specifications. Indeed, even the Market Monitor's Protest acknowledges that it "supports the choice of the CT with dual fuel capability as the reference resource."[11] Thus, PJM's selection of a CT as the Reference Resource is indisputably just and reasonable.

Instead, the disagreements are limited to the updated gross CONE values for the CT as the Reference Resource. While LS Power and P3 support PJM's 2025 Periodic Review filing, both suggest that the actual gross CONE for the CT may be significantly greater than the values estimated by PJM's consultants, The Brattle Group ("Brattle") along with Sargent & Lundy ("S&L").[12] On the other hand, the Market Monitor contends that the updated CONE values should be lower than what PJM's consultants estimate. Given that LS Power and P3 ultimately support PJM's proposed updates, this answer is limited to explaining why the arguments regarding an overestimated gross CONE value are unpersuasive and do not render PJM's proposal unjust and unreasonable. Further, the Commission need not consider the Market Monitor's alternative gross CONE value as it has consistently recognized that "[u]nder FPA section 205, the Commission determines the

[11] Market Monitor Protest at 3.

[12] LS Power Comments at 2; P3 Comments at 6-7.

justness and reasonableness of the proposal before it and is not obligated to consider whether the proposal is more or less reasonable than other alternatives."[13]

While the Market Monitor's calculation of total overnight project costs independently aligns with the value that Brattle calculated,[14] the Market Monitor's calculated gross CONE values differ from PJM's updated values based on three components: the build timeline, the capital spend drawdown schedule, and the amount of bonus depreciation realized in year one.[15] In support of the updated gross CONE values, PJM pre-emptively addressed each of the Market Monitor's highlighted concerns, which was explained in the Brattle CONE Report, supporting affidavits, and transmittal letter as part of the initial PJM filing.[16] Thus, there is already ample evidence in the record to support the justness and reasonableness of PJM's updated CONE values. Notwithstanding, PJM submits this answer, along with an additional affidavit from Brattle, to provide further support in response to the Market Monitor's protest.[17]

As an initial matter, it is noted that the Market Monitor never released its CONE model for public review either in the stakeholder process or in this proceeding. By contrast, Brattle publicly posted their gross CONE model, which allows any interested party to

[13] *PJM Interconnection, L.L.C.*, 182 FERC ¶ 61,183, at P 33 (2023); *Midcontinent Indep. Sys. Operator, Inc.*, 169 FERC ¶ 61,038, at P 12 (2019).

[14] The Market Monitor calculated that total overnight project costs for EMAAC were $552 million compared to the Brattle calculated total overnight project costs for EMAAC at $547 million. Monitoring Analytics, Quadrennial Review Issues, at 6 (May 19, 2025), https://www.pjm.com/-/media/DotCom/committees-groups/committees/mic/2025/20250519-special/item-01c---Market Monitor-mic-quadrennial-review-perspective.pdf.

[15] Market Monitor Protest at 3.

[16] *See* 2025 Periodic Review Filing.

[17] *See* Attachment A, Answer Affidavit of Dr. Samuel A. Newell, Dr. Andrew W. Thompson, Dr. Bin Zhou, and Joshua C. Junge ("Brattle Rebuttal Affidavit").

validate all inputs, and ensure the calculations are reasonable.[18] Having a publicly available CONE model provides transparency for all interested parties as to the calculation of the gross CONE values for each CONE Area. By contrast, the lack of any access to the Market Monitor's CONE model does not allow for adequate review of the inputs and ultimately amounts to insufficient record evidence necessary to support the Market Monitor's gross CONE assertions.

1. Project Timelines and Capital Expenditure Schedule Are Fully Supported.

Capital expenditure schedules affect the CONE calculation because the more capital that is incurred earlier, the higher the carrying costs, and thus, the higher the total installed project cost of developing a new resource. Brattle explains that, consistent with past CONE studies, it modeled capital expenditures closer to the time of construction relative to the Market Monitor's earlier project timeline.[19] However, Brattle's model accounts for the "current tight market conditions with long lead-times for major critical path equipment, whereas the IMM's version appears not to."[20] More particularly, the tight market "ha(s) resulted in reservation fees and more front-loaded payment schedules for turbines and other major equipment provided by the [Original Equipment Manufacturers]."[21] Brattle reached its overall capital drawdown schedule based on "actual recent and ongoing projects for which S&L is serving as owners' engineers" and validated the payment schedule for major equipment through extensive dialogue with the equipment

[18] PJM, MIC Meeting, Updated Brattle CONE Model (Aug. 22, 2025), https://www.pjm.com/-/media/DotCom/committees-groups/committees/mic/2025/20250822-special/updated-brattle-cone-model.xlsx.

[19] Brattle Rebuttal Affidavit at ¶ 7.

[20] *Id.* ¶ 8.

[21] *Id.*

manufacturer General Electric ("GE").[22] Indeed, GE provided Brattle/S&L with a standard payment schedule for the 7HA.03 technology and related major equipment for the CT, and Brattle confirmed that GE's payment schedule was consistent with S&L's modeling of payments for turbines and other major GE-provided equipment embedded in the capital expenditure schedule.[23] Additionally, S&L reached the 44-month capital drawdown schedule "based on recent/ongoing experience as owner's engineer for several similar plants, and through conversations with GE," a combustion turbine manufacturer.[24] Specifically, PJM's initial filing explained that Brattle, along with S&L, updated the project schedule to 44 months due to, "the tight market for turbines and other major components has lengthened the project development period by 24 months since the 2022 PJM CONE Study."[25] GE then validated the capital drawdown schedule that S&L had independently determined based on its expertise in engineering and developing gas plants.[26] Brattle, along with S&L, were selected precisely because of their technical expertise and experience working with project developers to build new generation resources.

By contrast, the gross CONE values that were initially calculated by the Market Monitor and introduced publicly at the May 19, 2025 MIC Special Session meeting initially assumed "a 37 month total project schedule."[27] The Market Monitor's project schedule

[22] *Id.*

[23] *Id.*

[24] 2025 Periodic Review Filing, Brattle/S&L CONE Aff. at ¶ 28.

[25] 2025 Periodic Review Filing, Brattle/S&L CONE Aff. at 45.

[26] Brattle Rebuttal Affidavit at ¶ 8.

[27] Monitoring Analytics, Quadrennial Review Issues, at 6 and 14 (May 19, 2025), https://www.pjm.com/-/media/DotCom/committees-groups/committees/mic/2025/20250519-special/item-01c---Market Monitor-mic-quadrennial-review-perspective.pdf.

remained at 37 months for multiple presentations until the September 10, 2025 MIC, when it was updated to 65 months[28] without any support besides indicating that "discussions with GE have resulted in the conclusion."[29]

2. PJM's Proposal Regarding Bonus Depreciation is Just and Reasonable.

The bonus depreciation used in the Brattle gross CONE values are also well documented in PJM's Periodic Review Filing.[30] Brattle's approach is consistent with the Market Monitor's contention that investors should attempt to "make efficient and profit maximizing use of the *available* tax benefits."[31] That is, where a developer does not have sufficient tax liability in the first year of operation, the maximum tax benefit associated with the bonus depreciation is simply not available to such developer in the first year.

As Brattle explained, because the installed cost of a new CT plant exceeds a typical merchant generation owner's taxable income for the first year of operation, it is not reasonable to assume such a seller would take 100% bonus depreciation in the first year. Rather, a more likely assumption is that the developer would spread it out over a few years. Indeed, Brattle estimated the taxable income of four publicly traded independent power producers ("IPPs") in PJM over the most recent three years (2022 – 2024).[32] All but one IPP had much lower taxable income than the cost of a single CT project. And, as Brattle explains, the lone IPP with higher taxable income (Constellation) "would find its tax

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[28] Monitoring Analytics, *IMM Gross and Net CONE Impact of Extended Project Schedule*, at 2 (Sept. 10, 2025, https://www.pjm.com/-/media/DotCom/committees-groups/committees/mic/2025/20250910/20250910-item-02-1b---quadrennial-review-proposal---Market Monitor.pdf.

[29] *Id*.

[30] 2025 Periodic Review Filing at 30.

[31] Market Monitor Protest at 4-5 (emphasis added).

[32] Brattle Rebuttal Affidavit at ¶ 13.

appetite limited if it is building multiple projects nationally to meet the current high national demand for power."[33]

In further support of this conclusion, Brattle also consulted with experienced tax advisors in the energy space to determine whether IPPs could monetize the full value of bonus depreciation right away by structuring arrangements with tax equity investors. Based on those consultations, Brattle concluded that it is unrealistic for IPPs to realize bonus depreciation more quickly than its own taxable income allows because "no market has developed for depreciation-only investment structures with partner entities like it has for clean energy tax credits."[34] Accordingly, Brattle assumed a 7-year straight-line depreciation as a reasonable approximation for CT plants, which "is mathematically equivalent to a 40/60 weighted average between the Min and Max CONE benchmarks."[35]

In short, contrary to the Market Monitor's assertion that Brattle provided inadequate evidence that investors could not take advantage of the full depreciation in one year, Brattle's expert testimony explained that a typical merchant generation owner's taxable income for the first year of operation would likely be less than the installed cost of a new CT so an investor would not be able to maximize the 100% bonus depreciation by taking it all in one year. This finding by Brattle, an expert consultant that frequently works with the generation development community, is corroborated by independent power producers such as LS Power, which explained that independent power producers "tend to have limited taxable income relative to the capital costs of new projects."[36] Indeed, P3, a

[33] *Id.*

[34] *Id.* at ¶ 14.

[35] *Id.* at ¶ 15.

[36] LS Power Comments at 10.

coalition of power providers that own over 108,000 MWs of generation assets in the PJM Region, confirmed that "the magnitude of today's capital costs make it unrealistic for merchant developers to absorb the full amount of bonus depreciation immediately, particularly given limited taxable income and the absence of a mature market for monetizing depreciation-only tax attributes."[37]

B. PJM's Proposed VRR Curve is Just and Reasonable.

As an initial matter, the Maryland OPC argument that the existing price collar should be extended because the same market conditions that necessitated the temporary price collar for the 2026/2027 and 2027/2028 Delivery Years are likely to persist into the foreseeable future are outside the scope of this proceeding. Specifically, PJM's 2025 Periodic Review does not propose an extension of the price collar. As a result, consistent with Commission precedent, arguments that the temporary collar should be extended for the foreseeable future should be disposed as they are simply outside the scope of this proceeding.[38] Issues associated with whether the current price collar should be extended have been presented by the Maryland OPC and others to the PJM Board through PJM's ongoing critical issue fast path process. The Commission should neither out-run nor pre-judge the outcome of that process but instead adjudicate such issues (which themselves are

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[37] P3 Comments at 8.

[38] *See PJM Interconnection, L.L.C.*, 152 FERC ¶ 61,187, at P 25 (2015); PJM Interconnection, L.L.C., 147 FERC ¶ 61,028, at P 43 (Apr. 9, 2014) ("the reasonableness of the solution-based DFAX methodology is beyond the scope of this proceeding."); *PJM Interconnection, L.L.C., et al.*, 139 FERC ¶ 61,242, at P 29 (2012) (the issue in this docket is whether PJM's Filing complies with Order No. 503's directives, not whether the merchant transmission facilities customer agreements allow for the pass-through of RTEP costs or whether pass-through of RTEP costs to such customers is consistent with the public interest); *PJM Interconnection, L.L.C.*, 139 FERC ¶ 61,010, at P 11 (2012) (issues raised by the Illinois Commission are beyond the scope of the docket and the only issue is "whether PJM has determined the cost responsibility . . . consistent with the methodology set forth in Schedule 12 of the PJM Tariff"); and *PJM Interconnection, L.L.C.*, 135 FERC ¶ 61,044, at P 20 (2011) (finding that the ICC did not state that the modeling assumptions used by PJM were inconsistent with the Tariff and, thus, further inquiry into the modeling assumptions required by the Tariff is beyond the scope of this proceeding).

tied to the impact of large load additions on capacity price levels) in the context of potential future filings necessary to effectuate proposals stemming from the critical issue fast path.

Further, as PJM noted in the 2025 Periodic Review Filing, the Commission's acceptance of the temporary price collar filing was "based on the confluence of unusual facts and circumstances presented" that "were not considered" in PJM's 2022 Periodic Review (i.e., interconnection backlog and ongoing queue reforms, compressed capacity auction schedule, and updates to capacity accreditation together with market conditions of near or actual shortage).[39] Those factors have evolved and been considered in the course of conducting the 2025 Periodic Review. The purpose of the Periodic Review is to "perform a review of the shape of the [VRR] Curve … based on simulation of market conditions to quantify the ability of the market to invest in new Capacity Resources and to meet the applicable reliability requirements on a probabilistic basis."[40] Thus, in accordance with this Tariff requirement, PJM engaged with an independent consultant to develop, *inter alia*, an updated shape of the VRR Curve based on the market conditions and circumstances that did not exist at the time of the last periodic review that was filed in 2022. In other words, the proposed updates in the 2025 Periodic Review filing account for and were "developed in the context of: (1) tight market conditions, (2) uncertainties that make it difficult to provide stable long-term investment signals, and (3) recent and anticipated RPM market design changes."[41]

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[39] 2025 Periodic Review Filing at 11-12 (citing *PJM Interconnection, L.L.C.*, 192 FERC ¶ 61,258, at P 37 (2025).

[40] Tariff, Attachment DD, section 5.10(a)(iii)

[41] 2025 Periodic Review Filing at 7.

Additionally, PJM explained in the 2025 Periodic Review Filing that since PJM requested a temporary price collar, PJM's Generation Interconnection Queue reforms, including the "fast lane" projects and the completion of Transition Cycle 1 contributed towards addressing the interconnection backlog that previously existed.[42] Furthermore, PJM's Reliability Resource Initiative ("RRI") provided a path for 11,000 MW of shovel-ready natural gas, nuclear and battery projects (both new construction and upgrades to existing generators) to be added to Transition Cycle 2, which is underway. Likewise, the compressed auction schedule that existed at the time of PJM's temporary price collar filing has improved as the Base Residual Auctions ("BRA") are on track to return to the normal three-year forward auction by May 2027 when the 2030/2031 BRA is scheduled to occur.[43] Additionally, since the time PJM submitted the temporary price collar, PJM has submitted several other capacity market rule updates that have been accepted.[44]

As PJM noted in the 2025 Periodic Review filing, designing a demand curve requires balancing "multiple considerations."[45] Here, the proposed demand curve balances the priorities identified by stakeholders, state regulators, and PJM following twelve months of discussions—i.e., increased stability, decreased volatility in the capacity market as significant priorities in the 2025 Periodic Review, and avoidance of outcomes that are economically disruptive and threaten confidence in the RPM.[46] Indeed, the Commission need not consider alternative demand curves proposed by the Market Monitor and MD OPC. "Under FPA section 205, the Commission determines the justness and

[42] 2025 Periodic Review Filing at 14.

[43] 2025 Periodic Review Filing at 15.

[44] *See* 2025 Periodic Review Filing at 10-11.

[45] 2025 Periodic Review Filing at 40.

[46] 2025 Periodic Review Filing at 2, 11-12.

reasonableness of the proposal before it and is not obligated to consider whether the proposal is more or less reasonable than other alternatives."[47]

1. A Cap that Accounts for Uncertainty in Net CONE is Appropriate.

The Market Monitor and MD OPC disagree with the formulation for the price of point 1. Specifically, both the Market Monitor and MD OPC have concerns with utilizing 75% of the net energy and Ancillary Services ("Net EAS") in calculating the price cap for the Variable Resource Requirement Curve of Net CONE.[48]

The current price cap is determined as the higher of 1.75 times Net CONE or gross CONE. Under the proposed updates, point 1 of the VRR curve recognizes the current market conditions by utilizing a conservative estimate of Net CONE. Specifically, using a price cap that accounts for uncertainty in Net CONE, combined with updates to point 2 and point 3 of the proposed VRR Curve, provides a flatter demand curve shape, which will help to produce more stable clearing outcomes while still meeting the long term reliability outcomes of a 1-in-10 loss of load expectation ("LOLE").[49]

As explained in the 2025 Periodic Review Filing, the proposed point 1 of the VRR Curve price cap is calculated using the inputs for Net CONE, gross CONE and Net EAS, which is consistent with previously approved VRR curves.[50] For the 2028/2029 Delivery

[47] *PJM Interconnection, L.L.C.*, 182 FERC ¶ 61,183, at P 33 (2023); *Midcontinent Indep. Sys. Operator, Inc.*, 169 FERC ¶ 61,038, at P 12 (2019).

[48] IMM Protest at 10; Maryland OPC Protest at 18.

[49] 2025 Periodic Review Filing at 64, Table 3. Base Scenario Monte Carlo Performance – Current VRR Curve vs. Proposed VRR Curve.

[50] *PJM Interconnection, L.L.C.*, 182 FERC ¶ 61,073 (2023).

Year, the proposed price cap for the RTO is calculated as follows using data from Table 3 of the Affidavit of Skyler Marzewski that was submitted as part of the initial PJM filing:[51]

$$Max(1.15 \times gross\ CONE - 0.75 \times Net\ EAS, 0.2 \times Gross\ CONE) = Price\ Cap$$

$$Max\left(\frac{1.15 \times \$613/MW\ Day\ ICAP - 0.75 \times \$361/MW\ Day\ ICAP}{0.79\ ELCC\ Class\ Rating}, \frac{0.2 \times \$613/MW\ Day\ ICAP}{0.79\ ELCC\ Class\ Rating}\right) = Price\ Cap$$

$$Max\left(\frac{\$704.95MW\ Day\ ICAP - \$270.75MW\ Day\ ICAP}{0.79\ ELCC\ Class\ Rating}, \frac{\$122.60MW\ Day\ ICAP}{0.79\ ELCC\ Class\ Rating}\right) = Price\ Cap$$

$$Max\left(\frac{\$434.20/MW\ Day\ ICAP}{0.79\ ELCC\ Class\ Rating}, \frac{\$122.60/MW\ Day\ ICAP}{0.79\ ELCC\ Class\ Rating}\right) \approx \boldsymbol{\$550/MW\ Day\ UCAP}$$

MD OPC's assertion that the 75% Net EAS multiplier results in a "double payment" relies on the faulty premise that administrative Net CONE calculations are precise and devoid of uncertainty. In reality, however, calculating Net EAS involves significant forecasting variables, creating inherent misestimation risk. For example, if PJM overestimates future energy revenues, the resulting Net CONE would be artificially suppressed and set a price cap that is too low to attract necessary capital investments. The 75% multiplier serves not to ignore revenue, but to provide a necessary margin of safety against this misestimation risk, allowing the price cap to remain robust enough to incentivize entry even if administrative estimates of Net EAS diverge from realized market conditions. Maryland OPC's argument effectively implies that the market should never clear above a static, administratively determined Net CONE, a rigid posture that ignores estimation error and would structurally bias the market toward under-investment, ultimately threatening long-term system reliability.

[51] 2025 Periodic Review Filing, *Affidavit of Skyler Marzewski*, Table 3. Gross CONE, estimated Net EAS, and estimated Net CONE values by Zone and LDA for the 2028/2029 BRA: Combustion Turbine.

Moreover, a maximum price of point 1 based only on the estimated Net CONE has a significantly higher risk of being equal to zero when Net EAS values are high. Indeed, Brattle's analysis showed that even 1.5 times Net CONE does not yield adequate reliability outcomes, unless the curve is shifted to the right.[52] Thus, to attract sufficient capacity to maintain PJM's reliability targets, point 1 would have to be modified to be a much higher multiple of Net CONE if the Net EAS multiplier is not utilized. Alternatively, the VRR curve would have to shift to the right, which shifts the demand curve outward, to compensate for the lower prices.[53]

2. *The Price Ceiling Should Allow Clearing Prices to Equilibrate Around Estimated Net CONE.*

The Market Monitor and Maryland OPC's contention that the "competitive equilibrium price" should be Net CONE reflects a fundamental misunderstanding of the distinction between long-run and short-run competitive dynamics. Net CONE is the long-run equilibrium price required to induce entry over time. By contrast, the short-run competitive price during a shortage is the price cap, representing the value of reliability. Thus, the market clearing price should be allowed to oscillate and be allowed to fall below Net CONE during surplus and also to rise significantly above Net CONE during shortage. Allowing prices to exceed Net CONE is critical for a competitive market to produce accurate shortage signals. As an analogy, when there is a shortage of wheat, the price of wheat rises to ration demand, which may far exceed the cost of growing new wheat. If the

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[52] *See* The Brattle Group, Modeling Results – IMM Curve (Aug. 22, 2025), https://www.pjm.com/-/media/DotCom/committees-groups/committees/mic/2025/20250822-special/brattle-imm-curve-modeling.pdf.

[53] *See* The Brattle Group, VRR Curve Variations Testing Lower Price Caps (June 16, 2025), https://www.pjm.com/-/media/DotCom/committees-groups/committees/mic/2025/20250616-special/additional-ct-and-cc-modeling-from-brattle-.pdf.

price of that wheat is controlled and capped at the cost of planting wheat during a shortage, such shortage could be exacerbated because such price would not be allowed to reflect the true severity of such scarcity. Similarly, as is the case with any other commodity market, capping capacity prices at the estimated amortized cost of building a new plant (Net CONE) when reserves are critically low ignores the immediate value of reliability to the system.

The Maryland OPC's argument that new entry cannot possibly respond to higher price signals in the upcoming auctions also misses the point. Take, for example, the current rising cost of beef. While beef prices have risen by nearly 15% year-over-year due, in part, to recent droughts, that higher price provides a market signal for ranchers to build larger herds.[54] As explained by the United States Department of Agriculture, "if cattle prices and producer revenues are expected to rise, producers may expand their herds; if revenues are expected to decline substantially, producers might reduce their herds by culling older cows and keeping fewer heifers to replace or add to older cows in their herd."[55] In fact, in the short run, higher beef prices will likely mean fewer cattle being brought into the beef supply as ranchers opt to keep more heifers to expand cattle herds. That is why the cattle cycle typically lasts between 8-12 years due to a lengthy gestation period and the time it takes to raise cattle to market.[56] As a result, higher beef prices today do not translate to immediate new beef supply in the market.

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[54] CNBC, Beef Prices are Soaring. https://www.cnbc.com/2025/12/07/beef-prices-are-soaring-heres-why-thats-hard-to-fix.html#:~:text=The%20latest%20available%20CPI%20data,the%20American%20Farm%20Bureau%20Federation.

[55] USDA Economic Research Service, Cattle & Beef – Sector at a Glance. https://www.ers.usda.gov/topics/animal-products/cattle-beef/sector-at-a-glance.

[56] *Id*.

The capacity market is designed to work in a similar manner. That is, higher clearing prices do not necessarily mean new entry will immediately participate in the auction for the associated Delivery Year. Investors first need to see the price signal produced by the market before taking steps to develop new resources, which could take several years before such new resources become available to serve as capacity. While pricing above net CONE in the capacity market may not immediately attract new entry in the associated Delivery Year corresponding with the relevant RPM Auction, it still provides dynamic incentives required to resolve shortage conditions. That is, even when new entry may not be immediate, scarcity prices (i.e., prices above Net CONE) perform several critical functions.

First, scarcity pricing incentivizes the retention of existing resources. High prices signal to aging thermal units, which might otherwise face economic retirement or capital maintenance decisions, that their capacity is critically needed. Suppressing prices to Net CONE risks driving existing, necessary megawatts out of the market or into export commitments to neighboring regions with higher prices.

Second, scarcity prices incentivize developers to pay premiums for expedited equipment delivery, overtime labor, and parallel permitting tracks. While supply chain delays may exist, lead times are often a function of capital intensity. In other words, developers can expedite the development of new resources by accelerating capital into a project. By contrast, a suppressed price cap removes the financial incentive for developers to expedite project development and solve for the supply chain bottlenecks.

Third, scarcity prices can unlock alternative supply, such as demand response, uprates to existing facilities, and imports, which may respond much quicker than new build.

Setting the price cap at Net CONE would effectively eliminate these dynamic incentives of shortage pricing. Moreover, establishing a price cap at Net CONE could create artificial scarcity conditions when capacity is offered into the RPM Auctions but fails to clear the auction, not because they were not needed, but because their offers exceed the price cap. In fact, while PJM would still have been short of the target Reliability Requirement for the 2027/2028 Base Residual Auction, over 800 MWs (UCAP) of capacity were offered in the auction but did not clear because such offers exceeded the temporary price cap.[57] To reduce the risk of creating artificial scarcity, the cap should be set to a level that allows the market to produce price signals that reflect shortage conditions. In short, rather than being set as a price cap, Net CONE should be regarded as an equilibrium concept where market clearing prices should be the average of Net CONE over the long run. To average out to Net CONE over time, prices must be allowed to fall below true Net CONE during surplus and also to rise significantly above Net CONE during shortage.

3. *Utilizing a Cap with a Safeguard Equal to 20% of Gross CONE is Just and Reasonable.*

PJM's proposal for point 1 continues to use Gross CONE to prevent the collapse of the Variable Resource Requirement Curve should Net EAS be overestimated and to avoid market uncertainty with a $0 demand curve. However, PJM proposes to lower the safeguard to 20% of gross CONE. Brattle modeled the long-run outcomes using the combined proposed VRR Curve changes and found that they resulted in acceptable reliability outcomes for PJM. The PA PUC also agrees that "the retention of this small

[57] PJM Interconnection L.L.C., *2027/2028 Base Residual Auction Report*, at 3 (Dec. 17, 2025), https://www.pjm.com/-/media/DotCom/markets-ops/rpm/rpm-auction-info/2027-2028/2027-2028-bra-report.pdf.

backstop is justified at the present time."[58] In any event, the 20% Gross CONE safeguard is not expected to be the binding value for the proposed VRR Curve, but it protects against unexpected market uncertainty.

As stated in the initial filing, "the price cap should enable the market to reach long-run equilibrium such that, even if prices clear at or near the price cap in some years, over the long run, the market price will average out to the price of true Net CONE."[59] Lowering the price cap risks reliability outcomes that do not maintain the 1-in-10 LOLE expectations. Additionally, without a safeguard this issue becomes compounded.

4. *The Rightward Shift of Point 3 to 106% of the Reliability Requirement is Justified and Supported.*

As explained in PJM's November 7, 2025 filing, shifting point 3 of the Variable Resource Requirement Curve to the right produces a relatively flatter curve, and meaningfully increases the amount of capacity that could be procured along this leg of the curve, i.e., at prices less than 0.5 times the price cap. This is appropriate because it recognizes the reliability value of incremental capacity that can be procured. Additionally, under recent market conditions, the RPM has experienced tight market conditions. A flatter curve supports efforts to incentivize new entry in light of marked supply shortages while mitigating against price volatility compared with a more vertical-shaped curve. Finally, extending the curve to the right emulates a feature of the Brattle marginal reliability impact ("MRI") Curve, set forth in the 2025 VRR Curve Study, in which Brattle analyzed the

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[58] PA PUC Comments at 5.

[59] 2025 Periodic Review Filing at 47.

reliability benefits of continuing to value capacity beyond 104.5% of the Reliability Requirement.[60]

C. PJM's Proposal to Update the Variable Operating and Maintenance Expense Used in the EAS Offset Is Just and Reasonable.

The Market Monitor's assertion that the Variable Operations and Maintenance ("VOM") expense should be set at $5.30/MWh relies on a theoretical iterative dispatch model that ignores the actual engineering and commercial realities of the Reference Resource. By contrast, Brattle "modeled an hours-based (MWh-based) regime and identified VOM for a 40% capacity factor as a representative value for the diversity of areas in PJM. S&L then relied on an OEM quote for [long-term service agreement] charges given a 40% capacity factor and applied this to all areas. This resulted in $1.93/MWh, which, when combined with other cost components resulted in a total variable major maintenance cost of $1.98/MWh."[61] By summing verified variable fees and outage milestone payments (approximately $1.98/MWh) with consumable costs (approximately $0.66/MWh),[62] PJM's calculation results in a grand total VOM of $2.65/MWh in 2028 dollars, which reflects the actual contractual costs a developer would face. By contrast, the Market Monitor's inflated estimate artificially suppresses Net EAS by imposing maintenance costs that are inconsistent with the unit's operational profile.

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[60] *Spees, Newell, and Thompson, et al.*, Sixth Review of PJM's Variable Resource Requirement Curve for Planning Years 2028/29 Through 2031/32, The Brattle Group (Apr. 9, 2025), https://www.brattle.com/wp-content/uploads/2025/04/Sixth-Review-of-PJMs-Variable-Resource-Requirement-Curve.pdf.

[61] Brattle Rebuttal Affidavit at ¶ 16.

[62] 2025 Periodic Review Filing, Brattle/S&L CONE Aff. ¶ 39.

D. Timely Commission Acceptance of the 2025 Periodic Review Is Necessary to Prevent Further Delay of the Base Residual Auction Associated with the 2028/2029 Delivery Year.

Given the well-supported 2025 Periodic Review filing, along with general stakeholder consensus that the proposal represents a just and reasonable update to the RPM Auction's input parameters, the Commission should swiftly and decisively accept this filing without delay. The Base Residual Auction associated with the 2028/2029 Delivery Year is currently scheduled to commence on June 30, 2026, with the pre-auction deadline associated with capacity market must-offer exception requests due no later than February 15, 2026.[63] Thus, Commission action on or before the requested order date of January 23, 2026, is imperative to maintain the current RPM Auction schedule associated with the 2028/2029 Delivery Year.

Acceptance of the proposed updates in the 2025 Periodic Review are necessary for PJM to conduct the 2028/2029 Base Residual Auction without any further delay because Tariff, Attachment DD, section 5.10(a)(i) does not provide a Variable Resource Requirement Curve beyond the 2027/2028 Delivery Year. The current Variable Resource Requirement Curve, which is effective only for the 2026/2027 and 2027/2028 Delivery Years, was intentionally time-limited for two Delivery Years "while PJM finalizes a long-term proposal through the [Periodic] Review process."[64] PJM's proposal in this docket, which represents the culmination of the latest Periodic Review process, would establish an updated Variable Resource Requirement Curve effective with the 2028/2029 Delivery Year.

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[63] *See* RPM Auction Schedule, Tab 28-29 BRA Post, available at: https://www.pjm.com/-/media/DotCom/markets-ops/rpm/rpm-auction-info/rpm-auction-schedule.xlsx.

[64] *PJM Interconnection, LLC*, 191 FERC ¶ 61,066, at P 63 (2025).

In accepting PJM's 205 filing, the Commission should also reject the Maryland OPC's call to initiate a new section 206 investigation "to determine whether PJM's quadrennial review process is just and reasonable given the unprecedented state of market conditions, and reinstitute the current cap as a just and reasonable replacement rate."[65] First, the Commission does not need to initiate a separate 206 proceeding under the Federal Power Act to determine whether the 2025 Periodic Review filing is just and reasonable. That is already the standard under which the Commission must evaluate PJM's filing pursuant to section 205 of the Federal Power Act. Second, as explained above, the Maryland OPC's allegation that PJM's market is uncompetitive because new entrants cannot respond in time to higher price signals fundamentally misinterprets the nature of scarcity pricing in wholesale electricity markets. When the system is physically short, the clearing price is determined not by the suppliers' offers, but by the administrative demand curve (the VRR Curve). High prices are a function of structural scarcity and not market power, as suppliers can behave perfectly competitively and engage in no withholding, yet the clearing price may nevertheless be set at the cap.

In short, arguments that high prices represent an abuse of market power because incumbent suppliers are "pivotal" (i.e., necessary to meet demand) and new entry cannot immediately discipline prices are simply unpersuasive. Consequently, there is no need for the Commission to initiate a separate 206 investigation. Instead, the Commission should expeditiously accept PJM's 205 filing and allow the 2028/2029 Base Residual Auction to proceed with the updated auction parameters and without further delay.

[65] Maryland OPC Protest at 9.

III. CONCLUSION

PJM asks that the Commission consider this answer and accept the proposed Tariff revisions in the 2025 Periodic Review filing effective January 23, 2026, as requested.

Respectfully submitted,

/s/ Chenchao Lu

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On behalf of
PJM Interconnection, L.L.C.

January 2, 2026

CERTIFICATE OF SERVICE

I hereby certify that on this day I have served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Audubon, PA, this 2nd day of January 2026.

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Attachment A

Answering Affidavit of
Dr. Samuel A. Newell, Dr. Andrew W.
Thompson, Dr. Bin Zhou, and Joshua C. Junge

UNITED STATES OF AMERICA

BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

	)	
PJM Interconnection L.L.C.	)	Docket No. ER26-455-000
	)	

ANSWERING AFFIDAVIT

OF

Dr. SAMUEL A. NEWELL, Dr. ANDREW W. THOMPSON, Dr. BIN ZHOU,
AND JOSHUA C. JUNGE

On Behalf of PJM Interconnection, L.L.C. Regarding

PROTEST OF THE INDEPENDENT MARKET MONITOR FOR PJM ON UPDATES TO PJM'S CONE AND NET ENERGY AND ANCILLARY SERVICE OFFSET PARAMETERS FOR DELIVERY YEARS 2028/29 THROUGH 2031/32

December 19, 2025

1. Our names are Dr. Samuel A. Newell, Dr. Andrew W. Thompson, Dr. Bin Zhou, and Joshua C. Junge. Dr. Newell and Dr. Zhou are employed as Principals and Dr. Thompson as an Energy Associate by The Brattle Group ("Brattle"). Mr. Junge is employed as a Principal Energy Consultant at Sargent & Lundy ("S&L").

2. We are submitting this affidavit on behalf of PJM Interconnection, L.L.C. ("PJM") to respond to the comments and protests submitted in this docket that relate to our independent assessment of PJM's adjustments to the administrative Cost of New Entry ("CONE") parameter, representing the cost of building a generation plant for use in PJM's capacity market (known as the Reliability Pricing Model or "RPM"). On November 7, 2025, we submitted an affidavit ("CONE Affidavit") to the Federal Energy Regulatory Commission ("FERC" or "Commission") explaining how our analysis informed PJM's proposed revisions to the CONE and Net Energy and Ancillary Service ("Net EAS") Offset parameters in the PJM Open Access Transmission Tariff ("Tariff") for Delivery Years 2028/29 through 2031/32.[1]

3. We respond here to a subset of the comments and protests that relate to CONE parameters and the Net EAS Offset methodology. These comments and protests were submitted by Monitoring Analytics, L.L.C., the Independent Market Monitor ("IMM") for PJM.[2]

4. The IMM claims that CONE for the combustion turbine ("CT") reference resource should be lower overall as a result of different views on the timing of capital expenditures and tax deductions, which affect the project's installed cost and capital recovery requirements even if not the overnight cost. That is, in spite of modeling the project timeline starting earlier to explicitly model the timing of development costs that are incurred before the final investment decision ("FID"), the IMM's capital expenditures are more back-end loaded overall; this results in lower capital carrying costs and so reduces CONE. Regarding tax deductions, the IMM assumes investors in merchant generation could fully realize tax deductions from 100% bonus depreciation in their first year of operation, which maximizes the present value of tax deductions and thus lowers CONE. We disagree with these assumptions and respond below by clarifying and supplementing our original affidavit.

5. Separately, the IMM claims that the variable operation and maintenance ("VOM") cost for the CT should be higher but does not provide enough detail to evaluate this claim. Our VOM value remains reasonable.

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1 *PJM Interconnection, L.L.C.*, Affidavit of Dr. Samuel A. Newell, Dr. Andrew W. Thompson, Dr. Bine Zhou, and Joshua C. Junge, Regarding Updates to PJM's CONE and Net Energy and Ancillary Service Offset Parameters for Delivery Years 2028/29 through 2031/32, Docket No. ER26-455-000 (Nov. 7, 2025) ("CONE Affidavit").

2 *PJM Interconnection, L.L.C.*, Protest of the Independent Market Monitor for PJM, Docket No. ER26-455-000 (Dec. 18, 2025) ("IMM Protest").

A. Project Timeline and Capital Expenditure Schedule

6. Capital expenditure schedules affect the CONE calculation by defining the times at which various components of the overnight capital costs are incurred. Incurring more capital costs earlier increases capital carrying costs and thus total installed project costs and the CONE value.

7. The IMM's capital expenditures start 21 months earlier relative to the same commercial online date but are overall weighted much later, resulting in lower capital carrying costs and CONE estimates. The IMM's earlier project timeline simply reflects the explicit representation of project development (i.e., siting, permitting, design, etc.), whereas our model starts closer to construction, at the final investment decision and incorporates the development costs occurring both before and after FID into the overall overnight cost. Our approach is consistent with past PJM CONE studies which have all defined the project timeline as between FID and the commercial operation date ("COD").

8. The bigger difference arises from the timing of the much larger construction costs, especially payments for major equipment. Our version reflects current tight market conditions with long lead-times for major critical path equipment, whereas the IMM's version appears not to. These conditions have resulted in reservation fees and more front-loaded payment schedules for turbines and other major equipment provided by the OEMs. As Brattle/S&L explained in our Affidavit, in meetings with the IMM, and in presentations to the PJM Market Implementation Committee ("MIC"), our overall capital drawdown schedule reflects actual recent and ongoing projects for which S&L is serving as the owner's engineer, and we have validated the embedded payment schedule for major equipment through extensive dialogue with General Electric ("GE"). Given that both Brattle and the IMM assume the CT reference resource uses the GE 7HA.03 turbine technology, GE is the authoritative source on OEM payment requirements. GE confirmed S&L's interpretation of GE's standard contract terms for major equipment, which include a deposit for reservation of a turbine production slot, a lump-sum payment upon contract signing, then a series of milestone-based or monthly calendar payments for most of the contract duration, followed by further lump-sum payments upon equipment ready-to-ship and delivery, and finally a smaller payment or series of payments concluding at COD. GE provided Brattle/S&L with a standard payment schedule for the 7HA.03 technology and related major equipment for the CT. This payment schedule is consistent with S&L's modeling of payments for turbines and other major GE-provided equipment embedded in the

capital expenditure schedule. This standard payment schedule from GE was also shared with the IMM.[3]

9. Our assumptions are further corroborated by industry announcements. For example, in their recent filing before the Kentucky Public Service Commission, Kentucky Utilities and Louisville Gas & Electric noted that they were required to pay GE a $25 million reservation fee to lock-in firm pricing for the equipment.[4] In a recent interview with Mitsubishi Power's Vice President of Business Development for Emerging Technologies, Peter Sawicki noted that "We're back to the days of reservation fees similar to the 2000s… So it does make things challenging for power developers, really where you have to put this deposit down very early on a project."[5]

10. In contrast, the IMM's back-loaded capital drawdown and OEM payment schedule do not appear to align with current industry conditions, and this understates current CONE. Furthermore, the IMM does not clearly explain its specific assumptions or evidentiary basis and also has not released its drawdown schedule nor CONE model publicly.[6]

B. Bonus Depreciation

11. The IMM is incorrect in its claim that Brattle provided no evidence to support the assumption that investors would not be able to fully realize immediate tax deductions from 100% bonus depreciation. Our CONE Affidavit explained the rationale and cited our presentation in the

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3 *See* PJM, MIC Meeting, posted meeting materials (Aug. 18, 2025), https://www.pjm.com/committees-and-groups/committees/mic. Materials include the Brattle CONE model, which embeds the capital drawdown schedules, https://www.pjm.com/-/media/DotCom/committees-groups/committees/mic/2025/20250822-special/updated-brattle-cone-model.xlsx.

4 *See* Direct Testimony of Lonnie E. Bellar, Senior Vice President, Engineering and Construction on Behalf of Kentucky Utilities Company and Louisville Gas and Electric Company, Kentucky PSC Case No. 2025-00045, at 11 (Feb. 28, 2025), https://psc.ky.gov/pscecf/2025-00045/rick.lovekamp%40lge-ku.com/02282025010202/12-Bellar_Direct_Testimony_2025-00045.pdf.

5 *See* POWER Magazine, "The POWER Interview: Mitsubishi Power Talks Turbine Constraints, Data Center Pressures, and Hydrogen Readiness" (Apr. 21, 2025), https://www.powermag.com/the-power-interview-mitsubishi-power-talks-turbine-constraints-data-center-pressures-and-hydrogen-readiness/.

6 The IMM's description of the drawdown schedule including "*EPC and GE payments in the middle months*" is vague and could mean many different possibilities over a 65-month project timeline. Based on descriptions by the IMM in public MIC meetings, the IMM assumes that 70% of the cost for turbines is paid as a lump-sum in a single month and the remaining 30% is incurred at later points somewhere in those "middle months," instead of the standard payment schedule provided by GE. However, at that time the IMM's project timeline for the CT was 37-months instead of the now revised 65-month schedule and it is not possible to determine additional differences or assess further the reasonableness of the IMM's drawdown schedule since this has not been provided publicly.

August 18th, 2025 MIC meeting, where Brattle presented supporting evidence.[7] It is the IMM's claims that are unsupported by evidence.

12. As explained in our CONE Affidavit, the One Big Beautiful Bill Act ("OBBBA") reinstated 100% bonus depreciation for eligible investments, which include gas power plant assets placed into service before January 2031.[8] 100% bonus depreciation enables investors to deduct the asset cost immediately from taxable income. However, a full deduction right away is possible only with sufficiently high taxable income. Otherwise, this tax benefit would have to be carried forward as a net operating loss ("NOL") to support future tax deductions with a lower present value. Our analysis and evidence presented showed that having such a high taxable income to be able to fully deduct the cost of a gas-fired plant is unrealistic for generation developers.

13. For example, even taking the IMM's understated total project costs, would require an investor in a single CT generator in CONE Area 3 to have a taxable income of at least $542 million to be able to fully realize 100% bonus depreciation in the first year.[9] This is high compared to the estimated taxable income of four publicly traded independent power producers ("IPPs") in PJM, as Dr. Zhou demonstrated at the August 18th PJM MIC meeting (Table 1).[10] Over the most recent three years (2022–2024), all but one IPP had much lower taxable income than the cost of a single CT project; and even the IPP with higher taxable income (Constellation) would find its tax appetite limited if it is building multiple projects nationally to meet the current high national demand for power.

TABLE 1: TAXABLE INCOME OF PUBLICLY TRADED INDEPENDENT POWER PRODUCERS IN PJM

Taxable Income for GAAP Reporting and US Tax Returns

($ in Millions)		2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
		A. Constellation			B. NRG			C. Talen			D. Vistra		
GAAP Income Before Income Taxes	[A]	(542)	2,447	4,516	1,663	(213)	1,448	(1,328)	871	1,111	(1,560)	2,000	3,467
Federal Taxes - Current	[B]	219	464	426	3	26	55	(9)	(12)	(113)	2	(1)	2
Inferred Taxable Income	[C]	1,043	2,210	2,029	14	124	262	(43)	(57)	(538)	10	(5)	10

Sources and Notes: AES is excluded from the analysis because of its substantial international and regulated utility operations.
[A] and [B] from company 10-Ks. Talen for 2023 is the sum of two partial years.
[C] = [B] / 21%, where 21% is the federal tax rate.

Source: Sixth Review of PJM's RPM VRR Curve Parameters, Interim Update: Gross CONE with Technology Cost and Depreciation Updates (Presented at the August 18, 2025, PJM MIC Meeting).

[7] *See* PJM, MIC Meeting, Sixth Review of PJM's RPM VRR Curve Parameters, Interim Update: Gross CONE with Technology Cost and Depreciation Updates (Aug. 18, 2025), https://www.pjm.com/-/media/DotCom/committees-groups/committees/mic/2025/20250822-special/brattle-updated-cone-presentation.pdf.

[8] With the CT reference resource's COD of June 2028, this asset would qualify.

[9] *See* IMM Protest at Table 1.

[10] *See* PJM, MIC Meeting, Sixth Review of PJM's RPM VRR Curve Parameters, Interim Update: Gross CONE with Technology Cost and Depreciation Updates (Aug. 18, 2025), https://www.pjm.com/-/media/DotCom/committees-groups/committees/mic/2025/20250822-special/brattle-updated-cone-presentation.pdf.

14. The question arose whether IPPs could still monetize much of the value of bonus depreciation right away by structuring arrangements with tax equity investors, so Brattle consulted with experienced tax advisors in the energy space. They indicated that since the last time 100% bonus depreciation was introduced under the 2017 Tax Cuts and Jobs Act, no market has developed for depreciation-only investment structures with partner entities like it has for clean energy tax credits. We concluded that it is unrealistic for an IPP to recognize bonus depreciation more quickly than its own taxable income allows.

15. To develop a more realistic representation of how an IPP could monetize 100% bonus depreciation, we assumed that the marginal IPP would take the 100% bonus depreciation in year 1, carry the resulting NOL forward, and use it up as quickly as its taxable income allows. This will result in something in between the full year-1 realization of 100% bonus depreciation (a "Min" CONE benchmark) and the original MACRS of 15 years for CT (a "Max" CONE benchmark). While it is difficult to establish a single, precise value applicable to all marginal suppliers given their varying incomes, project development portfolios, and tax strategies, we assumed a 7-year straight-line depreciation as a reasonable approximation for CT plants.[11] The resulting present value of tax deductions and the resulting CT CONE is mathematically equivalent to a 40/60 weighted average between the Min and Max CONE benchmarks. We presented this calculation to stakeholders as a comparison point demonstrating that the CT CONE with a 7-year straight-line depreciation schedule is reasonably in between the two benchmarks.[12] The IMM incorrectly characterizes this 40/60 ratio however as related to Brattle's depreciation schedule and provides irrelevant and incorrect calculations examining the implied depreciation in year 1.[13]

C. Variable Operations & Maintenance Cost

16. The variable operations and maintenance ("VOM") costs used by Brattle/S&L ($2.65/MWh) and the IMM ($5.30/MWh) for calculation of the Net E&AS offset differ significantly, mostly

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[11] As defined by the then-current IRS guidance on depreciation for property. *See* U.S. Department of the Treasury, Internal Revenue Service, "Publication 946 (2023): How to Depreciate Property," Table A-10. Straight Line Method Mid Quarter Convention Placed in Service in Second Quarter.

[12] *See* PJM, MIC Meeting, Sixth Review of PJM's RPM VRR Curve Parameters, Interim Update: Gross CONE with Technology Cost and Depreciation Updates (Aug. 18, 2025), https://www.pjm.com/-/media/DotCom/committees-groups/committees/mic/2025/20250822-special/brattle-updated-cone-presentation.pdf.

[13] The IMM claims that Brattle's first-year depreciation is "40 percent bonus depreciation and 60 percent 15 year MACRS ($289 million) for a CT" by comparing this to implied first-year depreciation from other depreciation schedules. The IMM incorrectly characterizes Brattle's approach, as the 40/60 weighted average is related to the present value of a more realistic use of bonus depreciation over a CT plant's lifetime, not the first-year depreciation. Additionally, the IMM incorrectly applies depreciation percentages to total project costs instead of the depreciable basis. *See* IMM Protest at 5-6 and Table 1.

attributable to the difference in the major maintenance costs.[14] Major maintenance costs reflect variable monthly payments tied to that month's operations as defined in the OEM's long term service agreement ("LTSA"). Payments can be structured in a "starts-based" regime for plants with relatively large number of starts and a lower capacity factor, or an "hours-based" regime for those with higher capacity factors and fewer starts, but the rates per relevant determinant may vary somewhat with operating profiles. Given that PJM's E&AS simulations indicated high capacity factors for CTs, we modeled an hours-based (MWh-based) regime and identified VOM for a 40% capacity factor as a representative value for the diversity of areas in PJM. S&L then relied on an OEM quote for LTSA charges given a 40% capacity factor and applied this to all areas. This resulted in $1.93/MWh, which, when combined with other cost components resulted in a total variable major maintenance cost of $1.98/MWh and a grand total VOM of $2.65/MWh in 2028 dollars.[15] This is a reasonable intermediate value that does not vary by area even though one might be able to obtain quotes for different operating profiles among areas, with higher costs per MWh in areas with lower capacity factors.

17. The IMM's argument that the VOM should be determined iteratively with simulated capacity factors appears to be inconsistent with its assertion of a single VOM cost per MWh applicable to a diversity of areas. Further, since the IMM has not shared or published details of their VOM inputs such as LTSA fixed fees, variable fees, milestone fees, and other major maintenance cost inputs, it is not possible to provide an opinion to the reasonableness of the IMM's assumptions or evaluate the differences from ours.

18. **This concludes our affidavit.**

[14] The IMM assumes $4.90/MWh major maintenance + $0.40/MWh consumables while S&L assume $1.98/MWh major maintenance + $0.66/MWh consumables. See IMM Protest, Table 3.

[15] $1.93/MWh is from the LTSA and ~$0.05/MWh comes from plant staff overtime attributable to major maintenance activities which together make the $1.98/MWh major maintenance cost in our VOM estimate. Our VOM calculations are further documented in the 2025 PJM CONE Report, the CONE Affidavit, and the Brattle CONE model.

D. Certification

We hereby certify that we have read the filing signed and know its contents are true as stated to the best of our knowledge and belief. We possess full power and authority to sign this filing.

Respectfully Submitted,

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