UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Governor Josh Shapiro and The Commonwealth of Pennsylvania	:	
Complainants,	:	
v.	:	Docket No. EL25-____
PJM Interconnection, L.L.C.	:	
Respondent.	:	

COMPLAINT OF GOVERNOR JOSH SHAPIRO AND THE COMMONWEALTH OF PENNSYLVANIA

Jacob B. Boyer, Esq.
Deputy General Counsel
Governor's Office of General Counsel
333 Market Street, 17th Floor
Harrisburg, PA 17101

Carl R. Shultz, Esq.
Eckert Seamans Cherin & Mellott, LLC
213 Market Street, 8th Floor
Harrisburg, PA 17101
(717) 237-6000 (phone)
(717) 237-6019 (fax)

Lauren M. Burge, Esq.
Eckert Seamans Cherin & Mellott, LLC
600 Grant Street, 44th Floor
Pittsburgh, PA 15219
(412) 566-2146 (phone)
(412) 566-6099 (fax)

Attorneys for Governor Josh Shapiro and the Commonwealth of Pennsylvania

Dated: December 30, 2024

TABLE OF CONTENTS

I. INTRODUCTION

Pennsylvania ratepayers face potentially the largest unjust wealth transfer in the history of U.S. energy markets due to PJM Interconnection LLC's ("PJM") capacity auctions. Three unexpected developments—(1) significant load growth; (2) the country's most snarled interconnection queue; and (3) a compressed capacity auction schedule—have collided with PJM's inapt design decisions to produce record high prices that are ineffective at delivering new power generation—the intended purpose of those high prices.

The Commonwealth of Pennsylvania, and other states PJM serves, are already experiencing the consequences. The 2025/2026 Base Residual Auction ("BRA") cleared at a price nearly ten times that of the immediately preceding auction. Even that price will almost certainly soon be eclipsed. The upcoming 2026/2027 BRA is forecast to produce a result that could be the most expensive in capacity market history.

If the auction were functioning as intended, these record-setting prices could encourage investment in new generation and preserve reliability, both of which Pennsylvania agrees are needed. Yet, as PJM's own experts have warned this Commission in recent weeks, the auction is currently structurally unable to deliver that intended result.[1] The ballooning delays in PJM's interconnection queue and increasingly compressed auction timelines conspire to foreclose any realistic possibility of market participants responding to the auction's clearing price. As PJM admits, it made changes in 2022 to the capacity auction that were designed to manage expected

[1] *See PJM Interconnection , L.L.C.*, Revisions to Reliability Pricing Model, Docket No. ER25-682-000 (Dec. 9, 2024), Attachment C, Affidavit of Dr. Samuel A. Newell at ¶ 18 (warning that consumers are exposed to the risk of "high prices that are beyond what is needed to attract new entry in the long run, but that may yet be produced in the interim period before barriers to entry can be addressed. . .") (hereinafter, "Newell Affidavit"); Attachment D, Affidavit of Walter Graf and Skyler Marzewski at ¶ 41(c) ("While market signals suggest the need for new generation resources, the transition in PJM's interconnection queue process has created a bottleneck, slowing the entry of new capacity.") (hereinafter "Graf/Marzewski Affidavit").

market conditions (an excess of supply leading to capacity over procurement) that have failed to materialize and actually starkly reversed.

PJM's capacity market is a complex construct that was not built for this environment. Under current conditions, the design of PJM's capacity market permits scant differences in supply to whiplash the market between soaring or cratering prices. Such excessive volatility is not the mark of a healthy market. No generator can rely on such outcomes to make retirement decisions, no investor can depend on them to deliver sustainable returns over time, and no consumer paying resulting double-digit bill increases can feel confident in having secured a more reliable grid as a result.

PJM itself has recognized the failures of its current design. It has proposed several partial reforms in its December 9, 2024 and December 20, 2024 Section 205 filings with this Commission,[2] and PJM has several more longer-term reforms underway in the stakeholder process.[3] These proposals will improve matters, but even were the Commission to approve all these proposals, it would be insufficient to ensure against the unjust costs that PJM's proposed market rules threaten to impose on Pennsylvania's consumers in the next two auctions.

Without the additional changes proposed in this Complaint to the capacity auction's price cap (also described as the top point on the Variable Resource Requirement, or "VRR," curve), Pennsylvania consumers and ratepayers across the region face up to a $20.4 billion increase in electricity bills over two years that will do extraordinarily little to ensure grid reliability.[4] A

[2] Docket Nos. ER25-682-000 and ER25-785-000, respectively.
[3] *See* Mark Takahashi, PJM Board Letter (Dec. 9, 2024) at 6, *available at* https://www.pjm.com/-/media/DotCom/about-pjm/who-we-are/public-disclosures/2024/20241209-board-letter-outlining-action-on-capacity-market-adjustments-rri-and-sis.pdf.
[4] $20.4 billion is the difference between the projected outcome of an auction conducted with the price cap changes requested by the Commonwealth and one conducted under the BRA parameters PJM has proposed in its Section 205 filings but without further changes to the price cap. If neither PJM's nor the Commonwealth's proposals are enacted, the next two auctions could cost ratepayers as much as $74 billion without producing a meaningful market response.

chorus of dismay from major independent observers, led by PJM's own Independent Market Monitor ("IMM") and the Organization of PJM States ("OPSI"), has warned for months that the current price cap is too high and that the extraordinary prices consumers will pay as a result have been "significantly affected by flawed market design decisions . . . . The BRA prices do not solely reflect supply and demand fundamentals but also reflect, in significant part, PJM decisions [that] resulted in [there being] prices . . . approximately twice as high (112.1 percent) as supported by the fundamentals."[5] But those warnings have not been heeded and prices still risk rising beyond levels justified by current market realities. To avoid forcing consumers to pay runaway prices driven by present market failures, this Commission should (in addition to the other measures the Commission may adopt) adjust the price cap formula for PJM's capacity auction.

Indeed, the auction price cap exists to ensure that the market does not exceed prices needed to incent a supply response. For the upcoming auction, that cap has been raised—for the first time—to the greater of 1.75 times PJM's estimate of the Net Cost of New Entry ("Net CONE") *or* PJM's estimate of the Gross Cost of New Entry ("Gross CONE").[6] Increasing the cap in this way was primarily meant to guard against over procurement that is no longer as meaningful a risk and assumes (and makes sense only when) market participants can respond to

[5] Monitoring Analytics, Analysis of the 2025/2026 RPM Base Residual Auction Part D (Dec. 6, 2024), at 7-8, *available at* https://www.monitoringanalytics.com/reports/Reports/2024/IMM_Analysis_of_the_20252026_RPM_Base_Residual_Auction_Part_D_20241206.pdf.

[6] While either parameter could theoretically set the maximum price of the auction, and both need to be adjusted to prevent an unjust outcome, Gross CONE is expected to set the maximum price regardless of the Net CONE multiplier used if Gross CONE is permitted to operate in the forthcoming auction. *See PJM Interconnection, L.L.C.*, Docket No. ER22-2984-000, Periodic Review of Variable Resource Requirement Curve Shape and Key Parameters (Sept. 30, 2022) at 19 ("Under current estimations of gross and Net CONE . . . gross CONE would set the value.").

the clearing price with new entry.[7] When, as now, that is not true, the cap cannot achieve its intended purpose.

In fact, over the last four years, each of the principal motivations for introducing the higher cap to be used in the next auction has vanished. Allowing a capacity auction to proceed with a cap that, because of changing real world circumstances, fails to protect consumers across the PJM region from bearing astronomical costs that will not produce a commensurate benefit, gravely undermines public confidence in the essential fairness of PJM's capacity market and is unjust and unreasonable.

Accordingly, Governor Josh Shapiro and the Commonwealth of Pennsylvania (collectively "Commonwealth" or "Pennsylvania") are filing this Complaint against PJM under Sections 206 and 306 of the Federal Power Act ("FPA"), 16 U.S.C. §§ 824e and 825e, and Rule 206 of the Federal Energy Regulatory Commission's ("FERC" or "Commission") Rules of Practice and Procedure, 18 C.F.R. § 385.206.[8] The Commonwealth respectfully requests that the Commission take the following further actions:

(1) Establish a refund effective date pursuant to Section 206 as of the date of this Complaint.

(2) Find that PJM's capacity market cap is unjust and unreasonable. Due to changes in load growth and existing constrained entry conditions for new supply, the current market cap permits the auction to clear at prices that threaten to impose enormous costs upon consumers without commensurate public benefit.

[7] When this Commission has approved the price cap mechanism, it has done so under the bedrock assumption that the market generally "will produce accurate market signals that will encourage capacity investment . . ." which presumes the ability to make such investment. *PJM Interconnection, L.L.C.*, 182 FERC ¶ 61,073, Order Accepting Proposed Tariff Revisions (Feb. 14, 2023), at ¶ 157.

[8] This Complaint is supported by the testimony of the Commonwealth's witness, Kris Aksomitis. Witness Aksomitis' Declaration is provided as Attachment 1, with his Report and CV included as Exhibits A and B, respectively.

(3) Establish just and reasonable replacement rates by ordering PJM to redefine its capacity auction market cap until the next quadrennial review period. This measure is needed so that the next two auctions do not impose $20.4 billion in unnecessary costs on consumers that provide no commensurate benefit in the public interest. The capacity price cap should be no more than 1.5 times Net CONE, and PJM should use 1.5 times the RTO Net CONE to set the minimum price cap for all Locational Deliverability Areas ("LDAs").

The Commission and PJM should prioritize these reforms ahead of the 2026/2027 BRA. Taking the steps above could reduce costs by up to half, saving consumers across the PJM footprint over $20.4 billion in unnecessary costs, including approximately $4 billion for Pennsylvania ratepayers alone.[9] These unnecessary costs are unsustainable for consumers, and if allowed will stoke calls for deeper reforms to the capacity market, preventing the establishment of stable market rules that are critical to long-term decision making and investment.

II. BACKGROUND

A. PJM

In 1927, two Pennsylvania utilities became founding members of the world's first regional power pool. Over the following 97 years, that entity has grown into PJM Interconnection, the nation's largest regional transmission organization ("RTO"), coordinating the movement of wholesale electricity in all or parts of 13 states and the District of Columbia.[10] Today, PJM is responsible for the reliability of the high-voltage electric power system serving 65 million people in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.

[9] Any estimate of the clearing price for the next auction is subject to a reasonable range of uncertainty. This good faith estimate, and those throughout this Complaint, are predicated on the separate analyses conducted by the IMM and the Commonwealth's expert, Kris Aksomitis, both of which are described in more detail below.
[10] https://www.pjm.com/about-pjm.

B. Purpose and Function of PJM's Capacity Market

PJM secures future power supply resources through its capacity market, called the reliability Pricing Model ("RPM").[11,12] PJM's Open Access Transmission Tariff [13] ("Tariff") Attachment DD implements the current reformed RPM.[14] PJM relies upon a competitive auction mechanism, securing capacity commitments under the RPM through a Base Residual Auction ("BRA" or "Auction"), which is designed to be held three years before a "Delivery Year."[15] When operating on that intended schedule, PJM also conducts three subsequent Incremental Auctions.[16]

The PJM capacity market has two driving purposes.

The first purpose is to signal whether the market is long or short—with low capacity prices driving uneconomic units to retire and high prices encouraging new entry. Celebrating the first RPM auction in 2007, PJM hailed its ability to "send pricing signals that will attract investment in new capacity resources where they are most needed."[17] Unlike the "prompt" capacity auctions conducted by other RTOs shortly before the delivery year, the RPM's

---

[11] Attachment 1, Exhibit A at Section 4.1.

[12] Although this Complaint adopts the colloquial terminology of referring to the RPM as a "market," the term "model" is more apt given the significant weight of PJM's design choices in controlling auction outcomes. *See* Monitoring Analytics, Analysis of the 2025/2026 RPM Base Residual Auction Part D (Dec. 6, 2024), at 7, *available at* https://www.monitoringanalytics.com/reports/Reports/2024/IMM_Analysis_of_the_20252026_RPM_Base_Residual_Auction_Part_D_20241206.pdf ("The BRA prices do not solely reflect supply and demand fundamentals but also reflect, in significant part, PJM decisions about the definition of supply and demand.").

[13] https://www.pjm.com/directory/merged-tariffs/oatt.pdf.

[14] The first daily capacity market, created in 1999, was replaced by the current design based on the recognition that the energy market resulted in a shortfall in net revenues compared to that necessary to attract and retain adequate resources for the reliable operation of the energy market. Quarterly State of the Market Report for PJM: January through June 2024, at p. 309, *available at* https://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2024/2024q2-som-pjm-sec5.pdf.

[15] *PJM Interconnection, L.L.C.*, 142 FERC ¶ 61079, 2013 WL 392398 (Jan. 31, 2013), *citing PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,331 (2006), order on reh'g, 119 FERC ¶ 61,318 (2007), reh'g denied, 121 FERC ¶ 61,173 (2007), aff'd Pub. Serv. Elec. & Gas Co. v. FERC, 324 Fed. App. 1 (D.C. Cir. 2009).

[16] A Delivery Year is a twelve-month period beginning on June 1 and ending on May 31. See Tariff Attachment DD, §§ 2.5 and 2.34.

[17] PJM, "PJM Completes First Reliability Pricing Model Auction," (Apr. 17, 2007), https://www.pjm.com/-/media/DotCom/Images/ctc-display/modules/timeline/2007-first-annual-pdf.ashx.

"forward" construct is conducted three years in advance to allow the auction's clearing price to better serve as a signal.[18] Three years is the expected build time of a generic power plant.[19] Therefore, as designed, that signal should incent timely new entry of generation assets as needed in a given delivery year.

The second purpose is to provide "missing money" to capacity resources in order to support resource adequacy and ensure sufficient capacity.[20] This "missing money" enables facilities to remain online to provide capacity even if they could not economically do so if reliant on energy revenues alone. In this way, the RPM is designed to serve the interests of ratepayers and generators by replacing the need for highly variable energy market scarcity pricing with stable capacity revenues.

To perform both functions, PJM relies upon Net CONE to establish the RPM auction price. Net CONE is a barometer of the estimated support needed to bring a new unit of a reference resource (that PJM selects) into the market. Net CONE is calculated as the annualized Gross CONE of the reference resource, less the expected net revenue from the energy and ancillary services market. Gross CONE, by contrast, is the entire estimated annual cost of constructing and operating a new capacity resource.[21]

---

[18] Prompt auctions can also provide a signaling function, but to do so they must be deployed intentionally and necessarily have entirely different design parameters. For instance, unlike the current ad hoc-prompt situation in PJM, ISO-NE is in the midst of deliberate multi-year transition from forward to prompt auctions. *See* ISO-NE, *Capacity Auction Reforms Key Project*, *available at* https://www.iso-ne.com/committees/key-projects/capacity-auction-reforms-key-project.

[19] *See* David Kearns, *et al.*, Technology Readiness and Costs of CCS Global CCS Institute at 30, *available at* https://www.globalccsinstitute.com/wp-content/uploads/2021/03/Technology-Readiness-and-Costs-for-CCS-2021-1.pdf..

[20] Attachment 1, Exhibit A at Section 4.1. *See also* Murty P. Bhavaraju et al., *PJM Reliability Pricing Model - A Summary and Dynamic Analysis*, IEEE XPLORE (June 2007), *available at* https://ieeexplore.ieee.org/document/4275491 ("[S]ince the peaking generation needed to meet the adequacy criterion will not receive enough revenue from the energy market to justify investments, other revenue streams are needed to ensure that they cover their fixed costs. . . . [this] is referred to as 'Missing Money.'").

[21] Attachment 1, Exhibit A at Section 4.2.

C. Changes to PJM's Reliability Pricing Model

PJM has regularly refined the RPM, introducing new features and improvements over time. Two design features are principally responsible for the harm to consumers that this Complaint seeks to avert.

1. PJM's Variable Resource Requirement Curve Maximum Price Calculation

First, from the inception of the RPM in 2007, PJM's Capacity Demand Curve, known as the VRR curve, relied upon Net CONE to set the price and quantity of capacity to be procured in each auction.[22] PJM initially used a single reference point—1.5 times Net CONE—to define the maximum price point of the curve, and hence the maximum price of the auction.

In 2011, the Brattle Group, in its Second Quadrennial Review, recommended introducing an alternate reference point to define the top of the curve due to inaccuracies that had been repeatedly observed in the estimation of Energy and Ancillary Services ("E&AS" or "EAS") revenues.[23] Gross CONE was proposed to serve this function, and since that time the higher of either Gross CONE or 1.5 times Net CONE have determined the maximum auction price.

[22] Attachment 1, Exhibit A at Section 4.3. Under the auction clearing requirements of the RPM, PJM develops a VRR curve related to capacity market demand. The VRR curve is based on the cost of new entry of a reference unit and is designed to provide incentives to invest in capacity. The VRR curve is a downward sloping demand curve based on the Net CONE price and quantity. The steeper, or more vertical, the demand curve, the more price volatility and quantity certainty can be expected. For the 2015/2016, 2016/2017, and 2017/2018 Delivery Years, the VRR curve had a maximum price (Point A on the VRR curve) equal to 1.5 times the Net CONE, determined annually, or Gross CONE, net of the three-year average energy and ancillary service revenues. However, for the Delivery Years of 2018/2019 through 2025/2026, the VRR curve had a maximum price (called "Point A") of the greater of Gross CONE or 1.5 times Net CONE for all unforced capacity MW between 0 and 99 percent of the reliability requirement.

[23] The Brattle Group, Second Performance Assessment of PJM's Reliability Pricing Model (Aug. 26, 2011), at 99-100, *available at* https://www.brattle.com/wp-content/uploads/2017/10/6232_second_performance_assessment_of_pjms_reliability_pricing_model_pfeifenberger_et_al_aug_26_2011-3.pdf (recommending the use of Gross CONE because "the resulting difference between points *a* and *b* would, for the most part, also likely be large enough to exceed the range of likely discrepancies differences between *administratively-determined* Net CONE values (*i.e.*, based on administratively-determined CONE and administratively-determined historical E&AS margins) and true Net CONE values . . ." (emphasis in original)).

In 2019, the IMM challenged the use of Gross CONE, arguing that its use as a potential maximum price could one day result in an artificial rise in prices.[24] In response, PJM repeated the arguments originally made by Brattle in 2011 that a backstop was necessary as reliance on Net CONE alone risked providing insufficient capacity prices during periods of high E&AS revenue. In essence, high energy market revenues could depress Net CONE, potentially masking the need for a high price signaling the market to build new capacity.

The Commission was persuaded that reliance on Net CONE alone would be insufficient to prevent such an "extreme scenario" where high E&AS revenue masked the need for entry of new capacity.[25] The Commission reasoned that because PJM would pay Gross CONE only in situations where supply fell below the Installed Reserve Margin, the use of Gross CONE as a backstop was just and reasonable to avoid a scenario where the Installed Reserve Margin was not met but capacity prices nonetheless remained artificially low due to reliance solely on a multiple of Net CONE.[26]

2. Modifications to VRR curve for 2026/2027 Delivery Year

Second, the forthcoming 2026/2027 capacity auction will utilize the highest ever multiple of Net CONE as the co-determinant, alongside Gross CONE, of the price cap: 1.75 times Net CONE (rather than 1.5 times Net CONE).[27]

The Brattle Group proposed this increase to Net CONE in the Fifth Quadrennial Review of PJM's VRR curve.[28] The change was proposed due to apparent concerns that prior auctions

[24] *PJM Interconnection, L.L.C.,* order on reh'g, 173 FERC ¶ 61,123 (Nov. 3, 2020) at ¶ 123, *citing* IMM Rehearing Request at 11-12, 23-25, *available at* https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20200619-5214.
[25] *PJM Interconnection, L.L.C.*, 171 FERC ¶ 61,153 (May 21, 2020), at 329-30.
[26] *PJM Interconnection, L.L.C.*, 171 FERC ¶ 61,153 (May 21, 2020), at 329-30.
[27] https://pjm.com/directory/merged-tariffs/oatt.pdf.
[28] Fifth Review of PJM's Variable Resource Requirement Curve for Planning Years Beginning 2026/2027 (April 19, 2022), *available at* https://www.brattle.com/wp-content/uploads/2022/05/Fifth-Review-of-PJMs-Variable-Resource-Requirement-Curve.pdf.

had "consistently procured capacity volumes beyond the Reliability Requirement" and recognizing that "[t]he PJM Board has identified the need for 'appropriate levels of capacity procurement' as a focus area for this Quadrennial Review."[29]

In the context of these concerns, PJM argued to the Commission that using a 1.75 multiple alongside the shift to a Combined Cycle unit as the reference resource would "produce[] a steeper VRR curve that more strongly controls RPM quantity clearing outcomes, increasing certainty that sufficient quantity will be procured while guarding against over procurement. Sharper control over quantity outcomes may be advantageous in the future if there is increased uncertainty over new entrants' true net costs of new entry, driven by uncertainties in Gross CONE and/or E&AS revenues."[30] As PJM explained further, "one of the overriding considerations in this periodic review is to address procurement level concerns, both variability and quantity. Increasing the multiplier [to 1.75] could help fulfill this objective, as . . . a steeper curve reduces variability in capacity procurement levels . . ."[31] The adoption of 1.75 times Net CONE was principally predicated on these concerns regarding over procurement and the need to provide more market certainty.

D. Other Recent Changes in PJM's Capacity Market

Commonwealth of Pennsylvania witness Kris Aksomitis has described several other recent changes in the PJM capacity market. These changes include:

[29] Fifth Review of PJM's Variable Resource Requirement Curve for Planning Years Beginning 2026/2027 at 2 (April 19, 2022), *available at* https://www.brattle.com/wp-content/uploads/2022/05/Fifth-Review-of-PJMs-Variable-Resource-Requirement-Curve.pdf.

[30] https://www.pjm.com/-/media/committees-groups/committees/mrc/2022/20220824/item-02---3-pjm-position-on-2022-quadrennial-review-recommendations.ashx.

[31] *PJM Interconnection, L.L.C.*, Docket No. ER22-2984-000, Periodic Review of Variable Resource Requirement Curve Shape and Key Parameters (Sept. 30, 2022), at 19.

- A change in PJM's accreditation of resource reliability from average Effective Load Carrying Capability ("ELCC") to marginal ELCC beginning with the 2025/2026 BRA;[32]

- Revisions to load forecasting and modeling, as well as changes in the BRA parameters due to a change in the measurement of UCAP and concern over extreme weather events;[33]

- A change in the reference resource from combustion turbine ("CT") to combined cycle gas turbine ("CCGT");[34] and

- The establishment of the Capacity Performance program to help promote reliability during peak conditions in the 2016/2017 delivery period;[35]

- Changes to E&AS Offset methodology by using forward electricity and gas prices applied to historical hourly shapes.[36]

E. PJM's December 2024 Section 205 Filings

The results of PJM's capacity auction for the 2025/2026 Delivery Year revealed major issues with PJM's model. That auction saw the clearing price increase almost tenfold from the previous auction: for most of the PJM region, the capacity price for the 2025/2026 delivery year increased from $28.92/MW-day in the previous auction to $269.92/MW-day,[37] totaling $14.7 billion in costs to consumers.[38]

[32] Attachment 1, Exhibit A at Section 4.4.3. For certain resources, the change was from Equivalent Forced Outage Rate Demand to marginal ELCC.
[33] Attachment 1, Exhibit A at Section 4.4.4.
[34] Attachment 1, Exhibit A at Section 4.4.5.
[35] Attachment 1, Exhibit A at Section 4.4.2.
[36] Attachment 1, Exhibit A at Section 4.4.6.
[37] PJM 2025/2026 Base Residual Auction Report (July 30, 2024) at 3, *available at* https://www.pjm.com/-/media/DotCom/markets-ops/rpm/rpm-auction-info/2025-2026/2025-2026-base-residual-auction-report.ashx.
[38] The total cost to load for the 2025/2026 BRA was $14.7 billion, which includes the cost of EE. PJM 2025/2026 Base Residual Auction Report (July 30, 2024) at 3, *available at* https://www.pjm.com/-/media/DotCom/markets-ops/rpm/rpm-auction-info/2025-2026/2025-2026-base-residual-auction-report.ashx.

In response to the July auction and the serious concerns it raised about the capacity market's design, PJM made two Section 205 filings with the Commission in December 2024 at Docket Nos. ER25-682-000 and ER25-785-000 offering proposed changes to its RPM.[39]

PJM's filings acknowledge the changing market realities and recognize that "when high prices are misaligned with the objectives of the VRR Curve design, PJM must reevaluate the RPM to better reflect actual market fundamentals."[40] PJM's filings also note that "[t]he PJM capacity market has had to absorb a number of significant external events, including unprecedented rapid load growth,"[41] a "bottleneck" in PJM's interconnection queue that constrains new entry,[42] and a "compressed auction schedule [that] has exacerbated the impact of the rapid external changes and created far more volatility than what might have occurred had the markets been able to run on their intended pace of one annual Base Residual Auction three years in advance of the Delivery Year."[43] Further, PJM's experts warn that the current RPM construct risks responding to these factors by delivering "multiple years of high prices that are beyond what is needed to attract new entry in the long run, but that may yet be produced in the interim period before barriers to entry can be addressed . . ."[44] In sum, PJM's Section 205 filings

[39] PJM is not alone is recognizing that current market conditions demand changes to the RPM model. Following the last auction, the IMM released an analysis recommending that the maximum price on the VRR curve be set at 1.5 times Net CONE rather than the greater of Gross CONE and 1.75 times Net CONE. Monitoring Analytics, Analysis of the 2025/2026 RPM Base Residual Auction Part C (Nov. 6, 2024), at 9, *available at* https://www.monitoringanalytics.com/reports/reports/2024/IMM_Analysis_of_the_20252026_RPM_Base_Residual_Auction_Part_C_20241106.pdf. OPSI also sent a letter to PJM urging PJM to lower the maximum price in its capacity construct. OPSI Letter Regarding Proposed Capacity Market Adjustments (dated Nov. 21, 2024), https://www.pjm.com/-/media/about-pjm/who-we-are/public-disclosures/2024/20241121-opsi-letter-re-proposed-capacity-market-adjustments.ashx. That letter argued that the maximum price is excessive under the current capacity construct given that interconnection queue delays limit the cap's ability to ensure reliability. OPSI proposed that, in the near term, PJM could address the situation by using a fraction of Gross CONE, a multiplier of Net CONE, a fixed adder to Net CONE, or a combination of these metrics to set Point A on the VRR Curve.

[40] *PJM Interconnection, L.L.C.*, Revisions to Reliability Pricing Model, Docket No. ER25-682-000 (Dec. 9, 2024), at 5.

[41] *Id.* at 35.

[42] Graf/Marzewski Affidavit at ¶ 41(c).

[43] *PJM Interconnection, L.L.C.*, Revisions to Reliability Pricing Model, Docket No. ER25-682-000 (Dec. 9, 2024), at 36.

[44] Newell Affidavit at ¶ 18.

recognize that anticipated record prices under the current RPM design will be structurally unable to elicit the intended supply response due to interconnection queue delays and the compressed auction schedule: "Until barriers can be addressed, high prices. . . cannot fully activate a response."[45]

In response, PJM has proposed multiple changes to the RPM, including reverting to the prior Combustion Turbine reference technology, which will have a downward impact on the maximum auction price.[46, 47] While the reference technology changes that PJM is now proposing to reverse were correlated with the move to 1.75 times Net CONE in the last quadrennial review, PJM's Section 205 filings do not propose any changes to the cap, arguing "interventions that suppress the price would increase investor perceptions of regulatory risk . . ."[48] PJM does not identify any principle distinguishing the risk to investor confidence from modifications to Net CONE versus the similarly price suppressive proposals contained in PJM's Section 205 filings.

III. DISCUSSION

The price cap for PJM's capacity auction must be changed before the auction for the 2026/2027 Delivery Year. The assumptions that were used in 2022 in setting the demand curve, and the price cap (Point A on that curve) in particular, have been undercut by changing market conditions.[49] In light of those changes, PJM's proposed BRA design will leave consumers paying

[45] Newell Affidavit at ¶ 18.
[46] PJM has also responded by activating the stakeholder process on several reforms proposed by a letter from five governors, including Governor Shapiro, which has renewed discussions around a seasonal or sub-seasonal capacity market construct and improvements to the ELCC accreditation that serve to undercount peak capacity of certain resources. *See* Mark Takahashi, PJM Board Letter (Dec. 9, 2024) at 6, *available at* https://www.pjm.com/-/media/DotCom/about-pjm/who-we-are/public-disclosures/2024/20241209-board-letter-outlining-action-on-capacity-market-adjustments-rri-and-sis.pdf; *see also* https://www.pjm.com/-/media/DotCom/about-pjm/who-we-are/public-disclosures/2024/20241025-governors-letter-regarding-capacity-auctions.ashx.
[47] The Commonwealth agrees that these are appropriate proposals. The Commonwealth also supports PJM's three related proposals: (1) Reliability Resource Initiative, (2) Capacity Interconnection Rights, and (3) Surplus Interconnection Service. *Id.* Each of these proposals will help to increase capacity supply without requiring consumers to pay needlessly high RPM costs.
[48] Newell Affidavit at ¶ 20.
[49] Attachment 1, Exhibit A at 1.

up to $20.4 billion in added costs over the next two years without receiving commensurate benefits in the form of new or retained generating capacity and increased reliability. That is unjust and unreasonable.

As described below and at more length in the Declaration of Kris Aksomitis (Attachment 1) and in his related Report (Exhibit A to Attachment 1), this unjust and unreasonable outcome can be corrected before, and without further postponing, the next auction. Time is short before the forthcoming auction, but scheduling concerns alone must not serve to maintain the status quo given the unprecedented magnitude of potential costs to consumers.[50] The Commonwealth's recommendations are intended to be pragmatic, predicated on returning to proven RPM rules that can be implemented in the very near term.[51]

A. Unforeseen Market Changes Make PJM's RPM Unjust and Unreasonable

Two significant changes in the marketplace since 2022 have undermined fundamental assumptions that informed the design of PJM's RPM and, as a result, make the RPM unjust and unreasonable.

1. Changes to Capacity Marketplace Expectations

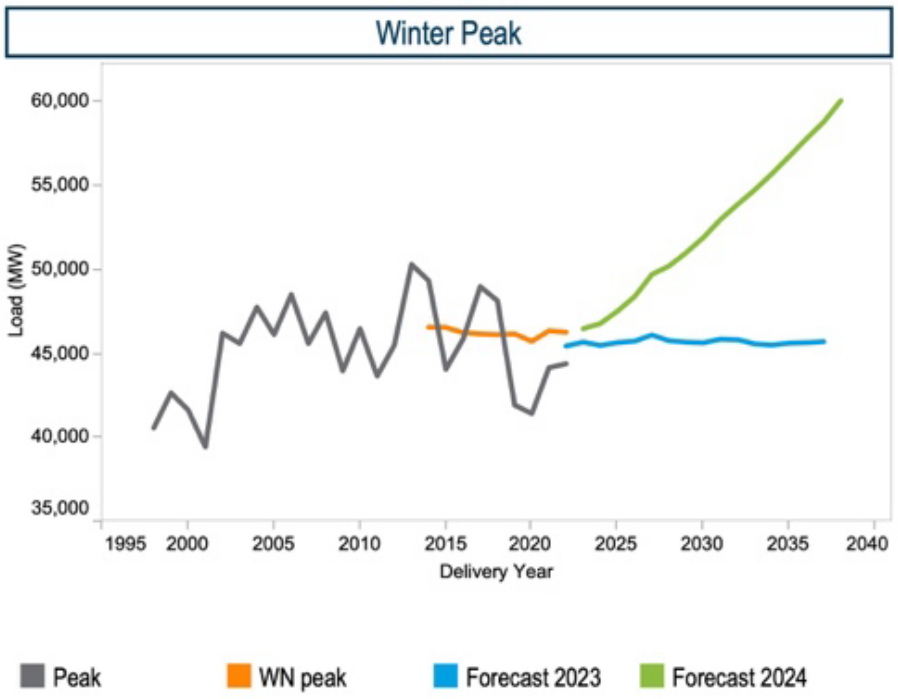
Dramatic increases in load growth forecasts and the impact of the revised methodology in setting the target capacity requirement have completely changed the market dynamics relative to when the demand curve parameters were set in 2022.[52] In PJM's footprint and beyond, energy markets have entered a period of dramatic change unforeseen even two years ago.[53] Electrification and rapidly growing interest in generative AI and associated data centers have

[50] Attachment 1, Exhibit A at Section 3.2.
[51] Attachment 1, Exhibit A at Section 3.2.
[52] Attachment 1, Exhibit A at 1.
[53] Although some of the factors described here are being experienced across the country, each of the four major capacity markets in the United States is a bespoke creation and the interaction of load growth and other factors with the design of PJM's RPM does not necessarily produce easily translatable lessons for other capacity markets.

upended a 30-year trend of relatively flat load forecasts,[54] replacing it with demand that is projected to skyrocket from 23 GW to 128 GW of growth in the next five years.[55] Peak load for 2027 is now forecast about 8,000 MW higher than was expected in 2022. The installed reserve margin requirement has been increased by about 3 percentage points due to the revised reliability forecasting methodology. Witness Aksomitis states that the large excess reserve margin in PJM has been unexpectedly reversed by these factors in the last two to three years.[56]

Unsurprisingly, even PJM experts told this Commission that, "the supply and demand balance that PJM has experienced over the last decade has fundamentally changed."[57] The shift can be seen in the rapidly evolving year-over-year forecast for winter peak load in the MAAC LDA serving much of Pennsylvania (expected to be further revised upwards in PJM's forthcoming 2025 load forecast[58]):[59]

[54] NERC, 2024 Long-Term Reliability Assessment (Dec. 2024) at 31, *available at* https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_Long%20Term%20Reliability%20Assessment_2024.pdf.
[55] John D. Wilson, *et al.*, Strategic Industries Surging, Driving US Power Demand, Clean Grid Initiative, at 3 (Dec. 2024), *available at* https://gridstrategiesllc.com/wp-content/uploads/National-Load-Growth-Report-2024.pdf.
[56] Attachment 1, Exhibit A at 1.
[57] Graf/Marzewski Affidavit at ¶ 48.
[58] *See* Molly Mooney, *2025 Preliminary PJM Load Forecast*, at 40 (Dec. 9, 2024), https://www.pjm.com/-/media/DotCom/committees-groups/subcommittees/las/2024/20241209/20241209-item-03---2025-preliminary-pjm-load-forecast.ashx.
[59] PJM, Load Forecast Report (Jan. 2024) at 4, *available at* https://www.pjm.com/-/media/DotCom/library/reports-notices/load-forecast/2024-load-report.ashx.



The steep VRR curve adopted by the Fifth Quadrennial Review is a very poor match for the market conditions that now exist. That curve introduces high volatility—this design "exchanges price risk for volumetric risk" as witness Aksomitis describes it.[60] That volatility further drowns out any vestigial price signal in a constrained entry environment. It requires potential entrants to gamble that a handful of additional megawatts will not appear and tank the price.

This was never the intended outcome of these VRR curve adjustments. The steep curve recommended by the Fifth Quadrennial Review was intended to limit over procurement and provide more granular control in a supply elastic, generation rich, environment with flat load. Today, with tight supply and capacity sellers unable to respond to the BRA clearing price no matter how high it climbs, that steep curve unintentionally serves to raise prices beyond rational

[60] Attachment 1, Exhibit A at Section 5.2.2.

levels and introduces volatility that undercuts the RPM's central purposes of reliability and predictability.[61]

In other words, a highly volatile VRR curve, extremely inelastic supply, and growing load growth make it impossible to ascribe the wisdom of a healthy marketplace to any resulting price, high or low. If supply were to dip slightly and prices hit the cap, it would send a dramatically different price signal from an equally plausible scenario where a small influx of supply craters prices—with the underlying reality essentially identical. Generators and consumers would both benefit from a more stable curve that can provide consistent pricing.

PJM's own expert, and one of the architects of the Fifth Quadrennial Review, recognizes the need to change the current cost formula: "If supply-side barriers and other challenges persist, the result could be to produce more concentrated compensation than the curve was designed for, at a greater cost to consumers, and with extreme sensitivity of prices to small changes in supply."[62] In short, unexpected changes to PJM's marketplace have undone the assumptions underpinning the Fifth Quadrennial Review and sent prices through the roof without a concomitant benefit, making the resulting auction design unjust and unreasonable in this new environment.

2. New Entry is Restricted

Second, the RPM is incapable of accomplishing its designed objectives. The capacity auction is designed: (1) to send a price signal to the market; and (2) to provide the "missing money" to existing generators. In particular, increasing the top of the VRR curve to the greater of Gross CONE or 1.75 times Net CONE necessarily assumed that market participants can respond with efficient entry or exit to the price signal that results from a given auction.

[61] Attachment 1, Exhibit A at Sections 3 and 5.2.2.
[62] Newell Affidavit at ¶ 5.

Yet it is currently physically impossible for new resources to respond to high BRA signals and enter PJM's marketplace. Right now, the PJM interconnection queue is utterly jammed—an all-time record 3,300 projects were awaiting interconnection earlier this year, by far the most queued projects of any RTO in the nation.[63] As it works to address this serious backlog, PJM has declined to allow new projects to join the queue since 2022,[64] so resources not already in the queue are unlikely to enter service before the end of the decade. Even PJM's proposed "fast track" Reliability Resource Initiative ("RRI")—which Pennsylvania generally supports—is not projected to allow new resources to come online before the 2029/2030 delivery year.[65] These obstacles mean most new projects are unable to even get in line to join the PJM grid for the foreseeable future, and none can realistically expect to be delivering power within eleven months.[66]

Making matters worse, PJM's capacity auctions have become increasingly delayed in recent years.[67] PJM's RPM is designed to be a forward auction that procures capacity three years in advance of the covered delivery year. But compounding delays since 2019 have resulted in increasingly condensed timelines between when capacity auctions are being held and the auction's covered delivery year. PJM held the 2022/2023 delivery year BRA thirteen months in advance, the 2023/2024 BRA twelve months in advance, the 2024/2025 BRA eighteen months in

[63] Lawrence Berkeley National Laboratory, Queued Up: 2024 Edition, (Apr. 2024) at 9, *available at* https://emp.lbl.gov/sites/default/files/2024-04/Queued%20Up%202024%20Edition_1.pdf.
[64] *Id.* at 7.
[65] *See* Affidavit of Donald Bielak at 10, Docket No. ER25-712-000, Tariff Revisions for Reliability Resource Initiative (Dec. 13, 2024), *available at* https://www.pjm.com/pjmfiles/directory/etariff/FercDockets/8547/20241213-er25-712-000.pdf.
[66] PJM's expert Samuel Newell implicitly concedes that any resource seeking to enter the 2026/2027 BRA would have needed to begin construction in 2023. Newell Affidavit at ¶ 11 ("the most recent forecast for 2026 is 157.2 GW, which is 4.5 GW higher than forecast *in 2023 at the time a new generator would have had to start construction*." (citations omitted and emphasis added)). This impossibility refers to newly constructed units, not adding marginal capacity through other paradigms such as surplus interconnection service, which the Commonwealth supports.
[67] Attachment 1, Exhibit A at Section 4.4.1.

advance, the 2025/2026 BRA eleven months in advance, and recently delayed the 2026/2027 BRA to July 2025, eleven months in advance of the delivery date.[68] This trend has curtailed the market's ability to respond to auction signals irrespective of price.[69]

If the market cannot function as an effective signal, it serves only the second purpose of providing existing units the "missing money" to remain operational. Under these circumstances, witness Aksomitis concludes that PJM's current cap is far higher than necessary to achieve that purpose.[70] If the upcoming auction clears at or near the current cap, there is a meaningful risk that that extraordinary cost comes with very little reliability benefit. In the 2025/2026 BRA, had prices hit the RTO-wide cap, the maximum response would have been an extra 514 MW of Unforced Capacity ("UCAP"), given that that was all remaining uncleared capacity available in the auction. Witness Aksomitis estimates that this equates to an implied Value of Lost Load ("VOLL") of a minimum of $11.6 million per MWh, which is orders of magnitude above recent VOLL estimates from MISO and ERCOT of $35,000 per MWh.[71] The lack of new entry means it will not be possible to summon a reliability improvement commensurate with such extraordinary cost.

PJM may theorize that extremely high prices could draw additional resources into the capacity market outside of new entrants. Witness Aksomitis examined this possibility and found that any such dormant resources do not require such high prices to enter. He notes that the

[68] Attachment 1, Exhibit A at Section 4.4.1.
[69] As noted above, *see supra* n.15, other RTOs hold intentionally prompt auctions which can offer some signaling function. However, the parameters of a forward auction, including the expected demand curve, differ dramatically from those in a prompt auction and it is not appropriate to design a forward auction and simply back into a de facto prompt schedule, expecting the same results.
[70] Attachment 1, Exhibit A at 1.
[71] "MISO Update to PJM Reserve Certainty Task Force," Nov. 2024, *available at* https://www.pjm.com/-/media/DotCom/committees-groups/task-forces/rcstf/2024/20241113/20241113-item-04---miso-shortage-pricing-update-to-pjm-rcstf.pdf. MISO reports a range of VOLL from $10,000/MWh to $35,000/MWh (pages 16 and 20). PUCT Review of Value of Lost Load in the ERCOT Market, September 2024, Value of Lost Load Study for the ERCOT Region, suggest an ERCOT wide VOLL of $35,000.

inability to interconnect new projects leaves three potential pools of resources that could opt to respond to a higher auction price signal: (1) mothballed units that could return to service; (2) projects that have exited the interconnection queue but not yet entered service; and (3) demand response resources.[72] None of these three sources of additional capacity require scarcity level pricing to enter the marketplace, and the BRA's current volatility risks may actually prevent their entry.

First, as witness Aksomitis has demonstrated, for mothballed units that are part of a larger portfolio, the steeply vertical VRR curve based on Gross CONE perversely disincentivizes reactivation due to lower fleet-wide profits were the unit to return to service.[73] Witness Aksomitis concludes, "[a] small portfolio and and/or relatively low costs for the reactivating unit are the only realistic way that the price cap would incent returning capacity."[74]

Second, PJM's tranche-based queue backlog processing means that the majority of imminent projects (in Transition Cycle #1 ("TC1")) will not receive an Interconnection Agreement before mid-2025.[75] This makes them "exceedingly unlikely to participate in the 2026/2027 BRA given reasonable construction timelines and the high likelihood of the resource not being available by June 2026."[76]

Third, demand response resources ("DR") are unconstrained by many of the market rules and physical limitations of conventional resources. While they should be expected to respond to higher market signals, there is no empirical basis to suggest markedly increased participation will occur at extremely high multiples of Net CONE or at Gross CONE versus at the historically high

[72] Attachment 1, Exhibit A at Sections 5.3-3.1.
[73] Attachment 1, Exhibit A at Section 5.3.1.
[74] Attachment 1, Exhibit A at Section 5.3.1.
[75] Attachment 1, Exhibit A at Section 5.3.
[76] Attachment 1, Exhibit A at Section 5.3.

prices that the market is already delivering. Because neither Net or Gross CONE pertain to the cost structure of DR, it is impossible to argue that either figure is the necessary amount needed to secure sufficient DR response. Instead, common sense dictates that an elevated price, such as the record set in the 2025/2026 BRA, and the potential for continued prices above historic norms will entice DR to enter the marketplace—in that scenario, the uncertainty produced by the steep VRR curve may be the greatest barrier to reliable participation by DR in forthcoming auctions.

Finally, the VRR price cap exists because market participants generally agree that it would not be just and reasonable for consumers to pay astronomical sums to obtain a handful of additional megawatts beyond a given point. Specifically for the 2025/2026 BRA, witness Aksomitis has demonstrated that a price increase from 1.0 times Net CONE at $224/MW-Day to Gross CONE at $695/MW-Day would have elicited only about 770 MW of additional total capacity, at most.[77] Under these conditions, "the implied cost of achieving incremental reliability would far exceed reasonable estimates of the VOLL."[78] This means that reducing the price cap as the Commonwealth requests for the two forthcoming auctions stands to save customers $20.4 billion dollars while reducing available capacity by only 100 MW each year.[79] Customers would pay approximately $100 million for each additional megawatt of capacity above a 1.5 times Net CONE price cap.

---

[77] Attachment 1, Exhibit A at Section 5.2.3.
[78] Attachment 1, Exhibit A at Section 5.2.4.
[79] These estimates are derived from the IMM's Scenario 32 in Part C (137,370 UCAP cleared) and Scenario 52 in Part D (137,270 UCAP cleared) as the closest suitable analogues for the estimated outcome of the 2025/2026 auction under the auction rules as proposed by PJM in its 205 filings or those rules with the addition of the Commonwealth's requested relief. Monitoring Analytics, Analysis of the 2025/2026 RPM Base Residual Auction Part D (Nov. 6, 2024), at 20, *available at* https://www.monitoringanalytics.com/reports/reports/2024/IMM_Analysis_of_the_20252026_RPM_Base_Residual_Auction_Part_C_20241106.pdf; Monitoring Analytics, Analysis of the 2025/2026 RPM Base Residual Auction Part D (Dec. 6, 2024), at 27, *available at* https://www.monitoringanalytics.com/reports/Reports/2024/IMM_Analysis_of_the_20252026_RPM_Base_Residual_Auction_Part_D_20241206.pdf.

In sum, increasing prices in the forthcoming auction cannot reasonably be expected to deliver sizable increases in capacity at any price, and requiring customers to pay scarcity pricing for *de minimis* variations in supply would serve neither the purpose of the RPM nor the public interest. In short, the current RPM auction rules are not just and reasonable under these market conditions.

B. PJM Should Be Directed to Remove the Gross CONE Linkage

Under the conditions described above, where the RPM is not serving as an effective market signal, PJM's use of Gross CONE is an arbitrarily high alternative price cap as by definition it provides far more than the "missing money."[80] PJM should be directed to replace its reliance on Gross CONE with 1.5 times the RTO-wide Net CONE, mirroring the RTO-wide Net CONE-based RPM penalty structure that PJM has proposed.[81]

Gross CONE cannot be justified in the absence of potential entry because it sets the price cap at a level far above realistic capacity costs.[82] Witness Aksomitis found that setting the price cap at Gross CONE would likely increase capacity prices for the 2026/2027 BRA by as much as 50% relative to prices under a Net CONE-based price cap, with no reasonable expectation of an

---

[80] Attachment 1, Exhibit A at 1. As noted above, although Gross CONE was introduced as a backstop alternative price cap, it will likely set the market in the two forthcoming auctions as the Gross CONE of CT or CC reference units is expected to exceed multiples of Net CONE.

[81] *See PJM Interconnection, L.L.C.*, Revisions to Reliability Pricing Model, Docket No. ER25-682-000 (Dec. 9, 2024), at 71. The logic for using RTO Net CONE as a backstop mirrors PJM's arguments for its use in the penalty rate. Namely, it is likely to avert the collapse of the VRR curve in LDAs where Net CONE falls to $0 in the next two auctions, replacing the need for Gross CONE in such circumstances. As PJM recently described to this Commission: "High EAS revenues can result in low or even zero-based capacity prices. However, high net EAS revenues have not been equally felt across the RTO. The RTO Net CONE is comparatively less likely to experience $0 or near-$0 Net CONE values. In short, a uniform Non-Performance Charge Rate based on the RTO Net CONE supports PJM's efforts to maintain reliability during potential capacity emergencies." *Id.*

[82] Attachment 1, Exhibit A at 2, Sections 3.2.2 and 6.2. *See also* Monitoring Analytics, Analysis of the 2025/2026 RPM Base Residual Auction Part D (Dec. 6, 2024), at 8, *available at* https://www.monitoringanalytics.com/reports/Reports/2024/IMM_Analysis_of_the_20252026_RPM_Base_Residual_Auction_Part_D_20241206.pdf ("The use of Net CONE was based on the logic of the capacity market, to ensure that between the energy and capacity markets the cost of entry was covered. . . . Net CONE was the equilibrating factor between the capacity market and energy market. The use of Gross CONE is inconsistent with that basic capacity market logic.").

incremental market response sufficient to justify this cost.[83] This would represent an unjustified wealth transfer as the incremental capacity and reliability benefit are shown to be minimal and come at cost orders of magnitude greater than any reasonable estimate of the VOLL.

Circumstances have meaningfully changed since this Commission last considered the use of Gross CONE as the maximum BRA price.[84] In 2020, this Commission concluded that Gross CONE was a necessary backstop for Net CONE because of the risk of an "extreme scenario" where high E&AS revenues reduced Net CONE below reasonable levels and effectively masked the need for new capacity in times of resource scarcity.[85]

That scenario did not materialize in the 2025/2026 auction, and current market conditions preclude any realistic probability of it occurring in the forthcoming two auctions (given PJM's proposed reliance on a CT reference resource); instead, Net CONE-based capacity prices are expected to remain elevated, or even at record highs, for the foreseeable future. This removes the feasibility of the "extreme scenario" that the Commission feared occurring before the next Quadrennial Review. Indeed, record load growth is making it plainly evident that new capacity is needed in the marketplace and the capacity market is responding as designed with a strong build signal. Under these conditions, Net CONE is functioning as intended and recently produced an all-time high RTO-wide capacity price in response to increasing supply demand imbalance in July 2024.

In 2020, the Commission also noted that allowing Gross CONE would be just and reasonable as a price cap because it would only bind the auction price if supply were below the Installed Reserve Margin.[86] This logic is flawed—a price cap of any amount can be justified if

[83] Attachment 1, Exhibit A at 2, Sections 3.2.2 and 6.2.
[84] *PJM Interconnection, L.L.C.*, 171 FERC ¶ 61,153 (May 21, 2020).
[85] *PJM Interconnection, L.L.C.*, 171 FERC ¶ 61,153 (May 21, 2020), at ¶ 329-30.
[86] *PJM Interconnection, L.L.C.*, 171 FERC ¶ 61,153 (May 21, 2020), at ¶ 329.

the very act of reaching that cap makes it just. This is the central problem with Gross CONE. As a measure of total cost (an amount which will definitionally always be more than the necessary capacity payment) it is unmoored to any specific rationale and in essence is merely a convenient large number. While Gross CONE is used elsewhere as such a generic round number, it has no rigorous basis as the proper maximum amount for consumers to pay in the event of scarcity.[87]

But even accepting the premise that extreme prices should be permitted when needed to entice the entry of additional supply, the Commission's logic in 2020 was predicated on the inherent assumption that Gross CONE would be capable of incenting such supply to enter and discipline the market. When falling below the Installed Reserve Margin cannot be corrected by an immediate price spike, as the Commission assumed in the supply-rich environment at the time, Gross CONE loses any theoretical justification. And as PJM has admitted to this Commission, under the current constrained entry conditions and market parameters, even highly elevated prices "cannot fully activate response" in the marketplace.[88]

Today's capacity market is simultaneously confronting growing load and diminishing supply due to retirements, ELCC adjustments, and other changes. These are serious challenges, but they simply cannot be fixed by consumers paying Gross CONE.

---

[87] Brattle's original recommendation of Gross CONE in 2011 included observations that utilizing 1.5 times Gross CONE, or even 2.0 times Gross CONE as the maximum auction price, would even further reduce the risk of misestimating Net CONE. The Brattle Group, Second Performance Assessment of PJM's Reliability Pricing Model (Aug. 26, 2011) at 99-100, n.118, *available at* https://www.brattle.com/wp-content/uploads/2017/10/6232_second_performance_assessment_of_pjms_reliability_pricing_model_pfeifenberger_et_al_aug_26_2011-3.pdf. This is limitless logic. A similar lack of principled gating function undermines the attendant argument that Gross CONE may be necessary to ensure the market can provide true Net CONE over time. That is because Gross CONE itself might be insufficient under unusual market conditions. To avert these concerns, a floor above $0 on the VRR curve could be considered to complement a cap at 1.5 times Net CONE, providing more predictable market outcomes. But the time for introducing such novel concepts is during the quadrennial review process, not when today's constrained entry conditions block resources that wish to enter the market from doing so, irrespective of BRA clearing price.

[88] Newell Affidavit at ¶ 18.

Nor would paying Gross CONE (or 1.75 times Net CONE) in the next two forthcoming auctions actually achieve meaningful improvements in grid reliability. The Commonwealth supports and encourages every rational measure to ensure the reliability of our electrical grid, including the use of a static backstop to avert a Net CONE-based VRR curve from collapsing due to high energy revenues. But PJM's existing reliability metrics, including the calculations related to the 1-in-10 reliability requirement, are predicated on the possibility of a higher price stimulating sufficient new capacity to relieve structural shortfalls in the market and thus tangibly improving reliability. Those expectations cannot be met in the current market at any price. Costs are rising across many areas of society, and to the extent that rising prices may require higher price caps in future auction cycles, those increases will be taken into account at the recalculation of Gross CONE in the Sixth Quadrennial Review, making that the proper forum for forward-looking concerns about price increases.[89] Further, the literal inability to construct any new resources in response to a price signal of any amount within the next two years due allays any concerns about rising prices impacting the feasibility of building said new resources.

Numerous shortcomings with PJM's methodology for calculating the Installed Reserve Margin,[90] Net CONE on a UCAP basis,[91] and ELCC[92] also all suggest that the scarcity pricing implied by reaching a Gross CONE cap would not reflect empirical capacity supply available in the marketplace. Additionally, PJM's use of either a CC or CT unit as the reference resource, and therefore the economic basis of Gross CONE, ignores that vanishingly little of either resource is being constructed today and the cost structure of the reference resource may have an increasingly

[89] Attachment 1, Exhibit A at 51-52, Section 6.2.
[90] Attachment 1, Exhibit A at 41-45, Section 5.4.
[91] Attachment 1, Exhibit A at 46-51, Section 5.5.
[92] Monitoring Analytics, Analysis of the 2025/2026 RPM Base Residual Auction Part A (Sept. 20, 2024), at 6, *available at* https://www.monitoringanalytics.com/reports/Reports/2024/IMM_Analysis_of_the_20252026_RPM_Base_Residual_Auction_Part_A_20240920.pdf.

attenuated correlation to the actual cost needed to bring the resources that are actually waiting (and waiting) in the queue into the marketplace. Thus, warnings concerning reliability that are predicated on a cascade of implicit and explicit assumptions are insufficient to justify charging what is by definition an excessive amount that itself cannot provide any degree of certainty that reliability will be greater, only certainty that cost will increase. That outcome cannot be in the public interest.

Therefore, replacing Gross CONE with an alternative formula directly rooted in Net CONE will satisfy the need for a backstop to address concerns about E&AS revenues masking the need for new capacity, but will eliminate the risk of unjust outcomes.[93]

C. PJM Should Be Directed to Reduce the Price Cap by Lowering the Net CONE Multiplier Until the Next Quadrennial Review

Additionally, PJM should be directed to reduce the price cap by lowering its multiplier to 1.5 times Net CONE until a new demand curve is established by the ongoing Sixth Quadrennial Review.[94]

Currently, the forthcoming auction will use the increased 1.75 times Net CONE as one of two possible definitions of the price cap. As witness Aksomitis observes, this figure was predicated on the potential for new entry and is not reasonable given the current compressed auction schedule and prolonged queue delays that interfere with that underlying assumption.[95] The steep slope and narrow width of the demand curve that results from the current cap

[93] Attachment 1, Exhibit A at 2, Section 5.2.4. Other potential backstop options exist as well, including OPSI's November 21, 2024 proposals and an original alternative considered by Brattle in 2011 of relying on 0.5 times Gross CONE to approximate 1.5 times Net CONE. The Brattle Group, Second Performance Assessment of PJM's Reliability Pricing Model (Aug. 26, 2011) at 99, *available at* https://www.brattle.com/wp-content/uploads/2017/10/6232_second_performance_assessment_of_pjms_reliability_pricing_model_pfeifenberger_et_al_aug_26_2011-3.pdf.

[94] Recognizing that analysis for that Review is already underway, the Commonwealth suggests that a one-year delay be considered, which would maintain the originally planned schedule for the Sixth Quadrennial Review.

[95] Attachment 1, Exhibit A at Section 6.1.

definition were intended to prevent over procurement in an expected supply rich market and are poorly suited to respond to the interconnection delays, compressed auctions, and explosive load growth that have all arisen since 2022. These curve parameters currently risk producing unjustifiably high prices.

PJM's expert, Dr. Newell, agrees that the proper curve shape for these market conditions is a "flatter curve [that] reduce[s] prices and price volatility in conditions of supply-demand shocks and non-forward auctions with less supply-side elasticity."[96] PJM's proposed return to a CT reference resource will tend to flatten the curve, but cannot assure that the RPM will not price near or at the cap. If the auction does clear near the cap, using the current definition rather than the Commonwealth's definition will cost consumers more than $20 billion over two years without providing tangible reliability or capacity benefits.

PJM recognizes that the assumptions underlying the Fifth Quadrennial Review have been undone by real world events.[97] As a result, its filings argue that the recommendations of the Fifth Quadrennial Review—in particular the change to the reference resource—should logically be reversed. However, it refuses to address the increase to Net CONE (from 1.5 times to 1.75 times Net CONE) that was adopted by this Commission as a concomitant result of the Fifth Quadrennial Review's analysis. The flawed assumptions undermining the switch in reference resource make the use of 1.75 times Net CONE equally untenable.

Before 2022, auctions had "consistently procured capacity volumes beyond the Reliability Requirement."[98] So, in 2022, the Commission approved the proposal to increase to

---

[96] Newell Affidavit at ¶ 18.
[97] *See* Newell Affidavit at ¶ 10 (describing an "unusual combination" of events that together are "beyond what the curve was designed for in the 2022 Quadrennial Review which incorporated smaller shocks, greater entry possibilities, and greater supply elasticity in three-year forward auctions . . .").
[98] Fifth Review of PJM's Variable Resource Requirement Curve for Planning Years Beginning 2026/2027 at 2 (April 19, 2022), *available at* https://www.brattle.com/wp-content/uploads/2022/05/Fifth-Review-of-PJMs-Variable-Resource-Requirement-Curve.pdf.

1.75 times Net CONE based on the analysis of the Fifth Quadrennial Review that found the overall result of the proposed VRR curve would "reduce[] average excess capacity procurement by approximately 805 MW relative to the current VRR curve . . . ."[99] Further justification for the increase came from concerns of artificial under procurement given the variability of E&AS revenues and the difficulty of assessing true Net CONE, as described above pertaining to Gross CONE.

Today, each of these issues has diminished or disappeared. First, rather than over procurement, the capacity market faces the prospect of a tight supply environment for at least the next several auctions. Second, PJM has taken a positive step in addressing historical issues with uncertainty over E&AS revenues by switching to a forward-looking model in the 2026-2027 auction that should improve the accuracy of Net CONE estimation. While this does not eliminate uncertainty with regards to E&AS revenue estimation, it directly addresses the concerns of artificial under procurement that the switch to 1.75 times Net CONE were partly intended to prevent. Third, as PJM's experts have argued to the Commission, the proposed return to a Combustion Turbine ("CT") unit as the reference resource further eases the range of uncertainty that might otherwise require a larger margin of error in estimating Net CONE "because CTs are far less reliant on EAS revenues, [so] the Net CONE of CT resources remain relatively stable in spite of the regulatory and policy uncertainties. . ."[100]

[99] Fifth Review of PJM's Variable Resource Requirement Curve for Planning Years Beginning 2026/2027 at 2 (April 19, 2022), *available at* https://www.brattle.com/wp-content/uploads/2022/05/Fifth-Review-of-PJMs-Variable-Resource-Requirement-Curve.pdf; *see also PJM Interconnection, L.L.C.*, 182 FERC ¶ 61,073, Order Accepting Proposed Tariff Revisions (Feb. 14, 2023), at ¶ 158. At the time, PJM minimized the likelihood of Net CONE-based under procurement scenarios by expressly emphasizing to the Commission that the Net CONE multiplier was unlikely to be determinative of the final auction price regardless due to the expected primacy of Gross CONE. *Id.* at 146, fn. 331.

[100] Graf/Marzewski Affidavit at ¶ 72.

Under these conditions, and given that the RPM is unable to serve as an effective market signal, PJM's use of 1.75 times Net CONE as one potential determinant of the price cap is arbitrarily high.[101] PJM should be directed to return to the prior multiplier of 1.5 times Net CONE that has existed in every previous BRA auction and that is familiar and predicable for market participants.[102]

Indeed, 1.5 times Net CONE is a conservative, reliability-centric price cap. True Net CONE itself is sufficient (and theoretically exactly correct) to supply the "missing money" when that is the sole effective outcome of the RPM. However, witness Aksomitis emphasizes that "Net CONE is an administrative estimate" that is subject to reasonable uncertainty.[103] Empirical observation indicates that PJM may have historically overestimated Net CONE, as "capacity additions have occurred even when prices were below the Net CONE, effectively revealing a lower market derived Net CONE."[104] Yet in the unlikely scenario that Net CONE were underestimated, capping the auction at 1.0 times Net CONE could lead to a failure to properly compensate reference units. These concerns are mitigated to some degree by PJM's proposal to revert to a CT reference unit in the forthcoming auction as doing so will tend to increase Net CONE.[105] However, given the reasonable range of estimates that exist for true Net CONE, the Commonwealth agrees that a maximum price above administrative Net CONE is a sensible

[101] Attachment 1, Exhibit A at 1.
[102] Additionally, as a purely pragmatic matter, given the growing uncertainty around both supply and demand in the capacity markets, the forthcoming auction represents a particularly inopportune time to increase the Net CONE multiplier to an all-time high.
[103] Attachment 1, Exhibit A at Section 6.2.
[104] Attachment 1, Exhibit A at Section 5.3. The use of a reference resource—whether CC or CT—that is generally more expensive to build and operate than the majority of resources currently seeking to join the PJM grid also suggests that Net CONE may be a conservative figure for attracting new entry in this market environment.
[105] Newell Affidavit at ¶ 18.

precautionary measure to avoid underestimating the true "missing money" required to keep needed capacity online.[106]

While PJM has proposed changing the reference resource, thereby indirectly modestly lowering the price cap, it has declined to directly address the cap because doing so would supposedly "frustrate RPM's goal of providing a degree of long-term stability."[107] This conclusion defies PJM's own logic in urging the Commission to roll back the change of reference resource: both changes (higher cap and newer reference resource) were recommended by the Fifth Quadrennial Review, predicated on the same assumptions and expressly pitched to this Commission as a correlated change, with 1.75 times Net CONE being the appropriate multiplier for a CC reference resource in order to have the same effect as 1.5 times Net CONE for a CT resource.[108] PJM has submitted that these assumptions no longer match the real world and that the reference resource must be reversed as a result. That conclusion applies with equal force to reversing the correlated increase to 1.75 times Net CONE. In fact, given the uncertainty driven by record load growth, a reversion to the traditional multiplier (1.5 times Net CONE) that was employed in every other BRA strengthens rather than undermines the stability of the capacity market.

[106] Attachment 1, Exhibit A at Section 6.2.
[107] *See PJM Interconnection , L.L.C.*, Revisions to Reliability Pricing Model, Docket No. ER25-682-000 at 45 (Dec. 9, 2024) (quotation omitted); *see also* Protest of the PJM Power Providers Group, Sierra Club, et al. v. PJM Interconnection, L.L.C., EL24-148-000 (Oct. 24, 2024), at 6 ("Frequent alteration of market rules and drastic changes in price signals erode investor confidence and hinder access to needed capital by increasing perceived risk.").
[108] *See PJM Interconnection, L.L.C.*, Docket No. ER22-2984-000, Periodic Review of Variable Resource Requirement Curve Shape and Key Parameters (Sept. 30, 2022) at 19 ("[T]he relationship between gross CONE and 1.75 times Net CONE for a CC Reference Resource is similar to the relationship between gross CONE and 1.5 Net CONE for the CT Reference Resource.").

Further, there have already been habitual changes—referred to by one member of this Commission as "endless Rube Goldberg tinkering"[109]—attempting to stabilize PJM's RPM model since its introduction in 2007. These include the most recent proposals contained in PJM's December 2024 Section 205 filings. The Commonwealth agrees that long-term stability is an important attribute of any capacity market model and strongly supports reaching a sustainable, durable capacity model as soon as possible. However, the volatility introduced by the Fifth Quadrennial Review's VRR curve is a source of instability in uncertain times. All market participants would benefit from a more predictable VRR curve in times of rapidly changing load growth. Again, PJM makes these same arguments in favor of changing the reference resource.[110]

While PJM has candidly, and reasonably, warned that its estimate of Net CONE is subject to high degrees of uncertainty (given regulatory and policy changes and E&AS variation),[111] and conceded that its chosen VRR curve introduces excessive volatility,[112] it persists with the illogical conclusion that the market must have access to disproportionate levels of compensation to permit functional outcomes. This cannot be so. No rational observer could ascribe percipience to a market where 770 MW of capacity (less than 0.5% of total UCAP) represents the full range of expected clearing volumes from price caps of 1.0 Net CONE to Gross CONE.[113] With an entirely inelastic supply curve, the reality is that a market that winds up with a handful of additional megawatts pushing prices down to 1.0 Net CONE is effectively the exact same real

[109] *See PJM Interconnection, L.L.C.*, 182 FERC ¶ 61,073 (Feb. 14, 2023), (Christie, concurring at ¶ 2) (describing tinkering "with the minute details of the capacity market construct. . . . has gone on for years and never reaches a point of stability, yet stability of market design is essential to attract the necessary capital investment in capacity resources.").
[110] Newell Affidavit at ¶ 18 ("The benefit of flatter curve is reduced prices and price volatility in conditions of supply-demand shocks and non-forward auctions with less supply-side elasticity.").
[111] Graf/Marzewski Affidavit at ¶¶ 71-72.
[112] *PJM Interconnection, L.L.C.*, Revisions to Reliability Pricing Model, Docket No. ER25-682-000 (Dec. 9, 2024), at 63.
[113] Attachment 1, Exhibit A at Section 5.2.3.

world market as one where a minute influx pushes prices to Gross CONE. The market cannot meaningfully distinguish these outcomes. Nor does any magic assurance of reliability arise between those two scenarios.[114]

Therefore, the public interest simply cannot tolerate up to $20.4 billion in unreasonably high rates dictated by a steep demand curve that was designed for an entirely different environment. To prevent an unjustly high auction price and to reflect current market conditions, PJM should be directed to return the price cap to 1.5 times Net CONE until a new demand curve is established by the ongoing Sixth Quadrennial Review.[115]

* * * * *

In sum, the capacity price cap should be set at the greater of 1.5 times Net CONE or 1.5 times the RTO Net CONE in constrained LDAs. If Net CONE is higher in an LDA, that LDA would use the LDA specific Net CONE, otherwise 1.5 times RTO-wide Net CONE would be the maximum price. This change is necessary to avert the risk of an up to $20.4 billion over payment born by consumers across the PJM region.

IV. RULE 206 REQUIREMENTS

To the extent this information has not already been addressed above, the Commonwealth provides the following as required by Rule 206 of the Commission's Rules of Practice and Procedure.

[114] While PJM's Section 205 filings, if adopted, would begin to flatten the VRR curve by changing the reference resource, the possibility of an extremely volatile outcome remains so long as the 1.75 Net CONE multiplier and Gross CONE, both of which were intended to combat scenarios that have not come to pass, remain the bedrock of the VRR curve.

[115] Multiple means could be used to lower the price cap, as outlined in OPSI's November 21, 2024 letter. *See* OPSI Letter Regarding Proposed Capacity Market Adjustments (Nov. 21, 2024), https://www.pjm.com/-/media/about-pjm/who-we-are/public-disclosures/2024/20241121-opsi-letter-re-proposed-capacity-market-adjustments.ashx. However, for the reasons described below, reducing the multiple of Net CONE and eliminating the use of Gross CONE is the most direct method and remains directly tied to historical practice.

A. Good faith estimate of financial impact or harm (Rules 206(b)(3) and (4))

As documented above, PJM's current method for calculating the maximum price on the VRR curve is unjust and unreasonable.

Witness Aksomitis estimates the capacity price for the upcoming July 2025 auction for the 2026/2027 Delivery Year will fall between $360/MW-Day and $500/MW-Day, or about 50% higher than actual 2025/2026 BRA results. This unjust and unreasonable rule will likely lead to excessive costs, inefficiencies and reduced reliability that will likely increase monthly utility bills for consumers in the Commonwealth as well as for the Commonwealth itself. Without prompt reforms that would apply to the next auction, that auction will impose additional unjust and unreasonable costs on consumers, including the Commonwealth. Witness Aksomitis calculates that the excessive price cap alone will increase capacity charges to PJM ratepayers in the 2026/2027 BRA by at least $5.82 billion above the fundamentals, based on 2025/2026 BRA results (for a total capacity cost of $20.5 billion in PJM's footprint in the 2026/2027 BRA) without accompanying benefits to consumers.

Witness Aksomitis' calculations are markedly conservative compared to the projections of other stakeholders. In a complaint filed on November 18, 2024 at Docket No. EL25-18-000 by a group of state consumer advocates (the "Joint Consumer Advocates"), the advocates project a new offer cap of $696/MW-day for the entire PJM region.[116] If that occurs, capacity charges to PJM ratepayers in PJM's footprint will total $37 billion in the 2026/2027 BRA,[117] which equates to an additional $22.3 billion compared to actual 2025/2026 BRA results.

[116] Joint Consumer Advocate Complaint at 2, 49, 52.
[117] Joint Consumer Advocate Complaint at 49, 52.

B. Practical, operations, or other nonfinancial impacts (Rule 206(b)(5))

The Commonwealth believes that PJM's current method for calculating the maximum price on the VRR curve creates excessive costs and inefficiencies to the detriment of ratepayers.

C. Other pending matters (Rule 206(b)(6))

Aspects of this Complaint are related to issues raised in other matters in which PJM's capacity market rules are being challenged.

Specifically, a complaint filed by the Sierra Club, Natural Resources Defense Council, Public Citizen, Sustainable FERC Project, and Union of Concerned Scientists on September 27, 2024, at Docket No. EL24-148-000 is related to the availability of capacity from power plants operating under Reliability Must Run ("RMR") arrangements.[118] The Sierra Club complaint makes specific reference to the Brandon Shores and Wagner units that are located in the Baltimore Gas & Electric ("BGE") LDA. Whether specific RMR units in the BGE LDA, namely the Brandon Shores and Wagner units, should offer into the capacity market is at issue in ER24-1787 and ER24-1790. Comments in the Sierra Club complaint, Docket No. EL24-148-000, have raised other aspects of the RPM market design.[119] Market design issues have also been raised in recent letters submitted to the PJM Board of Managers by the OPSI (in the OPSI Letter[120] of September 27, 2024) and P3 (in the "P3 Letter"[121] of October 2, 2024).

Additionally, a complaint was filed on November 18, 2024 at Docket No. EL25-18 by the state consumer advocates for Illinois, Maryland, New Jersey, Ohio and the District of Columbia (the "Joint Consumer Advocates") which alleges that PJM's capacity market rules are unjust and

[118] The Commonwealth intervened in the Sierra Club *et al.* proceeding on Oct. 17, 2024.
[119] Comments of the Organization of PJM States, Inc., filed Oct. 8, 2024.
[120] September 27, 2024 letter from OPSI to the PJM Board ("OPSI Letter") at 3, *available at* https://opsi.us/wp-content/uploads/2024/09/OPSI-BRA-RESPONSE-LETTER-2024.09.27.pdf.
[121] P3 Letter Regarding the OPSI Letter Addressing Results of the 2025/2026 Base Residual Auction, October 2, 2024, *available at* https://www.pjm.com/-/media/about-pjm/who-we-are/public-disclosures/2024/20241002-p3-letter-re-opsi-letter-addressing-results-of-25-26-bra.ashx.

unreasonable because they fail to mitigate market power and result in the imposition of excessive capacity charges upon consumers.

While these complaints raise related issues, neither the Sierra Club complaint nor the Joint Consumer Advocates complaint specifically addresses PJM's method for calculating the maximum price on the VRR curve.

Further, PJM has made two recent Section 205 filings. On December 9, 2024, PJM made a Section 205 filing with FERC at Docket No. ER25-682-000 to make certain proposed changes to its RPM. On December 20, 2024, PJM made an additional Section 205 filing at Docket No. ER25-785-000 proposing to extend the capacity must-offer requirement to all generation capacity resources.[122] The proposed changes would affect the price cap described in these filings but do not include direct changes to the price cap formula maximum discussed herein.

The Commonwealth is aware of and actively engaged in ongoing discussions in the PJM stakeholder processes that could result in reforms to the current BRA rules. At the present time, however, the Commonwealth has no reason to believe that the stakeholder process will be able to propose or effectuate reforms that could be implemented before the upcoming auction for the 2026/2027 Delivery Year.

D. Specific relief or remedy request (Rule 206(b)(7))

The Complaint sets forth in detail the specific relief requested.

E. Documents supporting the Complaint (Rule 206(b)(8))

The Declaration of Kris Aksomitis is included as Attachment 1 to this Complaint. A detailed Report prepared by Mr. Aksomitis supporting this Complaint, as well as Mr. Aksomitis'

[122] The Commonwealth also notes the filing of a third pertinent Section 205 at Docket No. ER25-712-000 on December 13, 2024.

CV, are included as Exhibits A and B to the Declaration, respectively. The Declaration and Report identify the materials relied upon by Mr. Aksomitis.

F. Alternative Dispute Resolution (Rule 206(b)(9))

The Commonwealth has not used the Commission's Enforcement Hotline or Dispute Resolution Services and do not believe at this time that alternative dispute resolution would resolve the issues underlying this Complaint. The Commonwealth has no reason to expect that alternative dispute resolution would yield the requested relief.

G. Form of Notice (Rule 206(b)(10))

A form of notice of this Complaint suitable for publication in the Federal Register is appended.

H. Fast Track Processing (Rule 206(b)(11))

The Commonwealth desires the relief be granted so that reforms can be implemented before the upcoming auctions for the 2026/2027 Delivery Year. To do this, the Commonwealth respectfully requests that this Complaint be addressed at the same time as PJM's Section 205 Filing of December 9, 2024.[123] In the event that the Commission should issue a deficiency letter for this Complaint or the PJM Section 205 Filing of December 9, 2024, the Commonwealth further respectfully requests that the Commission order a brief additional delay to the 2026/2027 capacity auction until December 2025 to ensure that ratepayer bills are not increased by double digits solely due to the commands of the calendar.

[123] *PJM Interconnection, L.L.C.*, Revisions to Reliability Pricing Model, Docket No. ER25-682-000 (Dec. 9, 2024).

I. Communications (Rule 203(b))

Pursuant to Rule 203(b) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.203(b), the Commonwealth specifies that communications in this matter are to be addressed to the following:

Carl R. Shultz, Esq.
Eckert Seamans Cherin & Mellott, LLC
213 Market Street, 8th Floor
Harrisburg, PA 17101
(717) 237-6000 (phone)
(717) 237-6019 (fax)
cshultz@eckertseamans.com

Lauren M. Burge, Esq.
Eckert Seamans Cherin & Mellott, LLC
600 Grant Street, 44th Floor
Pittsburgh, PA 15219
(412) 566-2146 (phone)
(412) 566-6099 (fax)
lburge@eckertseamans.com

Jacob B. Boyer, Esq.
Deputy General Counsel
Governor's Office of General Counsel
333 Market Street, 17th Floor
Harrisburg, PA 17101
jacobboyer@pa.gov

V. CONCLUSION

Managing the largest electrical grid in the nation is no easy task, particularly given the rapidly changing supply and demand dynamics across the PJM region. PJM and its dedicated staff work hard to address these important problems.

Still, it is difficult to escape the conclusion that PJM's capacity market is currently failing. This is not one isolated failure: respected analysts have ranked PJM's interconnection queue process the worst in the nation.[124] PJM has also habitually failed to run its capacity auctions on time – earning the distinction of being the only grid operator in the nation with a

[124] John D. Wilson, et al., G*enerator Interconnection Scorecard Ranking Interconnection Outcomes and Processes of the Seven U.S. Regional Transmission System Operators*, Advanced Energy United (Feb. 2024), at 5, *available at* https://advancedenergyunited.org/hubfs/2024%20Advanced%20Energy%20United%20Generator%20Interconnection%20Scorecard%20(1).pdf.

forward auction design that is effectively being held as a prompt auction. It has unsuccessfully tried repeatedly since 2007 to address deficiencies with its capacity market construct in what has been referred to as a game of whack-a-mole.[125] Now, PJM offers its latest series of fixes and corrections in its Section 205 filings and has argued that other, even very similar, proposals could interfere with the free function of the market or harm reliability.[126]

This Commission is the only formal check on PJM. It must look skeptically at any claims by PJM that a lower price cap would impair the marketplace or impact reliability in the next two auctions. As noted above, the RPM cannot be considered a true open market, but a market construct where PJM's own design choices, as the IMM has wisely observed, matter most of all.[127] More importantly, no one cares more about ensuring the reliability and stability of the grid than the Commonwealth. Pennsylvania has supported PJM since its founding in 1927 with the principal objective of ensuring reliability remaining paramount.

The proposals contained in this Complaint are rooted in a strong desire to improve PJM's capacity market and to ensure it provides all market participants needed stability in the long term. The current course is unsustainable. Excessively high auction prices that do not, and cannot, produce substantial supply increases in the real world threaten not only millions of

[125] Delia Patterson & Harvey Reiter, *FERC Chasing the Uncatchable: Trying to Fix Mandatory Capacity Markets is Like Trying to Win at Whack-a-Mole*, STINSON, LLP (2016), *available at* https://www.lexology.com/library/detail.aspx?g=1017dff1-42c8-4b8f-ada1-6ce816a20fec.

[126] *See* Mark Takahashi, Letter to Advocates (Sept. 19, 2024) at 3-4, *available at* https://www.pjm.com/-/media/DotCom/about-pjm/who-we-are/public-disclosures/2024/20240919-pjm-board-response-consumer-advocates-letter-re-urgent-reforms-pjm-capacity-market-re-reliability-must-run-units.ashx (suggesting that including RMR units would "distort the price signal and fail to incent the new build needed" and "could have unintended market consequences . . ."); Mark Takahashi, PJM Board Letter (Dec. 9, 2024) at 6, *available at* https://www.pjm.com/-/media/DotCom/about-pjm/who-we-are/public-disclosures/2024/20241209-board-letter-outlining-action-on-capacity-market-adjustments-rri-and-sis.pdf (suggesting that critiques of PJM's proposals might indirectly contribute to "allow[ing] the grid to fail . . .").

[127] Monitoring Analytics, Analysis of the 2025/2026 RPM Base Residual Auction Part D (Dec. 6, 2024), at 7, *available at* https://www.monitoringanalytics.com/reports/Reports/2024/IMM_Analysis_of_the_20252026_RPM_Base_Residual_Auction_Part_D_20241206.pdf.

consumers across Pennsylvania but the continued viability of PJM's capacity market. Averting that outcome is essential, just, and reasonable.

For these reasons, Governor Josh Shapiro and the Commonwealth of Pennsylvania respectfully request that the Commission find that the existing capacity auction price caps are unjust and unreasonable, and direct PJM to implement the reforms identified herein. Using a price cap as it currently exists, or solely as modified in PJM's Section 205 filings, in the upcoming auctions for the 2026/2027 BRA will result in unjust and unreasonable rates.

Respectfully submitted,

/s/ Jacob B. Boyer
Jacob B. Boyer, Esq.
Deputy General Counsel
Governor's Office of General Counsel
333 Market Street, 17th Floor
Harrisburg, PA 17101
jacobboyer@pa.gov

/s/ Lauren M. Burge
Carl R. Shultz, Esq.
Eckert Seamans Cherin & Mellott, LLC
213 Market St., 8th Floor
Harrisburg, PA 17101
717.237.6000, Fax 717.237.6019
cshultz@eckertseamans.com

Lauren M. Burge, Esq.
Eckert Seamans Cherin & Mellott, LLC
600 Grant Street, 44th Floor
Pittsburgh, PA 15219
412.566.6000, Fax 412.566.6099
lburge@eckertseamans.com

Dated: December 30, 2024

Counsel for Governor Josh Shapiro and the Commonwealth of Pennsylvania

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Commonwealth of Pennsylvania Complainant,	: :	
v.	:	Docket No. EL25-____-000
PJM Interconnection, L.L.C. Respondent.	: :	

NOTICE OF COMPLAINT

(December 30, 2024)

Take notice that on December 27, 2024 pursuant to sections 206 and 306 of the Federal Power Act, 16 U.S.C. 824e, 825e and Rule 206 of the Federal Energy Regulatory Commission's (Commission) Rules of Practice and Procedure, 18 CFR 385.206, the Commonwealth of Pennsylvania (Complainant) filed a Complaint against PJM Interconnection, L.L.C. (PJM or Respondent). Complainant assets that PJM's capacity market rules and unjust and unreasonable because: (1) capacity requirements are overstated; (2) the cost of capacity, as defined by Net CONE or Gross CONE in unforced capacity ("UCAP") terms, is over-stated; (3) the capacity market price cap is arbitrarily high and does not recognize the current inability of new supply to discipline market prices; and (4) the market power mitigation rules are insufficient to ensure competitive outcomes given the lack of entry and tight market conditions.

The Complainant certifies that copies of the Complaint were served on the contacts for PJM as listed on the Commission's list of Corporate Officials.

Any person desiring to intervene or to protest this filing must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a notice of intervention or motion to intervene, as appropriate. The Respondent's answer and all interventions, or protests must be filed on or before the comment date. The Respondent's answer, motions to intervene, and protests must be served on the Complainants.

The Commission encourages electronic submission of protests and interventions in lieu of paper using the "eFiling" link at http://www.ferc.gov. Persons unable to file electronically should submit an original and 5 copies of the protest or intervention to the

Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426.

This filing is accessible on-line at http://www.ferc.gov, using the "eLibrary" link and is available for review in the Commission's Public Reference Room in Washington, DC. There is an "eSubscription" link on the web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email FERCOnlineSupport@ferc.gov, or call (866) 208-3676 (toll free). For TTY, call (202) 502-8659.

Comment Date: 5:00 pm Eastern Time on [January 20, 2025].

Debbie-Anne A. Reese,
Acting Secretary.

Certificate of Service

I hereby certify that I have on this date caused a copy of the foregoing document to be served upon PJM Interconnection, LLC, at the following addresses obtained from the Commission's list of corporate officials designated to receive services pursuant to 18 C.F.R. § 385.2010(k):

Thomas DeVita
Assistant General Counsel
PJM Interconnection, LLC
2750 Monroe Boulevard
Audubon, PA 19403
Telephone: (610) 635-3042
FERCeService@pjm.com

Steven R. Pincus, Esquire
Associate General Counsel
PJM Interconnection, LLC.
2750 Monroe Boulevard
Audubon, PA 19403
Telephone: 610-666-4370
steven.pincus@pjm.com

Dated: December 30, 2024

/s/ *Lauren M. Burge*

Lauren M. Burge, Esq.
Eckert Seamans Cherin & Mellott, LLC
600 Grant Street, 44th Floor
Pittsburgh, PA 15219
412.566.6000, Fax 412.566.6099
lburge@eckertseamans.com

Counsel for Governor Josh Shapiro and the Commonwealth of Pennsylvania