

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.) Docket No. ER24-98-000
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PROTEST OF THE INDEPENDENT MARKET MONITOR FOR PJM

Pursuant to Rule 211 of the Commission’s Rules and Regulations¹ Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor (“Market Monitor”) for PJM Interconnection, L.L.C. (“PJM”),² submits this protest responding to the filing submitted by PJM on October 13, 2023 (“October 13th Filing”).

PJM’s proposed radical changes to the capacity market design in this docket, and in the related Docket No. ER24-99, are not motivated by any specific market issues. There was nothing in the PJM Board’s charge to PJM and its members that required or implied anything like the proposals in this filing.³ PJM proposes an unsupported and unprecedented paradigm change for the markets and requests expedited treatment by the Commission. The PJM proposed tariff language is unacceptably vague and would leave almost unlimited discretion to PJM to interpret that vague language. That failure to create an implementable or enforceable tariff is enough reason to reject the filings as not just and

¹ 18 CFR § 385.211 (2023).

² Capitalized terms used herein and not otherwise defined have the meaning used in the PJM Open Access Transmission Tariff (“OATT”), the PJM Operating Agreement (“OA”) or the PJM Reliability Assurance Agreement (“RAA”).

³ See Letter to PJM Stakeholders from Mark Takahashi, Chair, PJM Board of Managers (February 24, 2023), <<https://www.pjm.com/-/media/about-pjm/who-we-are/public-disclosures/20230224-board-letter-re-initiation-of-the-critical-issue-fast-path-process-to-address-resource-adequacy-issues.ashx>>.

reasonable. There is no reason to create unnecessary time pressure on stakeholders or the Commission to address the dramatic changes in PJM's filing. PJM's filings should be rejected as not just and reasonable. Regardless of the Commission's treatment of the filing in Docket No. ER24-99, the October 13th Filing related to the definition and implementation of MSOCs would permit the exercise of market power and should be rejected because PJM has not shown that its proposed changes to the market rules are just and reasonable.

There is nothing preventing PJM from implementing changes immediately to address defined and identified issues, including improved risk modeling, recognition of winter risk, recognition of correlated outages, and hourly modeling of load and generation resources. PJM could also support the Market Monitor's Complaint filed in Docket No. EL24-12 in order to reduce risk and uncertainty.⁴

There is no reason for PJM's hurry to have the filings approved. The lack of detailed analysis, the lack of clarity, and the unenforceability of key provisions in the filings reflect the fact that they were developed and written in haste and mean that PJM has not shown that its proposed changes to the market rules are just and reasonable. The Market Monitor's Complaint provides the Commission an option to allow more time for PJM and the stakeholders to consider any proposed changes to the capacity market design.⁵

I. PROTEST

The October 13th Filing proposes wholesale changes to the definition and role of the capacity market. From those proposed changes, PJM draws a series of illogical and incorrect conclusions about the nature, role and calculation of market seller offer caps ("MSOC") in the capacity market. PJM provides no rationale for such sweeping changes. PJM appears to not acknowledge that the changes would be a significant paradigm shift.

⁴ See Complaint Requesting Fast Track Processing of the Independent Market Monitor for PJM, Docket No. EL24-12-000 (November 7, 2023).

⁵ See *id.*

PJM has not shown that its proposed changes to the market rules are just and reasonable. The proposed changes significantly damage the existing PJM market framework. The October 13th Filing should be rejected.

A. Capacity Market Seller Offer Cap (MSOC)

PJM proposes radical changes to the substance of the MSOC and the review process for MSOC that would effectively reverse the Commission’s recently upheld order on the MSOC and permit the exercise of market power in the capacity market.⁶ PJM’s proposed changes to the MSOC are premised on a rejection of the foundational principles of the PJM Capacity Market that have been in place since at least 2007. The key components of PJM’s derivative attack on market power mitigation in the capacity market include: redefining the function and purpose of the capacity market; redefining avoidable costs; eliminating the offset of avoidable costs by energy and ancillary service market net revenues; allowing unit owners to shift costs and revenues among segments of the offer curve; redefining Capacity Performance Quantifiable Risk (“CPQR”); and replacing the Market Monitor’s substantive role in the process for reviewing CPQRs and MSOCs with PJM.

1. PJM Redefines the Capacity Market

The key to understanding PJM’s proposed approach to the MSOC is that PJM proposes to redefine the function and purpose of the capacity market. PJM’s approach would redefine the capacity market as a standalone market where a separate capacity product is bought and sold, unconnected to the fact that the only purpose of the resource is to provide reliable energy. It is only based on that faulty redefinition that PJM can assert that the current definition of avoidable costs is associated solely with the energy market and is not part of the avoidable costs of being a capacity resource. It is only based on that

⁶ See *Independent Market Monitor for PJM v. PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,137 (2021); *order on reh’g*, 177 FERC ¶ 62,066 (2021); *order on reh’g*, 178 FERC ¶ 61,121 (2022); *appeal denied*, *Vistra Corp., et al. v. FERC*, Case No. 21-1214, et al. (D.C. Cir. August 15, 2023); *appeal denied en banc*, *Vistra Corp., et al. v. FERC*, Case No. 21-1214, et al. (D.C. Cir. October 10, 2023).

faulty redefinition that PJM can assert that there is a new definition of capacity only avoidable costs for which there is no energy market net revenue offset.

2. PJM Redefines Avoidable Costs

Based on PJM's redefinition of the function and purpose of the capacity market, PJM proposes to completely redefine avoidable costs to exclude the avoidable costs of being a generating resource. PJM's proposal redefines avoidable costs to exclude all, or most, of the current components of avoidable costs. PJM specifically cites labor, maintenance and other operating expenses as excluded. Here, as elsewhere, the proposed tariff language is unacceptably vague and is therefore not supported as just and reasonable.

Part of the confusion in PJM's proposal is that PJM proposes to retain the existing definition of avoidable costs if a unit intends to stop operating either by retiring or mothballing if not cleared in the capacity market. Only in that case does PJM appear to recognize that the energy and capacity markets are actually integrated parts of the larger PJM market.

In place of the existing definition of avoidable costs, PJM's proposal introduces the concept of capacity only avoidable costs, which are costs that are avoidable if a resource does not clear in the capacity market and the resource plans to continue to operate in the energy and ancillary services markets. PJM's tariff definition of such costs includes CPQR but also includes unacceptably vague language about other costs that might qualify, including some that are included in the current definition of APIR, a component of ACR.⁷ PJM's proposal eliminates the energy and ancillary service revenue offset for the newly defined avoidable costs. In PJM's proposal, capacity avoidable costs are gross costs with no offset.

As long as a generation owner indicates that a resource will continue to operate and participate in the energy and ancillary services markets during the delivery year if not

⁷ See October 13th Filing at 7-24.

cleared in the capacity market, the net revenue offset will be set to zero.⁸ That case covers most PJM generating units. PJM's proposed tariff language is in Section 6.8(d-1) of Attachment DD:

Notwithstanding the foregoing, in the case that the Capacity Market Seller has indicated in their submission of a unit-specific Market Seller Offer Cap that the resource will continue to operate and participate in the energy and ancillary services markets during the Delivery Year if not cleared in the capacity market, the Projected PJM Market Revenues shall be zero dollars.

Consistent with PJM's failure to explain or understand the implications of their proposals, PJM has not provided any analysis of the likely impact of their proposal on the capacity market clearing process or the offers of resources with identifiable characteristics. It is not possible to fully analyze the impacts of PJM's proposal on market prices because the costs includable in a capacity market offer are not defined. PJM has not offered any such analysis.

PJM's proposal could reduce or eliminate the option to have a positive MSOC for some generators. Under PJM's proposal a unit with no CPQR risk would be required to offer capacity at zero even if the unit had a high gross ACR and high net ACR under the current ACR definition. Under PJM's proposal a unit with moderate CPQR risk would be required to offer at less than net ACR if the unit had a high gross ACR and high net ACR under the current ACR definition. Under PJM's proposal a unit with a positive CPQR, would be allowed to make an offer equal to CPQR, even if had a zero or negative net ACR under the current ACR definition, and regardless of whether energy market net revenues covered the CPQR by any amount.

PJM includes a new definition of avoidable costs that applies only to the newly defined standalone capacity market. If a Capacity Market Seller indicates that a resource

⁸ October 13th Filing at 22 n.43.

will continue to operate and participate in the energy and ancillary services markets during the delivery year if not cleared in the capacity market, the tariff language states that ACR would include the “incremental costs that would be avoided only in the absence of a capacity obligation such as CPQR.” But that is just the start. PJM’s transmittal letter states in footnote 41 that these incremental costs could also include other costs, for example the project investment costs for dual fuel capability. PJM’s language is unacceptably vague, includes no operational criteria, and could cover a broad range of as yet unspecified costs that PJM could propose to include in the future under this vague tariff language. It is possible that any investment designed to improve a unit’s reliability could be included in this definition. This is equivalent to allowing the APIR component of ACR to define an offer without any net revenue offset. The vagueness leaves PJM almost unlimited discretion to include costs in this category with no net revenue offset, that add directly to the MSOC. As PJM argues frequently on matters of tariff interpretation, “The tariff does not say that we cannot do that.” In this case, the tariff does not prevent any cost from being included in this category. As a result, PJM has not shown that its proposed changes to the market rules are just and reasonable.

PJM provides a simple numerical illustration about a hypothetical unit with a gross ACR of \$50 per MW-day (excluding CPQR), a CPQR of \$10 per MW-day, and a net revenue offset of \$100 per MW-day.⁹ In this scenario, the unit earns sufficient net revenues in the energy market to cover its going forward costs and risk. Under the PJM proposal, the market seller offer cap would be no less than a resource’s CPQR as long as the resource does not commit to retiring or mothballing.¹⁰ Under PJM’s proposal, if the unit owner could claim that certain project investments (\$45 per MW-day) would be avoided if the resource did not clear in the capacity market auction for one delivery year, the unit could offer at \$55

⁹ PJM uses \$/MWh in the illustration but probably intended to use \$/MW-day.

¹⁰ October 13th Filing at 22.

per MW-day (CPQR of \$10 per MW-day plus APIR of \$45 per MW-day minus net revenues of \$0 per MW-day).

The example makes clear that PJM's discretionary decisions about what is an avoidable cost and what is not could have an extremely significant impact on capacity market outcomes. Is an investment in dual fuel capability designed to ensure that the resource can provide energy more reliably and earn revenues from high energy market prices or is it designed to avoid PAI penalties? PJM would decide this without any operational or verifiable criteria or any clear rules of any type. This lack of clarity about the definitions and the impacts on market outcomes makes the PJM proposal unjust and unreasonable.

3. PJM Ignores the Purpose of the Capacity Market

PJM proposes to radically change the definition of the MSOC by eliminating the current definition of avoidable costs and eliminating the energy and ancillary markets net revenue offset entirely for the new definition of avoidable costs. This is completely inconsistent with the definition and purpose of the capacity market and MSOCs.

PJM's approach ignores the integrated nature of the markets. In order to be a capacity resource, a resource must go through the interconnection process and obtain CIRs. The CIRs provide the right and the ability to inject energy onto the grid under all market conditions. There is no such thing as a standalone capacity resource. The CIRs do not disappear if a unit does not clear in a BRA for a year. The unit remains a capacity resource even if it does not clear in a BRA for a year.

Capacity is not a thing. Capacity does not power light bulbs or refrigerators or air conditioners. The only real product provided in wholesale power markets is energy. Capacity is a concept designed to make the energy market work. The concept of capacity is needed in the overall market design, given the regulatory requirement that the system must include a reserve margin and therefore that the energy market will almost always be long and therefore that revenues from the energy market will not support a self sustaining overall market design.

PJM has lost sight of one of the fundamental purposes of the capacity market which is to provide that missing money. The concept of the missing money is a shorthand way of explaining that the purpose of the capacity market is to ensure that all capacity resources have the opportunity to cover their going forward costs from a combination of the energy market and the capacity market. The role of the capacity market is to help ensure that if energy market revenues are not enough to cover avoidable costs, the capacity market will provide that opportunity. The purpose of the capacity market is to provide the residual revenues not provided by the energy and ancillary services markets.

The current energy and capacity market design recognizes that the purpose of the capacity market is to make the energy market work. The purpose of the capacity market is to ensure that total revenues from the combination of the energy and ancillary services markets and the capacity market cover gross avoidable costs so that generation resources needed for reliability will continue to have an incentive to remain in the markets and continue to generate energy, which is the purpose of the entire PJM market enterprise.

Almost all PJM thermal resources are capacity resources and energy resources, including FRR resources. Thermal resources do not face incentives to be energy only resources, contrary to PJM.

PJM's assertions that the redefined avoidable costs cannot and should not be offset by energy market revenues is illogical, unsupported, inconsistent with the design and purposes of the capacity market, and would permit the exercise of market power by allowing offers to exceed net avoidable costs.

By attempting to create a distinction between energy and capacity avoidable costs, PJM would create a new set of avoidable costs for which there is no offset. PJM generation resources do not care whether their total net revenues come from the energy market or the capacity market. The PJM energy, ancillary service and capacity markets are integrated. The net revenue offset is a key link between the energy and ancillary services markets, and the capacity market. The PJM proposal would eliminate this link. PJM's effective goal is to

artificially increase MSOC values in order to counter what it refers to (at 20), without any analytical support or even definition, as over mitigation.

PJM misunderstands the basic dynamic of the interaction between the energy market and the capacity market. If the EAS net revenues exceed avoidable costs, regardless of any specific component like CPQR, the competitive offer in the capacity market is zero. That does not mean that the costs to mitigate risk are not covered; they are. That does not mean that the clearing price would be zero, but if EAS revenues were high enough for all resources, the capacity market clearing price could be zero. That would be the competitive outcome. It would be equivalent to an energy only market for at least that auction.

PJM also misunderstands what it means to be a capacity resource. Market participants pay to acquire Capacity Interconnection Rights (“CIRs”) because CIRs ensure that the energy output of the resource is always deliverable to all PJM load and for that reason is a requirement to be a capacity resource. Almost every thermal resource in PJM has entered the market as a capacity resource with CIRs. Market participants can choose to be energy only resources but thermal resources do not choose to do so, despite PJM’s unsupported assertions that they face incentives to do so. By using a portion of the scarce ability to interconnect to the grid and be deliverable (CIRs), market participants agree to be capacity resources and agree to a must offer obligation in the capacity market. In return, the capacity market provides the opportunity to cover the avoidable costs of the resource or more.

PJM ignores the symbiosis between the energy and capacity markets. PJM would redefine avoidable costs from the costs avoided by not operating for a year to be the costs of not being a capacity resource for a year. But capacity resources that do not clear in a specific auction are still capacity resources.¹¹ The missing money is missing from the operation of

¹¹ See the definitions of Capacity Resource and Generation Capacity Resource in the RAA, Article 1. See also RAA, Schedule 9 and 10.

the energy market. The capacity market is designed to ensure that resources can cover their costs from a combination of energy and capacity markets. There is no distinction between costs associated with being a capacity resource and costs associated with being an energy resource for units with CIRs that are capacity resources. That is not a choice that generators face or make with each auction. The goal is to cover at least the gross avoidable costs of being a generating unit from a combination of the energy market and the capacity market. The goal is to have reliable sources of energy.

The fact that PJM wants to make it riskier to participate in PJM markets by imposing PAI risks has become a rationale for undercutting the basic rules of the PJM markets in PJMs' filing. The better approach is to remove unjust and unreasonable risks from the capacity market design.¹² PJM's arguments for undercutting the existing MSOC appear motivated by the role of CPQR. CPQR has become an issue solely as a result of the Capacity Performance ("CP") design and its associated draconian penalties. As elsewhere in PJM's proposals, a bad design choice leads to a cascade of additional bad design choices. It would be preferable to recognize that CP was a failed experiment and eliminate the CP design and eliminate PAI risk. But even without CP, the CPQR calculation appropriately includes the cost to mitigate risk and the CPQR remains a cost of being a PJM resource that is appropriately offset by EAS revenues. Net ACR correctly reflects the competitive offer in the capacity market of a resource that supplies energy on a reliable basis to PJM markets.

The experience of Winter Storm Elliott and the associated penalties changed the calculation of the CPQR risk mitigation component of the ACR offer caps. Incorporating the Elliott data in the history used to calculate an appropriate CPQR led to very large CPQR values for some poorly performing resources. Correctly calculated maximum CPQR values increased from less than \$10 per MW-day to about \$50 per MW-day while some participants proposed CPQR values in excess of \$100 per MW-day. This impact illustrates

¹² See *Independent Market Monitor for PJM v. PJM*, Docket No. EL24-12-000 (filed November 7, 2023).

the circular logic of the CP model. The CP model creates arbitrarily high penalty rates which affect CPQR which increase the ACR market seller offer caps. The risk is created by the CP model and then the cost to mitigate that risk is compensated within the CP model.

The existing definitions of avoidable costs and net revenues accurately reflect competitive offers. PJM's arguments are an attempt to redefine offers to permit the exercise of market power by allowing offers in excess of avoidable costs. PJM repeats phrases like competitive offer and economic costs and profit maximizing and over mitigating as if they are a substitute for explaining why PJM believes that the current model does not provide for competitive offers that reflect marginal costs consistent with profit maximizing or explaining why PJM believes that the proposed model meets the objectives of helping ensure the reliable supply of energy. PJM fails to make its case.

PJM raises the impact of their proposal on intermittent resources, asserting that the current rules provide a disincentive to offer as capacity resources. But as PJM recognizes elsewhere, the disincentive is entirely the result of PJM's irrational definition of a solar resource, for example, as a perfect resource at its derated level, that is subject to PAI penalties for not producing energy in the middle of the night.

While PJM has stated that PJM no longer supports the opportunity cost basis for capacity market offers based on the asserted option to be an energy only resource, and removes energy only resources from the bonus pool, PJM in fact continues to assert the mistaken opportunity cost logic. PJM refers to the option of being an energy only resource as a basis for their assertion that CPQR and other undefined costs should not be offset by energy market net revenues. (Transmittal at 20-21) The asserted incentive to become an energy only resource does not exist and PJM cites no evidence to support the claim. Intermittent resources are not held to a must offer obligation because, as PJM recognizes, PJM is imposing irrational performance penalties on intermittent resources as well as imposing constantly changing ELCC derates of their asset values. PJM's proposal creates and sustains a critical set of disincentives for intermittent resources to be capacity resources. This is yet another reason that the PJM proposal is unjust and unreasonable.

PJM is attempting to undo the Commission’s order in the MSOC complaint.¹³ The Commission has found Net ACR as a just and reasonable estimate of a competitive capacity supply offer.¹⁴ Therefore, PJM has not shown that its proposed changes to the market rules are just and reasonable.

4. Implications for Variable Resource Requirement Curve

PJM is proposing to redefine a competitive offer in the capacity market. However, PJM has not considered any implications for the capacity market demand curve, the Variable Resource Requirement (“VRR”) curve, or any other area where the concept of a competitive offer is used, such as the Minimum Offer Price Rule (“MOPR”). Under the PJM proposal, the capacity offer is no longer based on the missing money concept, but on the “economic costs” for a resource that earns sufficient revenue from the energy and ancillary services markets or a resource that would continue operating regardless of capacity market clearing. PJM should reevaluate the implications for the costs and revenues of the reference resource that define the VRR curve price points, including the definition of the price cap, given this proposed new definition of a competitive offer. Specifically, regarding the VRR price cap, if the reference resource would earn sufficient revenues in the energy and ancillary services markets to cover its levelized Cost of New Entry (“CONE”), based on the PJM proposal, the competitive offer would be its incremental capacity costs such as CPQR. Or if the reference resource will continue operating regardless of capacity market clearing, based on the PJM proposal, the competitive offer would be its incremental capacity costs such as CPQR. In order for PJM to show that its proposal is just and reasonable, it must consider and explain how its proposal impacts key components of its capacity market

¹³ See *Independent Market Monitor for PJM v. PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,137 (2021); *order on reh’g*, 177 FERC ¶ 62,066 (2021); *order on reh’g*, 178 FERC ¶ 61,121 (2022); *appeal denied*, *Vistra Corp., et al. v. FERC*, Case No. 21-1214, et al. (D.C. Cir. August 15, 2023); *appeal denied en banc*, *Vistra Corp., et al. v. FERC*, Case No. 21-1214, et al. (D.C. Cir. October 10, 2023).

¹⁴ *Id.* at P 67.

design, such as the VRR curve. PJM's failure to do so further demonstrates that it has not shown that its proposed changes are just and reasonable.

5. Details of CPQR Calculation

PJM motivates its proposal to change the definition of CPQR by asserting (at 9), incorrectly and without citing any evidence, that the review of CPQR values has been "unduly contentious." In fact, in the 2024/2025 BRA, only 2.2 percent of offers (21 generation resources) requested unit specific avoidable cost review, of which only 0.6 percent of offers (six resources) requested a CPQR. Only a very small proportion of that 2.2 percent did not reach agreement with the Market Monitor. The Market Monitor calculated offer caps for 742 generation resources that submitted capacity offers, most of which (96.4 percent) were default ACR based.¹⁵

PJM proposes to change the definition of CPQR. PJM proposes to change the CPQR definition from the "costs of mitigating the risks of non-performance" to the "costs of mitigating, retaining, or otherwise managing the risks of Non Performance Charges."¹⁶ PJM does not explain why the change is appropriate or consistent with the intent of the original CP filing and order. The changes make the definition unclear, so broad as to be meaningless, unenforceable and unverifiable and therefore not just and reasonable. As part of the confusion, PJM does not explain whether the omission of bonus payments was intentional.¹⁷ Either way, it is inappropriate to skew the definition so as to include only the negative side and not the positive offsetting side. Under the plain words of PJM's proposed language, a resource that reasonably expects to receive bonuses equal to three times the expected penalties could justify a high, positive CPQR, contrary to the basic math of the CP model and contrary to logic.

¹⁵ See Market Monitor, *Analysis of the 2024/2025 RPM Base Residual Auction* (October 30, 2023) at 2, 55.

¹⁶ October 13th Filing, Attachment A (Redlines), OATT Attachment DD § 6.4(a).

¹⁷ See October 13th Filing, Attachment A (Redlines), OATT Attachment DD § 6.8(a).

PJM added a provision stating that a CPQR submission that includes an “independent third party” review would be considered a “reasonably supported” CPQR submission. The meaning and interpretation of the tariff language is not clear. PJM’s purpose is not clear. If this review is considered an alternative to the Market Monitor review, it would override a basic part of the MSOC review process. If that is not the case, there is no reason to add this language as no participant needs permission so support their position in any way they choose. The standard of experience is vague and unenforceable, requiring that the third party have “experience in evaluating capacity performance insurance policies.”

PJM proposes a value-at-risk (“VAR”) approach to quantifying CPQR. This approach was not included in PJM’s discussions during the CIFP process. VAR is a general approach to risk used to evaluate exposure to losses at a predefined probability level, chosen by the user. PJM’s VAR approach will use the 95th percentile of the net non performance charge distribution. The PJM VAR is the loss level that a resource has a five percent probability of exceeding. PJM multiplies this low probability, high loss level by the after tax weighted average cost of capital (“WACC”) to calculate the CPQR. PJM does not support its choice of five percent or the WACC or the approach to multiply them.

The approach also relies on simulated PAIs from the same processes “used to study reliability risks and assess resource accreditation.”¹⁸ These processes cannot be used to predict PAIs. PJM’s Reserve Reliability Study (“RRS”) simulates whether there is enough capacity to meet the load. It does not simulate commitment and dispatch, therefore, it assumes that any MW available can be instantly used to meet the demand. The RRS also does not include transmission constraints. During Winter Storm Elliott, PJM had more than

¹⁸ October 15th Filing, Attachment D (Graf Affidavit) at ¶ 95.

enough capacity to meet the demand, but the capacity was not used to meet the demand because it was not committed in time.¹⁹

The standard insurance approach that is used to set premiums for potential losses is to set the premium equal to the expected loss plus an adder. The proposed PJM CPQR value could be less than the expected loss.

PJM has not shown that its proposed changes to the market rules are just and reasonable.

6. Segmented Offer Caps

The PJM proposal would allow segmented Market Seller Offer Caps where the first segment, if elected by the Capacity Market Seller, “may have a Market Seller Offer Cap reflective of incremental expenses directly required to operate a Generation Capacity Resource that a Generation Owner would not incur if such generating unit were to mothball or retire, in accordance with Tariff, Attachment DD, section 6.8(b).”²⁰ Other segments, including the first segment if elected by the Capacity Market Seller, “shall reflect incremental costs that would be avoided only in the absence of a capacity obligation, in accordance with Tariff, Attachment DD, section 6.8(b).”

The proposed redline in OATT Attachment § 6.8(b) includes:

Alternatively, for Capacity Market Sellers that have indicated in their submission of a unit-specific Market Seller Offer Cap that the resource will continue to operate and participate in the energy and ancillary services markets during the Delivery Year if not cleared in the capacity market, avoidable costs and expenses shall be limited to the incremental costs that would be avoided only in the absence of a capacity obligation such as CPQR. Such Capacity Market Sellers of resources that will continue to operate and participate in the energy and ancillary services markets shall not include labor, maintenance, and other operating expenses that

¹⁹ See Figure 1 in *Protest of the Independent Market Monitor for PJM*, ER24-99-00 (November 9, 2023).

²⁰ Proposed OATT Attachment DD § 6.4(e).

would be avoided only if the Capacity Resource were not operating and participating in the energy and ancillary services markets during the Delivery Year.

PJM's proposal to allow segmented offer caps is unacceptably vague, lacks essential details, and is therefore not enforceable. PJM provides no example showing how this would work in practice and provides no additional explanation anywhere in the filing. As a result, PJM has not shown that its proposed changes to the market rules are just and reasonable.

PJM does not make clear how exactly the calculation of the segmented offer caps and the allocation of avoidable costs and net revenues would work under the PJM proposal. Suppose a run of river hydro unit is 100 MW, its gross ACR is \$150 per MW-day, and its net revenue offset is \$250 per MW-day. A Capacity Market Seller could claim 50 MW in the first segment would mothball or retire if not cleared in the capacity market, and the Market Seller Offer Cap would be based on the current net ACR definition. In this example, PJM does not make it clear whether the net ACR for the first segment would be calculated as \$150 per MW-day minus \$250 per MW-day, or \$300 per MW-day minus \$250 per MW-day, or \$300 per MW-day minus \$500 per MW-day.

The Capacity Market Seller could claim the remaining 50 MW would continue operating if not cleared in the capacity market, and therefore, under the PJM proposal, the Market Seller Offer Cap would be equal to a CPQR value (for example, \$55 per MW-day), ignoring any net revenue offset. Alternatively, if the Capacity Market Seller claims that all 100 MW would continue operating if not cleared in the capacity market, the Market Seller Offer Cap for the first segment would be equal to a CPQR value (for example, \$35 per MW-day) and the second segment would be equal to a higher CPQR value (for example, \$55 per MW-day), with both segments ignoring the net revenue offset.

PJM also glosses over the logical inconsistency of the segmented offer cap proposal with the rest of its proposal. The proposed changes to the definition of avoidable and the

net revenue offset are premised on the decision of the operating status if not cleared in the capacity market.²¹ Allowing a resource to claim that the first segment of a sell offer (a part of a resource) will mothball or retire if not cleared in the capacity market and to claim that the subsequent higher priced segments of a sell offer (the remaining MW of a resource) will continue to operate in the energy and ancillary services markets if not cleared in the capacity market is illogical. For example, suppose both segments in the example of the 100 MW hydro plant do not clear. The basis for the first segment assumes the MW will mothball or retire and the basis for the second segment assumes the MW will continue to operate. PJM attempts to explain that the proposed rule for the subsequent segments is based on the assumption that the first segment clears.²²

PJM's proposal to allow segmented offer caps would allow the exercise of market power. If costs and revenues can be assigned to different self defined MW offer segments, MSOCs are meaningless. Assigning a disproportionately large share of costs and no net revenues to a MW tail block would permit offers that exceed the correctly calculated MSOC by multiples and would permit the exercise of market power. The problem is exacerbated by PJM's proposal to not use any net revenue offset. PJM's proposal to allow segmented offer caps would further undermine MSOCs, permit generation owners to offer at levels well in excess of competitive offers, and permit the exercise of market power. PJM's lack of clear, enforceable rules means that PJM has not shown that its proposed changes to the market rules are just and reasonable. PJM's creation of the opportunity to exercise market power demonstrates that PJM has not shown that its proposed changes to the market rules are just and reasonable.

PJM does not provide any details or examples of what would qualify as "adequate justification for the use of a segmented offer cap" or explain how the MW would be

²¹ See proposed OATT Attachment DD § 6.7(d)(i), § 6.8(b), and § 6.8 (d-1).

²² October 13th Filing at 34.

allocated to segments or supported. The proposed tariff language is too vague to enforce any sufficient standard of review. PJM has not shown that its proposed changes to the market rules are just and reasonable.

PJM states (at 33–34), without support, that the reason for proposing the segmented offer caps is that the cost of capacity performance risk increases as more capacity is offered due to the operating characteristics of a resource. PJM appears to be trying to address an issue with unit specific capacity accreditation by undercutting the definition of MSOC. The current rules allow resources to offer different segments of capacity at different prices, all subject to the overall MSOC. PJM has not shown that its proposed changes to the market rules are just and reasonable.

7. MSOC for Planned Generation

Under the current rules, offers for Planned Generation Capacity Resources are subject to mitigation if (1) collectively all such sell offers provide unforced capacity in an amount less than two times the incremental quantity of new entry required to meet the Locational Deliverability Area (“LDA”) reliability requirement; or (2) less than two unaffiliated suppliers have submitted sell offers for Planned Generation Capacity Resources in such LDA.²³ If offers for Planned Generation Capacity Resources are subject to mitigation or the sell offer is pivotal, the sell offer is rejected “if it exceeds 140 percent of: 1) the average of location-adjusted Sell Offers for Planned Generation Capacity Resources from the same asset class as such Sell Offer, submitted (and not rejected) (Asset-Class New Plant Offers) for such Delivery Year; or 2) if there are no Asset-Class New Plant Offers for such Delivery Year, the average of Asset-Class New Plant Offers for all prior Delivery Years; or 3) if there are no Asset-Class New Plant Offers for any prior Delivery Year, the Net CONE applicable for such Delivery Year in the LDA for which such Sell Offer was submitted.”

²³ OATT Attachment DD § 6.5(a)(ii).

PJM proposes to define the default offer cap for Planned Generation Capacity Resources that are subject to offer capping as the default net Cost of New Entry (“CONE”) for the applicable technology, delivery year and zone. For resources where there is no default net CONE defined for a technology, PJM proposes to define the default offer cap for Planned Generation Capacity Resources that are subject to offer capping as the net CONE used in the Variable Resource Requirement (“VRR”) curve for the applicable delivery year and LDA of the resource. PJM also proposes to introduce a unit specific offer cap process for Planned Generation Capacity Resources calculated in accordance with the MOPR provisions and following the procedures and timelines in the MSOC provisions.

PJM provides no rationale for retaining the two criteria in OATT Attachment DD § 6.5(a)(ii)(B) for determining whether offers for Planned Generation Capacity Resources are subject to mitigation. OATT Attachment DD § 6.5(a)(ii)(C) currently applies the Three Pivotal Supplier (“TPS”) test in addition to the two conditions in OATT Attachment DD § 6.5(a)(ii)(B):

Where the two conditions stated in subsection (B) above are not met, *or the Sell Offer is pivotal*, the Sell Offer shall be rejected if it exceeds... [emphasis added]

This test is overly complicated with no added benefit and should be simplified by only evaluating whether the TPS test is failed and eliminating the two additional criteria defined in OATT Attachment DD § 6.5(a)(ii)(B).

The Market Monitor agrees that the rules for evaluating the offers for Planned Generation Capacity Resources currently defined in OATT Attachment DD § 6.5(a)(ii)(C) could be simplified. However, PJM has not shown that it is just and reasonable to base determinations of whether a capacity offer for a Planned Generation Capacity Resource is competitive on net CONE rather than Net ACR.

B. Capacity Performance Excuses

Under the current rules, capacity resources are excused from PAI penalties if: 1. the resource was on a Generator Planned Outage; 2. the resource was on a Generator

Maintenance Outage; 3. the resource was not scheduled and the reason for not being scheduled was not solely due to any operating parameter or due to having a market-based offer above the cost-based offer; or 4. the resource was scheduled down and the reason for being scheduled down was not solely due to any operating parameter or due to having a market-based offer above the cost-based offer.

PJM proposes to modify excuses 3 and 4.²⁴

PJM's proposal to modify excuse 3 would include economic withholding as an excuse from paying penalties for nonperformance. This proposal would permit the exercise of market power and should be rejected because PJM has not shown that its proposed changes to the market rules are just and reasonable.

PJM proposes to simply delete the condition: "the seller's submission of a market based offer is higher than its cost-based."²⁵ PJM asserts that a unit cannot have market power if it does not have locational market power.²⁶ The current tariff correctly recognizes that this presumption is incorrect. There should be no assumption that the resources in question were unable to exercise market power. This creates the opportunity for resources to avoid any penalties by simply increasing their price-based offer. The flaws in PJM's approach are obvious and have been previously recognized by the Commission in its order approving CP.²⁷ The Commission found that it was reasonable for Market Sellers to assume the risk of non-performance resulting from their offer strategy.²⁸ PJM's filing reverses its

²⁴ October 13th Filing at 35.

²⁵ *See id.*

²⁶ *See id.*

²⁷ *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,208 at P 168 (2015).

²⁸ *Id.*

PJM's own position in the CP proceeding, and here simply repeats the generators' assertions that the Commission has already rejected.²⁹

In one case, PJM is assessing penalties to resources based on their operating parameters (even when those parameters have been reviewed and approved by PJM). In the other case, PJM is excusing resources that failed to perform because they offer well in excess of their cost-based offers, which are their short marginal costs as defined by the tariff and therefore their competitive offers. The only conclusion to be drawn from offers above the competitive level during a PJM emergency and an associated failure to perform is that the resources are exercising market power. As a result, PJM has not shown that its proposed changes to the market rules are just and reasonable.

PJM proposes to require generators to attempt to self schedule in order to be excused.³⁰ PJM proposes that offline units (units that have not been scheduled by PJM) will only be excused from performance assessment if PJM has denied their request to come online. PJM's proposal will create perverse incentives with likely unintended consequences, like over generation when generation is not needed. PJM's proposal means that every generator that is not expected to operate must tell PJM that they want to self schedule. For long lead time units, this could require them to inform PJM that they want to be self scheduled based on the anticipation of an emergency or as soon as PJM declares any warning, such as cold weather or hot weather alerts. PJM will then have to evaluate if the system can support such operation and provide their determination to the generator. If PJM determines that the generator cannot run, the generator will be excused from PAIs. This is the exact opposite of how PJM normally operates and how any rational system operator would operate. Under normal operations, PJM provides commitment instructions to generators based on system needs.

²⁹ *Id.*

³⁰ October 13th Filing at 36.

PJM has not explained why this is not simply a punitive rule that disproportionately harms long lead time units. PJM has not explained why it is not PJM's responsibility, as system operator, to let generators know when it needs them. Effectively, PJM is asserting that generation owners should know more about actual and expected system conditions that PJM itself does. This rule does not make the system more reliable. The rule is also unclear and it is not transparent or verifiable. For example, it is not clear how this rule would apply, if a resource is denied coming online before a PAI starts and then it is called on by PJM after the PAI starts. It is not clear whether the excuse would apply for the entirety of the PAI, a portion of it or none of it. For all these reasons, PJM has not shown that its proposed changes to the market rules are just and reasonable.

C. Balancing Ratio Changes

PJM proposes to change the balancing ratio ("B"), a key variable in defining the performance obligation of capacity resources during a PAI. PJM proposes to modify the numerator and the denominator of B.

Currently, the numerator in B is equal to All Actual Generation Performance, Storage Resource Performance, Net Energy Imports, Price Responsive Demand Bonus Performance, and Demand Response Bonus Performance. PJM is proposing to remove Net Energy Imports, Price Responsive Demand Bonus Performance, and Demand Response Bonus Performance and to cap the Actual Performance of resources at committed installed capacity ("ICAP"), regardless of whether resources can and do generate energy in excess of committed ICAP.

Currently, the denominator in B is equal to All Committed Generation and Storage Capacity. PJM proposes to exclude Committed Generation and Storage Capacity that has been excused from performance.

The changes to the numerator will result in a lower B since PJM is excluding performance from DR, imports, energy only resources and any MW from capacity resources above their committed ICAP. This change can result in an irrational outcome. For example, if all committed resources fail to perform and PJM is able to keep serving load

from imports or energy only resources, none of the committed resources will be subject to penalties. That is because the balancing ratio will reduce their expected performance to exactly their actual performance.

The changes to the denominator will result in a higher B since PJM is excluding excused MW.

PJM's proposed changes to the balancing ratio are an illogical step to address the failures of the CP market design. The concept behind the balancing ratio was to measure the amount of capacity that was needed to meet the demand for energy and reserves. Committed capacity resources' performance would then be adjusted by such ratio. The original metric was to define the balancing ratio as total load plus reserves divided by the total capacity procured.

The proposed B will not be a measure of the amount of capacity needed, instead it will be an administrative device that understates the performance obligations of capacity resources. For example, PJM claims, that these modifications align "the marginal incentives of committed capacity resources that over-perform compared to those that under-perform during a PAI" and allow "market participants with over-performing resources to use the bonus revenues collected for such over-performance to net against non-performance charges on a MW-for-MW basis."³¹ These are not reasons to modify the concept behind B. These issues arise simply by the existence of a balancing ratio instead of requiring all committed capacity to perform to their committed value and by allowing excuses. The change to the numerator in B distorts the purpose of B and can result in irrational outcomes. This change is not just and reasonable and should be rejected.

PJM fails to explain why it is reasonable to define the required performance of a capacity resource during a PAI as less than the full capacity (ICAP) of the resource. PJM's calculation of B would reduce the performance obligation by comparing the MW of

³¹ October 15th Filing, Attachment D (Graf Affidavit) at ¶ 67.

performing resources to the MW of all resources, including nonperforming resources. If one third of resources fail to perform during a PAI, the performance required from the remaining resources should be at full ICAP and not reduced to reflect the nonperformance of that one third. PJM's proposed calculation of B significantly understates the actual obligation of and need for capacity resources to perform when they are most needed, during a PAI. As a result, PJM has not shown that its proposed changes to the market rules are just and reasonable. For example, if the total committed ICAP were 100,000 MW and 40,000 MW failed to perform during a PAI with 60,000 MW of load, PJM needs the 60,000 MW to perform at 100 percent of their ICAP (or more if possible) and that should be the obligation. Performance at a level discounted by B could result in a shortage of supply but no penalties. Capacity resources are paid to be available at their full ICAP and not an arbitrarily discounted level.

D. PJM's Proposed PAI Risk Market

PJM proposes to create a new financial market to address a risk that is created unnecessarily by PJM's proposal to penalize solar resources if they cannot produce energy at night.

PJM calls this new market the Performance Assessment Interval obligation transfer for Capacity Market Sellers ("PAI Obligation Transfer"). This market would provide for the transfer of PAI risk from one participant to another.

The ELCC approach leads PJM to draw the conclusion that a new financial market must be created by PJM to permit intermittent resources to manage the illogical risk imposed on intermittent resources by PJM's ELCC implementation. In addition to the fact that this proposed new market would allow intermittent resources to sell the same obligation to perform twice, the entire approach would be unnecessary if the ELCC approach evolved to an hourly availability approach. There is no risk of a solar resource not producing at night if PJM's ELCC approach did not create it. Regardless, PJM should not be in the business of creating financial markets; private markets can handle any actual issue if there were one.

PJM has not established the need for PJM to create a new bilateral market to address risk that is inappropriately created by PJM's own ELCC proposal. PJM's has not shown that its proposal to create the new PAI Obligation Transfer market is just and reasonable

E. Proposed Changes to OATT Attachment M–Appendix Are Not Supported as Just and Reasonable.

Attachment M–Appendix to the OATT is part of the PJM Market Monitoring Plan, Attachment M. Attachment M–Appendix provides details on how the Market Monitor interacts with market participants to perform its role.

1. Projected PJM Market Revenues Deadline

In the October 13th Filing, PJM proposes revisions to Section II.I of Attachment M–Appendix, which concerns the Market Monitor's role in reviewing PJM Project Market Revenues. PJMs' proposed timeline for providing Projected PJM Market Revenues to calculate a market seller offer cap is not feasible and is not supported. As a result, PJM has not shown that its proposed changes to the market rules are just and reasonable. PJM did not discuss whether this proposal is feasible with the Market Monitor. PJM proposes to change the deadline for providing net revenue values to participants from 90 days prior to the auction window opening to 150 days prior to the auction window opening for preliminary net revenue values, and 125 days prior to the auction window opening for final net revenue values. For any auction held in early May, 150 days prior to the auction window opening falls in December, which prevents the current calendar year from being used as a basis year for calculating preliminary projected revenues. For any auction held in early May, 125 days prior to the auction window opening falls in either late December or early January. Even if 125 days prior to the auction window opening falls in early January, there must be sufficient time for PJM settlements data to be finalized and for the Market Monitor to run the forward dispatch for all units for which projected net revenues are needed. For example, if the BRA auctions were back on schedule to be held the first week of May and the deadline for providing final net revenue values was 125 days prior to the auction window opening, the due date for final projected net revenues would be between

December 28, 2022, and January 3, 2023. As a result, the May 2023 BRA for the 2026/2027 Delivery Year would use 2019, 2020, and 2021 as basis years since using calendar year 2022 would be either not possible because settlements data would not be final and it would not be possible to calculate projected net revenues for all units in the available time. The result in that example would be that calendar year 2022 revenues would not be included in the preliminary net revenues. That would be a mistake. The deadline for providing revenues to participants should remain 90 days prior to the auction window opening.

2. The Proposed Unit Specific MSOC Review Process Contradicts Tariff Provisions Defining PJM’s Role and Has Not Been Shown to Be Just and Reasonable.

The PJM market rules define the roles of the Market Monitor, PJM and market sellers in determining the inputs to prospective mitigation, including, in capacity markets, MSOCs.³² Section 12A of the OATT defines PJM’s role, which confirms that determinations about market power are exclusive to the Market Monitor, and that PJM “does not make determinations about market power, including, but not limited to, whether the level or value of inputs or a decision not to offer a committed resource involves the potential exercise of market power.”

PJM claims (at 32) that its proposed revision “does not change the respective roles of PJM and the Market Monitor with regard to this process as it currently exists today.” On the contrary, PJM’s proposal clearly does substantively change the role of the Market Monitor and PJM.

PJM proposes a significant change in the process for the review of MSOCs. PJM would make PJM the primary reviewer and decision maker in the review of the MSOCs. PJM’s proposal would significantly diminish the role of the Market Monitor in reviewing proposed MSOCs and making market power determinations. Under the current rules, if

³² See OATT Attachment M § IV; OATT Attachment M–Appendix § II.

there is a disagreement, both the market seller and the Market Monitor submit proposed MSOC values to PJM. PJM must choose between the two proposals and cannot negotiate with the seller or calculate an MSOC value. The seller and the Market Monitor can continue to discuss differences, exchange additional data and come to an agreement about the appropriate MSOC. The Commission has the final decision making authority if a disagreement remains and PJM selects one option. The current rules do not permit PJM to negotiate with the seller on the level of the MSOC. Section 12A to the OATT explicitly prohibits such negotiation. PJM's proposal would inappropriately substitute PJM for the Market Monitor in making decisions about market power. PJM would not limit itself to determinations of compliance with the market rules, as the OATT provides,³³ but would instead determine the level of the MSOC, meaning that it is making judgements on what constitutes an attempted exercise of market power. PJM's proposal contradicts the process and roles defined in the tariff, including Section 12A.

PJM's process changes specifically for CPQR review would effectively replace the Market Monitor's role with consultants hired by generation owners, and by PJM. Such consultants, unlike the Market Monitor, are not required to be independent or objective, have economic incentives inconsistent with independence, and are not obligated to protect public interest in competitive markets.³⁴ The assertion that generation owners have the unique ability to define their own CPQR and that it should not be subject to meaningful review is based on PJM's willfully naive view that there is no market power in the capacity market, a position that is demonstrably incorrect. If a generation owner has market power, a review is essential to determine the degree to which the CPQR reflects the actual cost to

³³ See OATT § 12A ("The Office of the Interconnection shall oversee compliance with PJM Market Rules and may take action on compliance issues and/or request that the Market Monitoring Unit take action on compliance issues.").

³⁴ See OATT Attachment M, including, in particular the Market Monitor's tariff defined code of ethics in Section XI.

mitigate risk and the degree to which the CPQR reflects the attempt to exercise market power.

The current rules recognize that participants are responsible for their own behavior in the markets, and must be prepared to defend that behavior if challenged. When PJM improperly steps into the shoes of the seller, as it would under its proposal, it creates confusion about who is responsible for the behavior represented by an offer. PJM's interference will make the Market Monitor's role impossible to perform if sellers believe they can negotiate with PJM. PJM's confusion of its proper role with the seller will similarly hamper the ability of the Commission to detect, detect and prevent exercise of market power. Avoiding such confusion is exactly why the OATT provides:

A market participant may submit any offer or bid that it chooses or make a decision not to offer a committed resource, provided that the Office of the Interconnection determines that: (i) the market participant has participated in the review process conducted by the Market Monitoring Unit (without regard to whether an agreement is obtained) if required by the Tariff; (ii) offer is no higher, in the case of seller market power, or lower, in the case of buyer side market power, than the level to which the market participant has committed or agreed in the course of its participation in such review process; and (iii) the offer is compliant with the Tariff and PJM Manuals. The market participant assumes exclusive responsibility for any adverse findings at the Commission related to its offer.³⁵

PJM's proposal is inconsistent with and undermines rules specified in the OATT governing the basic framework for participation in its markets.

The current provisions are just and reasonable. The current provisions have worked well. Relative to the number of sellers, offers and auctions over the years, the current provisions have resulted in only a handful of cases requiring direct Commission

³⁵ OATT § 12A; *see also* OATT Attachment DD § 5.8(j).

involvement. But the Market Monitor has had reasonable opportunity to raise issues with the Commission when it was necessary.

PJM's proposed changes to its role in the MSOC review process have not been shown just and reasonable, and should be rejected.

II. CONCLUSION

The Market Monitor respectfully requests that the Commission afford due consideration to this pleading as the Commission resolves the issues raised in this proceeding.

Respectfully submitted,



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Dated: November 9, 2023

CERTIFICATE OF SERVICE

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

Dated at Eagleville, Pennsylvania,
this 9th day of November, 2023.



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