

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Independent Market Monitor for PJM)	
)	
)	
v.)	Docket No. EL19-47-000
)	
PJM Interconnection, L.L.C.)	
)	

**ANSWER AND MOTION FOR LEAVE TO ANSWER
OF THE INDEPENDENT MARKET MONITOR FOR PJM**

Pursuant to Rules 212 and 213 of the Commission’s Rules and Regulations,¹ Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor (“Market Monitor”) for PJM Interconnection, L.L.C. ² (“PJM”), submits this answer to the answer submitted by PJM on April 9, 2019 (“PJM Answer”), and, to the extent additional arguments are included, to the protests filed by PJM Power Providers Group on April 15, 2019 (“Power Providers”) and by the PJM Utilities Coalition on April 15, 2019 (“Utilities”).³

¹ 18 CFR §§ 385.212 & 385.213 (2018).

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

³ The PJM Utilities Coalition includes: The FirstEnergy Utility Companies, including Ohio Edison Company, The Cleveland Electric Illuminating Company, The Toledo Edison Company, West Penn Power Company, Pennsylvania Power Company, Pennsylvania Electric Company, Metropolitan Edison Company, Jersey Central Power & Light Company, Monongahela Power Company and The Potomac Edison Company; American Electric Power Service Corporation, on behalf of its affiliates Appalachian Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company, Wheeling Power Company and AEP Energy Partners, Inc.; The Dayton Power and Light Company; and East Kentucky Power Cooperative, Inc.

The answer also addresses comments jointly filed April 15, 2019, by Calpine Corporation, Vistra Energy Corp. and Dynegy Marketing and Trade, LLC, and the Electric Power Supply Association (“Calpine et al.”). Calpine et al. do not attempt to defend as just and reasonable the Market Seller Offer Cap (MSOC) based on the expected number of Performance Assessment Intervals (PAI) set at 360 intervals,⁴ but instead argue that the Market Monitor’s proposed relief is inferior to their own proposal of setting the level of expected PAI at 138–204 intervals (11.5–17 PAH) and using that value in calculating the MSOC and the nonperformance charge rate.

Contrary to various arguments raised on answer and protest, there is sufficient evidence to show that the current level of the MSOC is unjust and unreasonable and allows the exercise of market power. Contrary to various arguments raised on answer and protest, there is sufficient evidence to show that expected PAI levels are overstated. Contrary to various arguments raised on answer and protest, the Market Monitor’s proposed relief does not over mitigate. Granting the complaint would mean that units likely to set the market price would make unit specific offers subject to market power review instead of the default MSOC. The argument against over mitigation is really an argument for ineffective mitigation.

The Commission can correct the deficiency identified in the complaint consistent with its prior orders and without disturbing other aspects of the PJM Capacity Performance (CP) capacity market design. It is plain that the default market seller offer cap that functions as a mitigated offer level must be corrected when the market routinely clears at levels substantially below it and the offers that set prices are not subject to review for market power. That is the case now in RPM auctions, and the default MSOC must be corrected in

⁴ Equivalent to the 30 Performance Assessment Hours (PAH) established in the order on Capacity Performance. *PJM Interconnection, L.L.C., et al.*, 151 FERC ¶ 61,208 (2015) (“CP Order”).

order to ensure competitive outcomes in the capacity market and in order for the public to have continued confidence in the competitiveness of RPM auction results.

I. ANSWER

A. Circumstances Have Materially Changed Since the 2015 Capacity Performance Order.

PJM's (at 5–6) defense of the current MSOC primarily relies on the Commission's approval of the equivalent of 360 PAI (30 PAH) in the CP Order. The argument that the CP Order represented a definitive finding on the appropriate level of PAI at the time, or in the future, has no merit. That the Commission had reservations about the level of PAI is plain on the face of the order.⁵ First, the Commission found (at P 13) that 30 PAH was "a reasonable upper bound of hours during which the PJM system is likely to experience Emergency Actions over the relevant commitment period." The Commission did not state that it is desirable to use an upper bound on the *possible* number of hours with emergency actions, but explicitly stated that at the time the CP Order was issued, 360 PAI (30 PAH) represented the upper bound on the hours when PJM is *likely* to experience emergency actions. It is nonsensical to suggest that the CP Order identified any goal other than determining an accurate estimate of the expected PAI. In observing that PAI is at the "upper bound," the Commission reveals concern that the level of PAI is potentially overstated. Nowhere does the CP Order indicate any intention to establish the highest possible level of PAI. Since the MSOC operates to prevent the exercise of market power, the

⁵ In addition, Chair Bay's statement of dissent from the CP Order emphasized dissatisfaction with the effect on mitigation: "CPP largely eliminates mitigation as a safety net up to .85 of Net Cost of New Entry (CONE)." Chair Bay specifically questioned the level of PAH: "The number 30 is important because it represents PJM's expectation of performance assessment hours in a year. In 2011–12, PJM declared 7; in 2012–13, 5; and in 2013–14, 30.[footnote omitted] The average over the three-year period is 14. If the outlier is excluded (2013–14), the average is 6. An estimate of 30 expected performance assessment hours appears to be overly generous..."

better policy would be to set the expected number of PAI at an accurate level based on supportable expectations.⁶

PJM states (at 5): "...the Market Monitor has not sufficiently demonstrated that system conditions have drastically changed between 2015, when the Commission accepted 360 as the estimated number of Performance Assessment Intervals, and today to justify a complete reversal of its prior decision at this time." It is surprising that PJM has not recognized the drastic changes in system conditions that resulted, in significant part, from the introduction of the Capacity Performance rules. The changes in system conditions were the intended result of the CP rules.

PJM ignores the substantive arguments and supporting evidence presented by the Market Monitor, including:

- In contrast to the expected annual 360 PAI, there were zero PAI in 2015, 2016 and 2017 in PJM and there were 24 PAI (equivalent to 2 PAH) in 2018, triggered in small, localized areas due to multiple transmission contingencies where no capacity resources were subject to performance assessment penalties as a result of the local PAI (See IMM Complaint at 17–18).
- The actual installed reserve margins for each of the delivery years for which PJM held RPM base residual auctions from 2015 through 2018 were well in excess of the target installed reserve margin (IRM) for each year, reducing the likelihood of PAIs (IMM Complaint at 15).
- The results of a simulation study that PJM conducted show that there are 24 expected PAI (2 PAH) using actual observed installed reserve margins.

The assertion that the system conditions have not "drastically changed" since 2015 has no basis in fact and would surprise any objective observer of PJM markets. The

⁶ See *ISO New England Inc.*, 162 FERC ¶ 61,206 at P 38 (March 9, 2018) ("We agree with ISO-NE that suppliers should not rely on the Dynamic De-List Bid Threshold as an indicator of the likely clearing price in the next auction; the purpose of the Dynamic De-List Bid Threshold is not to signal the likely market clearing price, but instead to help ensure that the marginal bid is subject to IMM review for the potential exercise of market power.").

assertion (at 5) that the complaint seeks a “complete reversal of its prior decision” is clearly not correct, is a mischaracterization of the relief requested and contradicts the Commission’s recent statements on Capacity Performance. The requested relief is a specific, targeted, update that is in line with what the Commission anticipated in the CP Order (at P 163). The Commission has previously accepted complaints on the Capacity Performance market rules and reexamined the underlying issues.⁷ An Order issued February 23, 2018 stated:

Section 206 of the Federal Power Act recognizes that a rate previously found just and reasonable may be found unjust and unreasonable in a later proceeding. Capacity Performance has now been in effect for two years, and the complainants have raised important issues as to whether certain aspects of the construct are performing as well as expected. In particular, complainants present analyses prepared by PJM which call into question the assumption that permitting any stand-alone participation by Seasonal Resources would negatively impact reliability in non-summer months.⁸

Capacity Performance has been in effect for an additional year since the February 23rd Order issued.

PJM Utilities Coalition (at 5) states: “In developing key market metrics, such as the default MSOC methodology, it would be poor practice to focus on a relatively small sample size of specific Delivery Years and ignore prior, but recent, Delivery Years.” PJM Utilities Coalition then proceeds illogically to rely on only one year, 2014, and ignore the four prior, recent and subsequent years with zero and near zero PAH (2015, 2016, 2017 with zero PAH, and 2018 with two narrowly locational PAH), to argue for continuing to use 30 PAH/360 PAI as the expected number of PAI. The PJM Utilities Coalition fails to note that 2014

⁷ See *Old Dominion Elec. Coop., et al. v. PJM Interconnection, L.L.C., et al.*, 162 FERC ¶ 61,160 at P 56 (Issued February 23, 2018), *reh’g dismissed*, 164 FERC ¶ 61,116 (2018) (“February 23rd Order”).

⁸ *Id.*

included the polar vortex and the extraordinarily high level of forced outages that were the reason for the development of the Capacity Performance capacity market design. It is illogical and nonsensical to rely on pre CP performance as a guide to expected PAI under CP. PJM Utilities Coalition's logic supports the Market Monitor's position.

The Commission conditioned its acceptance of the use of 30 PAH in the CP Order on PJM making updates as it gained experience: "However, given that the Performance Assessment Hour estimate affects core components of the Capacity Performance design, including the Non-Performance Charge rate and the default offer cap, we condition our acceptance of PJM's proposal on PJM making annual informational filings with the Commission to provide updates on the use of 30 hours for this parameter."⁹ The finding in the CP Order recognized the need to track the level of expected PAI and included the expectation that the level of PAI, and the associated market rules, would need to be revisited. PJM did not provide a substantive update.

PJM states (at 13): "[T]he stakeholder process revealed that there was simply not enough data or experience to justify substituting another number for the estimated number of Performance Assessment Intervals at this time." The stakeholder process did not reveal anything about the facts, either data or experience. The stakeholder process revealed that stakeholders would not agree on the obvious implications of the fact that there is a significantly lower number of PAH and that rational expectations are for a continued low level of PAH. The implications were repeatedly made clear in that process. That the actual

⁹ CP Order at P 163. See also CP Order at P 13 ("[A]s part of the Commission's ongoing monitoring of PJM's markets, we require that PJM submit informational filings with the Commission after the conclusion of each of the first five delivery years under PJM's proposal, beginning with the 2016-2017 delivery year, to evaluate the impact of this 30 hour assumption on resource performance during Performance Assessment Hours, as well as the possible impact of alternative Non-Performance Charges based on higher and lower estimates of the number of Emergency Action hours during each delivery year. We also encourage PJM, as it gains more experience under its new capacity construct, to reassess the assumed number of Performance Assessment Hours and file with the Commission if it believes a revision is warranted").

realized PAIs for four consecutive years since the CP Order was issued were zero or close to zero in comparison to the expected value of 360 intervals (30 hours) constitutes more than sufficient data. That RPM auctions cleared repeatedly well below the default MSOC under Capacity Performance constitutes sufficient experience. That RPM auctions repeatedly cleared with installed reserve margins (IRM) well above the target IRM under Capacity Performance constitutes sufficient information. Stakeholders' role is not to make evidentiary determinations. That a stakeholder body with divergent financial interests could not agree on another number to use for the expected PAI, with its significant implications for the market seller offer cap and/or the penalty rate, is not justification for PJM's inaction. The 30 PAH was clearly overstated at the time, even based on the polar vortex experience, and the evidence since 2014 shows that the Capacity Performance model and incentives have resulted in a significant reduction in forced outages, an improvement in incentives and performance, an increase in reserves, and that the 30 PAH is even more overstated today.

B. That An Overstated MSOC Prevents Meaningful Market Power Mitigation Is Undisputed.

That an overstated MSOC interferes with effective and efficient market power mitigation is undisputed. PJM does not appear to understand the core problem motivating the complaint. PJM offers as a defense (at 6) that "the Market Monitor identifies no specific evidence of entities exercising market power." The Market Monitor identified the exercise of market power in the 2021/2022 Base Residual Auction Report but did not identify the companies or units involved. But PJM knows, in detail, the exact details of the market power that the Market Monitor identified in the 2021/2022 Base Residual Auction Report.¹⁰

¹⁰ See Market Monitor, Analysis of the 2021/2022 RPM Base Residual Auction: Revised (August 24, 2018), which can be accessed at: <http://www.monitoringanalytics.com/reports/Reports/2018/IMM_Analysis_of_the_20212022_RPM_BRA_Revised_20180824.pdf>.

PJM confusingly raises as a defense the existence of the core problem, that the Market Monitor is not receiving, as a result of the overstated MSOC, the avoidable cost data needed to effectively detect the exercise of market power. Routine and consistent information on the costs associated with price setting offers is needed to identify market power issues when the market consistently clears well below the default MSOC. If the Market Monitor believes an entity is exercising market power, it will refer or take other regulatory action against the entity exercising market power. A referral requires a finding of sufficient credible information of a violation.¹¹ Without data, this standard is much more difficult to meet and without data this standard is sometimes impossible to meet. This complaint does not attempt to prove a particular exercise of market power. The Market Monitor has made that assertion separately in the 2021/2022 Base Residual Auction Report and the Market Monitor has followed the processes mandated in Attachment M to the PJM Tariff. The goal is to prevent the exercise of market power in the future, including the next auction. The purpose of the complaint is to permit effective market power mitigation.

PJM states (at 7): “A very large percentage of resources offer at zero or another price well below their avoided [sic] costs in order to ensure the resource clears.” PJM does not have data on avoidable costs for the same reasons that the Market Monitor does not have that data, and PJM does not have data on net avoidable costs. As a result, PJM does not know what percentage of resources is offering at, below or above their net avoidable costs. Regardless, the units setting the clearing prices in the capacity market auctions do not submit avoidable costs unless they are one of a small number of high ACR units, and are not required to submit avoidable costs, making it impossible to verify whether the offers are competitive. As a result, the outcome in all the auctions is not consistent with the

¹¹ OATT Attachment M § IV.I.2.

Commission's expectation, in the CP Order, of protection for consumers due to unit specific review of offers that are expected to set price.¹²

PJM argues (at 8–10): “[T]he Market Monitor should review Sell Offers that it believes result from an exercise of market power, including those above and below the default MSOC, to ensure that Capacity Market Sellers do not exercise market power.” PJM is again confused about the issue. The Market Monitor cannot efficiently, effectively and consistently review offers below the MSOC level because participants offering below the MSOC are not required to provide to PJM or the Market Monitor the avoidable cost data necessary to perform such review. The PJM tariff specifically designates offers at or below the default MSOC as not an exercise of market power.¹³

PJM argues (at 8) that: “Capacity Market Sellers in PJM are incented to offer at or near their avoidable costs (i.e., the marginal cost of capacity), so that they can clear and realize a substantial contribution to fixed-cost recovery in the form of RPM capacity clearing prices.” It is instructive that PJM explicitly recognizes that net avoidable cost is the definition of a competitive offer, and not Net CONE * B. But PJM forgets the fact that the capacity market is not structurally competitive. PJM assumes competitive behavior and ignores the repeatedly documented facts about the structure of the PJM Capacity Market. PJM also ignores the fact, for which PJM has the data, that there were clearly noncompetitive offers in the 2021/2022 Base Residual Auction. The fact of structural market power is why market power mitigation is necessary. Capacity Market Sellers that believe they have market power have an incentive to exercise that market power and setting the

¹² CP Order at P 344.

¹³ “... and provided further that the submission of a Sell Offer with an Offer Price at or below the revised Market Seller Offer Cap permitted under this proviso shall not, in and of itself, be deemed an exercise of market power in the RPM market.” See OATT Attachment DD §6.4(a).

MSOC well above net ACR provides the opportunity for such sellers to exercise that market power. That is not hypothesis but fact.

P3 states (at 14–15): “Rather, the IMM appears to be making the statement that some subset of resources availed themselves of the FERC-approved opportunity to offer at least some capacity at a price greater than zero, but no greater than the applicable MSOC. This fact pattern is more a statement of the level of MSOC relative to the typical ACR than it is a statement about the exercise of market power.” P3 seems to suggest that the “FERC-approved opportunity” is an opportunity to exercise market power. The Commission’s approval of the default MSOC at net CONE times the balancing ratio was contingent on the assumption that it was the competitive offer. The Commission did not approve an opportunity for market sellers to exercise market power. With a default MSOC that is based on accurate assumptions, market sellers should have the opportunity to offer at any level below the default MSOC. P3 also asserts (at 15), with no evidence, that clearing prices below the MSOC are evidence of a “market that is more competitive than envisioned by PJM.” P3’s assertion would only be true if the default MSOC were a true competitive offer level. As the Market Monitor’s complaint explains, and this answer reiterates, that is not the case.

C. The Market Monitor’s Proposal Is Just and Reasonable.

The Market Monitor’s proposal will ensure that the default MSOC is set at a level that is consistent with a realistic expectation of the number of PAI. It also ensures that offers that potentially set prices in the RPM auctions are reviewed for market power as the Commission envisioned. This goal is also consistent with the Commission’s finding in its March 9th Order that “the proposed decrease in the Dynamic De-List Bid Threshold will increase the likelihood that the IMM will review the marginal bid for the potential exercise

of market power.”¹⁴ The Commission’s policy preferences as represented in its March 9th Order come after the CP Order issued. The same principles established in *ISO New England* to protect the integrity of New England markets should also be applied in PJM.

1. Sixty PAI/Five PAH Is a Reasonable Estimate for the Expected PAI Given Supply and Demand Conditions for Capacity in PJM.

PJM objects (at 10–12) to the Market Monitor’s reliance on PJM’s simulation study. PJM explains (at 10): “The simulation study referenced by the Market Monitor is based on General Electric Multi-Area Reliability Simulation Program (“GE MARS”), which is a planning software tool capable of calculating standard reliability indices for a given power system and calculates the expected number of days per year that emergency operating procedures may be utilized at different reserve margins.” PJM’s objections about using the planning software tool for estimating PAI is in contradiction to its own practice of using such tools for calculating the planning parameters for the capacity market auctions, most importantly, setting the target installed reserve margin (IRM) for RPM auctions.¹⁵ There is no reason why PJM cannot use the same models it uses for resource adequacy and for setting the planning parameters for RPM auctions, to model and estimate the expected number of PAIs, for consistency. The GE MARS model is also used by other RTOs/ISOs.¹⁶ PJM’s arguments against using its own standard set of reliability analysis models that inform its resource adequacy construct should be rejected. If PJM believes that its models

¹⁴ 162 FERC ¶ 61,206 at P 35 (2018). The Dynamic De-List Bid Threshold operates similar to the MSOC in the PJM market design.

¹⁵ See PJM, “Manual 20: PJM Resource Adequacy Analysis,” Section 1.8 Modeling Tools (Rev. 10), (March 21, 2019), which can be accessed at: <<https://www.pjm.com/-/media/documents/manuals/m20.ashx>>.

¹⁶ ISO-NE employed the same GE MARS simulation tool for its initial estimate (in 2013) and to update its estimate (in December 2016) of hours with reserve deficiency, the equivalent of PAH in PJM. See ISO New England Inc., “Memorandum on Operating Reserve Deficiency Information dated December 19, 2016,” Attachment A to Joint Testimony of Hemant Patil and Gregg Bradley, Docket No. ER18-620 (January 8, 2018).

should be replaced or modified, PJM should do so on a consistent and transparent basis for all the planning and capacity market applications.

PJM states (at 14): “[T]he impending retirement of over 11,000 MWs of coal, nuclear, and other resources, [footnote omitted] will lower PJM’s existing Installed Reserve Margin and creates a reasonable expectation that these retirements will likely equate to more Performance Assessment Intervals in the future.” PJM’s claims of sudden declines in reserve margins are incorrect and unsupported. In PJM’s most recent reserve requirement study, that is the basis of the target IRM and forecast pool requirement (FPR) used in PJM’s RPM auctions, PJM models a total of 22,980 MW of new additions (including updates) against 8,740 MW of retirements for a net addition of 14,240 MW in the 11 year horizon that the study looks at.¹⁷ PJM has a consistent history of over forecasting peak loads and clearing excess reserve margins, and there is no evidence that this is going to suddenly cease. The Market Monitor has also repeatedly documented the fact, including in this complaint, that PJM has more than 10,000 MW of excess reserves for the upcoming delivery years for which auctions have cleared. PJM should continue to update the expected number of PAI/PAH as conditions evolve. The current evidence makes clear that the 30 PAH estimate is grossly overstated.

2. PJM Misunderstands the Market Monitor’s Sensitivity Analysis of the 2020/2021 BRA.

PJM (at 17) and P3 (at 15-16) misunderstand and mischaracterize the results of the sensitivity analysis provided by the Market Monitor for the 2021/2022 Base Residual Auction (BRA). PJM states (at 17): “Even assuming the Market Monitor’s argument that the competitive BRA clearing prices should have been as low as \$124.40/MW-day for the 2021/2022 Delivery Year.” PJM and P3 assume that the result of this sensitivity analysis is a

¹⁷ See PJM, “2018 PJM Reserve Requirement Study,” Generating Unit Additions/Retirements (Oct. 10, 2018) at 33, which can be accessed at: <<https://www.pjm.com/-/media/planning/res-adeq/2018-pjm-reserve-requirement-study.ashx?la=en>>.

competitive price of \$124.40/MW-day. That is incorrect. The Market Monitor did not compute ACRs and substitute them for all the RPM offers in its sensitivity analysis of the 2021/2022 base residual auction. In fact, the Market Monitor's complaint repeatedly explained that the general lack of ACR data makes such an analysis very difficult. The sensitivity analysis only adjusts the offers of the units that clearly exercised market power and for which the Market Monitor was able to substitute competitive offers. The complaint clearly states (at 11–12 [emphasis added]):

If the **identified noncompetitive offers** had been capped at net ACR in the 2021/2022 RPM Base Residual Auction **and everything else had remained the same** that, total RPM market revenues for the 2021/2022 RPM Base Residual Auction would have been \$8,070,050,631, a decrease of \$1,230,826,475, or 13.2 percent, compared to the actual results.

3. Protesters' Claims Inappropriately Emphasize ACR Effort Over Market Power.

PJM (at 17–18), P3 (at 13), PJM Utilities Coalition (at 7), Calpine et.al. (at 16) and Dominion (at 3–4) claim that the Market Monitor's proposal would subject a large number of resources to unit specific review of ACR. It is correct that a significant number of units would likely need to submit unit specific ACR, although default ACRs would continue to be an option. Protesters overstate the burden of ACR review. All owners of capacity have experience in calculating ACR, or using available alternatives, because net ACR was the defined market seller offer cap prior to the introduction of the capacity performance model. More importantly, such owners have intimate familiarity with their own costs. The notion that calculating net ACR is "extraordinarily time consuming" is hyperbole. The Market Monitor is prepared to engage in review of company ACR filings in a timely manner.

The Commission's findings related to the recent ISO-NE Forward Capacity Market (FCM) auction held in February 2019 are relevant. After the Commission's March 9, 2018 order accepting the reduction of the Dynamic De-List Bid Threshold (DDBT) to \$4.30/kW-month, the auction cleared at \$3.80/kW-month, lower than the threshold. In the March 9th Order, the Commission stated (at 35):

We also believe that the proposed decrease in the Dynamic De-List Bid Threshold will increase the likelihood that the IMM will review the marginal bid for the potential exercise of market power.

The clearing price in the ISO-NE FCM auction was set by an offer that apparently was not required to undergo market power review. The Market Monitor's proposal would result in the default MSOC in PJM capacity markets at a level that ensures that all the resource offers relevant to setting the clearing price are reviewed for market power.

PJM states (at 18): "Such a process is burdensome, litigious and unnecessary, particularly in light of the fact that the Market Monitor already has the ability and responsibility to review any Sell Offers it suspects may be an exercise of market power as explained in section II.A above." The process is not burdensome for unit owners or for the Market Monitor, but the process is necessary for effective market power mitigation and to ensure just and reasonable rates in the capacity auctions. This is exactly the same process that was successfully engaged in prior to CP. To require the Market Monitor to attempt to gather data after market power has been exercised is more burdensome and more litigious and dramatically less likely to protect competitive markets because the Commission has seldom reversed market outcomes.

4. The Nonperformance Charge Rate Level.

A number of commenters allege that using a different value for the expected number of PAI in the MSOC and the nonperformance charge rate is unjust and unreasonable.¹⁸

PJM states (at 15): "The Market Monitor's proposed use of five hours (60 intervals) for the anticipated number of Performance Assessment Intervals only for the purpose of determining the default MSOC is arbitrary and fundamentally inconsistent with the underlying logic of the default MSOC equation." As the Market Monitor noted in the

¹⁸ PJM at 19–20; P3 at 8–10.

complaint (at 7), the Market Monitor did present an option to set both values at the same level to the stakeholder group considering this issue.¹⁹ None of the parties that now protest the Market Monitor's proposal, including PJM, supported that proposal during the stakeholder process.

While it would be consistent to use the same PAI value in the denominator of the nonperformance charge rate calculation and the numerator of the equation defining the MSOC, it is not required. This is particularly the case when the use of the correct low number of PAI would result in an extremely high penalty rate. Using an expected PAI of sixty (5 PAH) to recalculate the nonperformance charge rate would increase the value to six times its current value, or between \$18,000 and \$24,000 per MWh, approximately. There are no additional benefits to increasing the nonperformance charge rate from its current value, in the form of added incentives for generation resources to perform, or to invest in reliability. The current level of the nonperformance charge rate has been an effective incentive since capacity performance has been implemented. PJM provides no evidence to argue that the nonperformance charge rate is unjust and unreasonable. It is more likely that a much higher nonperformance charge rate is unjust and unreasonable including for the reason that the implied VOLL is higher than any reasonable estimate and because it would make the stop loss provision bind after a short period of time, thus eliminating the marginal incentives. The level of the default MSOC, however, is unjust and unreasonable given the evidence provided in the Market Monitor's complaint, and in this answer. Using a different value of expected PAI for the default MSOC, and the nonperformance charge rate, as the Market Monitor proposed, is not arbitrary, as it ensures that the market power mitigation

¹⁹ The results of the stakeholder vote on the proposals is noted in the minutes of the meeting. See "Draft Minutes, Markets Implementation Committee," (August 8, 2018) at 2, which can be accessed at: <https://www.pjm.com/-/media/committees-groups/committees/mic/20180912/20180912-item-01-draft-minutes-mic-20180808.ashx>.

rules work as envisioned by the Commission in the CP Order and retains a level of nonperformance charge consistent with appropriate incentives.

Calpine et al.'s witness Dr. Roy Shanker argues that while the Market Monitor's proposal does address concerns related to market power mitigation, Dr. Shanker's proposal is a superior one. The Market Monitor disagrees. In his affidavit, Dr. Shanker states (at 16):

First, as noted in the IMM's complaint and as I have verbally confirmed in discussions with the IMM, the IMM's concerns regarding market power mitigation can be addressed by making adjustments to *either* the MSOC or the nonperformance charge rate that are consistent with adjustments to the level of PAH/PAI.

Dr. Shanker also states (at 28):

The above makes clear that, if the sole concern is market power mitigation, there are two plausible approaches under the CP paradigm to establish the "right" MSOC given a modification of the expected number of PAH/PAI. I have confirmed this observation with the Market Monitor.[footnote deleted] Given this, I believe it is very important to consider the specific properties of implementing each alternative.

Dr. Shanker misinterpreted at least part of the conversation with the Market Monitor on this topic. It is not the Market Monitor's position that setting both PAI values in the relevant CP equations at the same level would address the market power concerns. It is not the Market Monitor's position that increasing the nonperformance charge by reducing PAI would address the market power concerns. The only way to address the market power concerns is to reduce the MSOC from the level of $\text{Net CONE} * B$.

While Dr. Shanker's proposal to use an updated value for the expected PAI in both the MSOC and the nonperformance charge keeps the PAI value consistent, he has not shown that the result is necessary for or consistent with efficient and competitive market outcomes. In addition, the level of PAI proposed by Dr. Shanker is too high, and it is not consistent with the recent history of actual PAIs or PJM's projections or rational

expectations of PAIs. Dr. Shanker's proposal does not address the concern that marginal resources in RPM auctions are not subject to market power review.²⁰ Dr. Shanker's proposal by maintaining an inflated MSOC, does not address the basic market power concern raised by the Market Monitor.

D. A Lower Default MSOC Should Be Implemented Without Delay.

PJM expresses concerns (at 20–21) about the time needed to submit and review data supporting offers above a lower MSOC. PJM states:

Specifically, the Commission should ensure that Capacity Market Sellers will still be able to submit unit-specific MSOC data and provide PJM and the Market Monitor with sufficient time to review such submissions. This includes potentially not applying the replacement rate to the upcoming BRA for the 2022/2023 Delivery Year. Such a course of action is prudent given that the existing deadline for Capacity Market Sellers to submit unit-specific MSOC by April 16, 2019, 120 days prior to the commencement of the upcoming BRA.

It is at least a little ironic that PJM appears to assert that fixing the MSOC and the associated market power concerns is too hard to do, given all the other major issues remaining to be resolved in the PJM capacity market design. It is the position of the Market Monitor that PJM should not run the next Base Residual Auction until the MSOC issue is resolved. It would be a mistake to run an auction using a market design in which market power can be and has been exercised.

Participants concerned about the time needed for review can and should submit data now in anticipation of the possibility that the relief sought in the complaint will be granted. The Market Monitor can review such offers on a contingent basis. If the relief requested is granted, PJM should be directed to file reasonable new deadlines for review on compliance. Such an approach can avoid the possibility of refunds and market uncertainty.

²⁰ See Calpine, et al., Affidavit of Roy J. Shanker, Ph.D.

II. MOTION FOR LEAVE TO ANSWER

The Commission's Rules of Practice and Procedure, 18 CFR § 385.213(a)(2), do not permit answers to answers or protests unless otherwise ordered by the decisional authority. The Commission has made exceptions, however, where an answer clarifies the issues or assists in creating a complete record.²¹ In this answer, the Market Monitor provides the Commission with information useful to the Commission's decision-making process and which provides a more complete record. Accordingly, the Market Monitor respectfully requests that this answer be permitted.

²¹ See, e.g., *PJM Interconnection, L.L.C.*, 119 FERC ¶61,318 at P 36 (2007) (accepted answer to answer that "provided information that assisted ... decision-making process"); *California Independent System Operator Corporation*, 110 FERC ¶ 61,007 (2005) (answer to answer permitted to assist Commission in decision-making process); *New Power Company v. PJM Interconnection, L.L.C.*, 98 FERC ¶ 61,208 (2002) (answer accepted to provide new factual and legal material to assist the Commission in decision-making process); *N.Y. Independent System Operator, Inc.*, 121 FERC ¶61,112 at P 4 (2007) (answer to protest accepted because it provided information that assisted the Commission in its decision-making process).

III. CONCLUSION

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

Respectfully submitted,



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Dated: April 30, 2019

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 30th day of April, 2019.



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