

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

Independent Market Monitor for PJM	)	
	)	Docket No. EL19-47-000
v.	)	
	)	
PJM Interconnection, L.L.C.	)	
	)	
	)	
Office of the People’s Counsel for District of Columbia	)	Docket No. EL19-63-000
	)	
Delaware Division of the Public Advocate	)	
	)	
Citizens Utility Board	)	
	)	
Indiana Office of Utility Consumer Counselor	)	
	)	
Maryland Office of People’s Counsel	)	
	)	
Pennsylvania Office of Consumer Advocate	)	
	)	
West Virginia Consumer Advocate Division	)	
	)	
PJM Industrial Customer Coalition	)	
	)	
v.	)	
	)	
PJM Interconnection, L.L.C.	)	(not consolidated)
	)	

**REPLY BRIEF OF THE INDEPENDENT MARKET MONITOR FOR PJM**

Pursuant to the order issued March 18, 2021, granting the complaints in the above proceedings (“March 18<sup>th</sup> Order”),<sup>1</sup> Monitoring Analytics, LLC, acting in its capacity as the

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<sup>1</sup> *Independent Market Monitor v. PJM, e al.*, 174 FERC ¶ 61,212.

Independent Market Monitor (“Market Monitor”) for PJM Interconnection, L.L.C.<sup>2</sup> (“PJM”), submits this reply brief in response to the initial briefs submitted by PJM (“PJM Brief”), the Indicated Suppliers (“Indicated Suppliers”), and the joint brief of Exelon and PSEG (“Exelon/PSEG”).<sup>3</sup> Indicated Suppliers and Exelon/PSEG are “Generators.” The Market Monitor submitted its initial brief (“IMM Initial Brief”) in this proceeding on April 28, 2021.

## I. ARGUMENT

### A. The Current MSOC Permits the Exercise of Market Power.

#### 1. The Current MSOC Does Not Define a Competitive Offer.

The market seller offer cap (MSOC) as currently defined exceeds the competitive offers of generators in the PJM market. The best evidence of that is the actual behavior of the generation owners. If generation owners actually believed their assertions, unit offers would reflect those assertions. The offer prices and clearing prices in the recently concluded capacity auction were well below the offers implied by the assertions of the generation owners.

Getting the MSOC correct is essential because structural market power has always been and continues to be endemic to the PJM Capacity Market. Setting the MSOC in excess of competitive levels permits the exercise of market power. That is what occurred in the 2021/2022 and 2022/2023 Base Residual Auctions (BRA).

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<sup>2</sup> 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”).

<sup>3</sup> See “Initial Brief of PJM Interconnection LLC,” Docket Nos. EL19-47 and EL19-63, (May 3, 2021); “Initial Brief of the Indicated Suppliers,” Docket Nos. EL19-47 and EL19-63, (May 3, 2021); “Initial Brief of Exelon Corporation and the PSEG Companies,” Docket Nos. EL19-47 and EL19-63, (May 3, 2021).

## **2. A Well Defined MSOC is Required for Effective Market Power Mitigation.**

As part of avoiding the issue of the correct MSOC to directly address market power, PJM repeats (at 14) its demonstrably incorrect arguments that the Market Monitor can “proactively mitigate market power and prevent economic withholding regardless of the default MSOC value.” PJM never specifies the mechanism to be used by the Market Monitor to prevent economic withholding. There is no such mechanism. The Commission already rejected this argument in its March 18<sup>th</sup> Order.<sup>4</sup> The 2022/2023 BRA also demonstrated the illusory nature of PJM’s assertion under the current inflated MSOC.

While the Market Monitor does review all offers for market power and raises any concerns, the Market Monitor does not have the ability to prevent the exercise of market power. The issues with the current default MSOC that the Commission identified were observed during all the auctions under the Capacity Performance design, including during the most recent auction held for the 2022/2023 Delivery Year. The Market Monitor did not have the underlying cost data or evidence supporting the offers in the 2022/2023 Base Residual Auction (BRA) to comprehensively evaluate the competitiveness of the auction offers in advance and therefore could not address, or in some cases identify, issues with the auction results prior to posting of final prices.

## **3. Results of 2022/2023 BRA.**

In the 2022/2023 BRA, 99.3 percent of the MW UCAP offered, for which the default MSOC was applicable, were offered at less than the default MSOC of Net CONE times B. In fact, 85.6 percent of the MW UCAP offered, for which the default MSOC was applicable, offered at 50 percent or less of the applicable default MSOC, excluding the offers of price

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<sup>4</sup> March 18<sup>th</sup> Order at P 68.

takers.<sup>5</sup> The weighted average offer price for capacity resources that elected the default MSOC was \$39.47 per MW-day, only 20.6 percent of the RTO default MSOC of \$191.80 per MW-day. While resources can select an offer cap from the available options (default MSOC or unit specific MSOC or price taker), the actual offers in the auction more closely reflected the true competitive offers, although not in all cases. In the 2022/2023 Base Residual Auction, no existing generating resource requested a unit specific review for an offer above the default offer cap.<sup>6</sup> No offers below the default MSOC were submitted for unit specific cost review for seller side market power prior to the auction because the default MSOC created a zone within which it was believed that market power could be exercised without consequences.

Table 1 shows the default MSOC applicable in the 2022/2023 BRA and the actual clearing prices for each zone in the PJM region. In every zone, the clearing price was substantially below the default MSOC.

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<sup>5</sup> These data excludes resources that have chosen to be price takers because they are required to offer at zero in the auction. If those were to be included at \$0 per MW-day, an even greater proportion of MW would have been offered below the threshold of 50 percent of the default MSOC.

<sup>6</sup> Demand resources, energy efficiency resources, and planned generation resources are not subject to a market seller offer cap. *See* "PJM Manual 18: PJM Capacity Market," at Section 5.4.4 Sell Offer Caps.

**Table 1 Clearing prices and default market seller offer cap: 2022/2023 Base Residual Auction<sup>7</sup>**

Zone	Zonal Capacity Price (\$/MW-day)	Default Market Seller Offer Cap (\$/MW-day)	Market Seller Offer Cap as a Percent of Clearing Price	Clearing Price as a Percent of Offer Cap
AECO	\$98.04	\$195.16	199.1%	50.2%
AEP	\$50.09	\$167.17	333.7%	30.0%
APS	\$50.09	\$149.29	298.0%	33.6%
ATSI	\$50.09	\$169.71	338.8%	29.5%
BGE	\$127.07	\$166.67	131.2%	76.2%
COMED	\$69.13	\$182.50	264.0%	37.9%
DAYTON	\$50.09	\$166.64	332.6%	30.1%
DEOK	\$71.78	\$164.65	229.4%	43.6%
DLCO	\$50.09	\$165.18	329.7%	30.3%
DOM	\$50.09	\$184.14	367.6%	27.2%
DPL	\$98.04	\$173.90	177.4%	56.4%
EKPC	\$50.09	\$168.27	335.9%	29.8%
JCPL	\$98.04	\$196.28	200.2%	50.0%
METED	\$96.42	\$175.23	181.7%	55.0%
OVEC	\$50.09	\$158.91	317.2%	31.5%
PECO	\$98.04	\$189.91	193.7%	51.6%
PENELEC	\$96.42	\$122.15	126.7%	78.9%
PEPCO	\$95.97	\$191.09	199.1%	50.2%
PPL	\$96.42	\$184.38	191.2%	52.3%
PSEG	\$98.04	\$197.65	201.6%	49.6%
RECO	\$98.04	\$192.87	196.7%	50.8%
RTO	\$50.00	\$191.80	383.6%	26.1%

#### **4. The Current MSOC Makes Effective Market Power Mitigation Difficult.**

PJM does not appear to understand that generation owners do not have to provide any supporting information or indicate the level of their offer prior to submitting offers in

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<sup>7</sup> See PJM, 2022/2023 Base Residual Auction Results, which can be accessed at <<https://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2022-2023/2022-2023-base-residual-auction-results.ashx>>.

the auction under the current MSOC.<sup>8</sup> While the market sellers elect the offer cap that applies to them 120 days prior to the auction, they do not need to submit actual offers until the last day of the offer period. PJM asserts that the Market Monitor can refer a market seller that is at risk of exercising market power.<sup>9</sup> Under the current MSOC, all market sellers are at risk of exercising market power. Until the actual offers are submitted in the auction, there is no evidence of an attempt to exercise market power. That leaves approximately one week to evaluate all the offers and to prepare a complaint to the Commission requesting that the final posting of the prices be postponed during a market power investigation.

The most efficient way to ensure that market power is not exercised is with a market design that prevents it. The Market Monitor proposed to modify the design through the stakeholder process, and subsequently filed the complaint with the Commission when PJM and the PJM stakeholders failed to act.<sup>10</sup>

In contrast to the current MSOC approach, the process for ACR review is designed to identify whether there are issues that need to be resolved in advance of the auction. Under the offer review process, participants reach an agreement with the Market Monitor on the MSOC level or commit not to exceed a certain MSOC level or request a higher level from the Commission. (OATT § 12A) This process allows for the identification of issues and leaves time for the Commission to resolve them.

The Commission has recognized in prior proceedings that the rule based approach is preferable to referrals to the Office of Enforcement. The enforcement approach is inefficient, nontransparent, and of limited value as a deterrent to market manipulation.<sup>11</sup> Even if an

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<sup>8</sup> PJM Brief at 14–15.

<sup>9</sup> *Id.*

<sup>10</sup> See Complaint of the Independent Market Monitor for PJM, Docket No. EL19-47-000 (February 21, 2019) (“IMM Complaint”) at 7, 14–16.

<sup>11</sup> See *PJM Interconnection, L.L.C.*, 158 FERC ¶ 61,038 at PP 32, 33 & 80 (2017).

enforcement action were taken after an investigation, the enforcement action approach is inefficient compared to the rule based approach to market power mitigation. An enforcement approach cannot undo the harm to the market that results from the exercise of market power.

## **B. PJM's Proposal Is Illogical**

### **1. PJM Recognizes the Impossibility of Correctly Calculating Performance Assessment Intervals (PAI).<sup>12</sup>**

PJM's approach recognizes that it is impossible to correctly calculate the expected number of PAI in advance of an auction. Under normal timing, PJM would have to estimate the PAI more than three years prior to the delivery year. The fact that it is impossible to correctly calculate the number of PAI means that taking a position on the number of PAI becomes an indirect way to take a position on the market seller offer cap.

In the IMM Complaint, the Market Monitor supported a PAI value of 60 (or five PAH). But, recognizing the impossibility of correctly calculating the expected PAI, the Market Monitor has proposed use of net ACR in this proceeding rather than relying on a specific estimate of PAI. The comments of some parties were directed toward the Market Monitor's recommended solution in the IMM Complaint rather than the preferred solution recommended in the IMM Initial Brief.

### **2. PJM's Proposal is Arbitrary and Not Market Based.**

Given PJM's recognition of the futility of calculating the number of PAI, PJM proposes to use a rule of thumb to define an MSOC rather than economic and market

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<sup>12</sup> The term Performance Assessment Hour (PAH) was changed to Performance Assessment Interval (PAI) when the market rules were revised in compliance with Order No. 825, to evaluate performance and settle on a five minute basis instead of an hourly basis. See *PJM Interconnection, L.L.C.*, 162 FERC ¶ 61,150 (2018). The use of PAI has no substantive impact on the mathematics of the competitive offer calculation of Capacity Performance resources. One PAH (hour) is equivalent to 12 PAIs (five minute intervals).

principles. PJM proposes to set the default MSOC for the next Base Residual Auction (BRA) based on the clearing price and quantity in the prior BRA and the demand curve for the next BRA.<sup>13</sup> PJM proposes to use the simple average of the prior BRA clearing price, and an estimate of the price in the next auction. The price in the next auction would be estimated by calculating the price on the VRR curve for the next auction that corresponds to the quantity cleared in the prior auction.

PJM asserts that the result is a reasonable estimate of the clearing price for the next auction and is therefore a competitive price. PJM would use that estimated clearing price to set the default MSOC, as long as it falls within its preferred range defined by a floor of 75 percent of the prior BRA price and a ceiling of 75 percent of Net CONE. No basis for these arbitrary cutoffs is provided.

Both parts of PJM's average price include the supply curve from the prior auction. There is no reason to give any weight to the supply curve from the prior auction. PJM does not address the logical conundrum that the supply curve and the auction results they propose to use to address the flaws in the MSOC will directly incorporate those flaws because they were key determinants of the results of the prior auction. Even ignoring the market power issue, there is no reason to believe that the actual market conditions defining a competitive offer in a prior auction will ever be the same for the next auction. The results of the 2022/2023 BRA illustrate the point.

PJM does not adequately address the locational pricing issues that are core to the PJM Capacity Market. PJM states, in a footnote, that it will calculate the MSOC for the RTO and three LDAs, but does not indicate how it would address the significant locational differences in supply and demand curves for other LDAs in the PJM Capacity Market (PJM at 6, n 10). PJM provides no further details about the critical issues involved in defining locational MSOCs.

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<sup>13</sup> PJM Brief at 6.



PJM's attempt to estimate the clearing price from an imaginary future competitive auction is misguided. The approach is top down rather than starting with competitive offers and letting the market work.

If PJM's suggested method were a reasonable way to estimate the clearing prices in the next auction, the market analysts and market participants who routinely and significantly misestimate those capacity market clearing prices would get it right, or much closer to right, every time.

PJM's proposal should be rejected because it simply sidesteps the hard question of how to address market power. Instead, PJM would substitute an arbitrary and illogical calculation of what it asserts is the competitive price for the next auction, based on the supply curve from the prior auction that is both outdated and based on the flawed MSOC that it is designed to replace.

### **3. PJM's Proposed Method Would Not Protect Against Market Power.**

The Commission stated, in its March 18<sup>th</sup> Order (at 68):

If the default offer cap is no longer set at an appropriate level, as we find here to be the case, then it may prevent the Market Monitor from reviewing and addressing offers that may be uncompetitive.

The concern that the Commission identified with the existing default MSOC would remain under PJM's proposal. PJM's proposal does nothing to guarantee that offers that could potentially set or affect the clearing price in the capacity market are reviewed for market power. The results of the 2022/2023 BRA demonstrate that PJM's proposed default MSOC is ineffective and inaccurate. If the PJM proposed default MSOC had been applied to the 2022/2023 BRA, the Market Monitor would still not have had the cost data for offers that set and affected clearing prices, including those in constrained LDAs with locational price adders.

#### 4. PJM Ignores Numerous Inputs That Affect Clearing Prices in Capacity Market Auctions.

PJM admits in a footnote (n.14) that changes in the supply curve are also a key determinant of the expected market clearing price, but then admits that the lack of information on capacity bids makes it hard to estimate a supply curve.

PJM ignores the changes it has undertaken in recent years in the energy and reserves markets that had significant impacts on the capacity supply curve. Energy and reserve market changes have a direct impact on the supply curve of capacity by changing net revenue and therefore net capacity costs. The Commission recognized in its order in the reserve enhancements proceeding that the energy and capacity markets work together to ensure competitive resources have an opportunity to earn sufficient revenues to cover their costs.<sup>14</sup> The Commission recognized that the changes to the energy and reserve markets that are scheduled to be implemented in May 2022, prior to the beginning of the 2022/2023 Delivery Year, are a major, systemic change in market design.<sup>15</sup> PJM is also scheduled to implement fast start pricing in September 2021 that will result in an increase in energy and reserve prices.<sup>16</sup>

A number of other system inputs also affect the clearing prices in the capacity auctions. The changes to elections of the Fixed Resource Requirement (FRR) option by Load Serving Entities in each capacity auction, changes to the Effective Load Carrying Capability (ELCC) rules that impact the cleared quantity from intermittent resources, the forward energy prices used in defining net revenues and capacity auction parameters, all have had or will have a significant impact on the clearing prices and quantities in the PJM Capacity

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<sup>14</sup> 171 FERC ¶ 61,153 (May 21, 2020) (“ORDC Order”) at 309.

<sup>15</sup> *Id.* at 311 and 314.

<sup>16</sup> See PJM, “Motion of PJM Interconnection, L.L.C. for Extension of Effective Date,” Docket No. ER19-2722-003 (June 7, 2021).

Market. Updates to the Capacity Emergency Transfer Limits (CETL) into modeled LDAs also affect the supply of capacity in the rest of RTO region, the individual LDAs, and the clearing prices throughout the RTO. PJM's proposal ignores the impact of all of these inputs, and substitutes a vertical supply curve based on previous auctions cleared quantity.

#### **5. Applying PJM's Proposal to the Current Auction Illustrates Its Flaws.**

Applying PJM's proposed MSOC calculation method to the latest BRA would have resulted in an MSOC of \$70.00 per MW-day. That is the average of the prior auction clearing price (\$140.00 per MW-day) and the price from the latest BRA VRR curve for the prior auction's quantity (\$0.00 per MW-day).<sup>17</sup> But \$70.00 per MW-day is lower than the arbitrary floor that PJM set (\$105.00 per MW-day). PJM's proposed default offer cap would have been \$105.00 per MW-day (UCAP) for the RTO Region in the 2022/2023 BRA. This is the floor that PJM proposed for setting the default MSOC at 75 percent of the \$140.00 per MW-day RTO clearing price in the 2021/2022 BRA. In fact, the rest of RTO cleared at \$50.00 per MW-day, a value that is 47.62 percent of PJM estimated competitive clearing price.

Table 2 shows the results from using the actual VRR curve used in the 2022/2023 BRA and applying PJM's method. Using the 2021/2022 cleared quantity with the 2022/2023 VRR curve for the RTO would result in a \$0.00 per MW-day clearing price. The \$0.00 price resulted, in significant part, from Dominion's FRR election in this auction. PJM did not address new FRR elections or other fundamental changes that shift the supply and demand curves from one auction to the next are accounted for in its default MSOC calculation. The problems with the application of PJM's method remain even if PJM shifts the demand curve to account for the new FRR election.

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<sup>17</sup> The prior auction's cleared quantity, taken as is, intersects the VRR curve used in the BRA for the RTO region beyond point (c), where the price is \$0.00 per MW-day.

**Table 2 PJM proposed default MSOCs compared to actual clearing prices: 2022/2023 Base Residual Auction using the actual VRR curve**

Region	Cleared Quantity from 2021/2022 BRA (MW)	Net CONE for 2022/2023 (\$/MW-day UCAP)	Price from 2022/2023 VRR Curve (\$/MW-day UCAP) (a)	Clearing Price from 2021/2022 BRA (\$/MW-day UCAP) (b)	Average of (a) and (b)	Default MSOC Floor (75% of 2021/22 Clearing Price)	Default MSOC Ceiling (75% of 2022/23 Net CONE in UCAP)	Final Default Proposed MSOC	2022/2023 Clearing Price (\$/MW-day UCAP)	Final Default MSOC as a Percent of Clearing Price
RTO	163,627.3	\$260.50	\$0.00	\$140.00	\$70.00	\$105.00	\$195.38	\$105.00	\$50.00	210%
MAAC	67,365.9	\$245.12	\$213.42	\$140.00	\$176.71	\$105.00	\$183.84	\$176.71	\$95.79	184%
EMAAC	29,288.5	\$259.36	\$389.04	\$165.73	\$277.39	\$124.30	\$194.52	\$194.52	\$97.86	199%
SWMAAC	10,106.7	\$242.95	\$364.43	\$140.00	\$252.22	\$105.00	\$182.21	\$182.21	\$95.79	190%

Table 3 shows the default MSOCs (PJM’s estimate of competitive clearing prices) that would have resulted under PJM’s proposal after adjusting the RTO demand curve (VRR curve) to account for changes to FRR elections, and the actual clearing prices from the 2022/2023 BRA. The calculations shown in Table 3 used a modified VRR curve that added back the peak load of Dominion Energy Virginia (“Dominion”) to the VRR curve used in the auction. This adjustment was made because the 2021/2022 BRA cleared resources in RPM to meet the reliability requirement including Dominion, whereas in the 2022/2023 BRA, Dominion elected the FRR alternative, and its peak load was removed from the VRR curve used in the auction. This exercise also highlights the issues with the timing of PJM’s posting of its default MSOC and changes to the VRR curve that occur after that, with FRR elections by load serving entities. While the Market Monitor applied this method for consistency with using the previous auction’s cleared quantity, this would still result in an inflated estimate of the clearing price because the actual supply and demand are significantly lower than the modeled supply and demand used after accounting for FRR plans.

Applying PJM’s proposed MSOC calculation method to the modified VRR curve in the 2022/2023 BRA would have resulted in an MSOC of \$99.23 per MW-day which is the average of the prior auction clearing price (\$140.00 per MW-day) and the price from the modified VRR curve for the prior auction’s quantity (\$58.45 per MW-day). But \$99.23 per MW-day is also lower than the arbitrary floor that PJM set (\$105.00 per MW-day). PJM’s proposed default offer cap would have been \$105.00 per MW-day (UCAP) for the RTO

Region. This is the floor that PJM proposed for setting the default MSOC at 75 percent of the \$140.00 per MW-day RTO clearing price in the 2021/2022 BRA. Using the results of the 2022/2023 BRA that were reported on June 2, 2021, PJM’s estimates of the competitive clearing prices were 210 percent of the actual for the rest of the RTO Region, and from 184 percent to 199 percent of the actual prices for the other LDAs.<sup>18</sup>

**Table 3 PJM proposed default MSOCs compared to actual clearing prices: 2022/2023 Base Residual Auction using modified VRR curve**

Region	Cleared Quantity from 2021/2022 BRA (MW)	Net CONE for 2022/2023 (\$/MW-day UCAP)	Price from 2022/2023 VRR Curve (\$/MW-day UCAP) (a)	Clearing Price from 2021/2022 BRA (\$/MW-day UCAP) (b)	Average of (a) and (b)	Default MSOC Floor (75% of 2021/22 Clearing Price)	Default MSOC Ceiling (75% of 2022/23 Net CONE in UCAP)	Final Proposed Default MSOC	2022/2023 Clearing Price (\$/MW-day UCAP)	Final Default MSOC as a Percent of Clearing Price
RTO	163,627.3	\$260.50	\$58.45	\$140.00	\$99.23	\$105.00	\$195.38	\$105.00	\$50.00	210%
MAAC	67,365.9	\$245.12	\$213.42	\$140.00	\$176.71	\$105.00	\$183.84	\$176.71	\$95.79	184%
EMAAC	29,288.5	\$259.36	\$389.04	\$165.73	\$277.39	\$124.30	\$194.52	\$194.52	\$97.86	199%
SWMAAC	10,106.7	\$242.95	\$364.43	\$140.00	\$252.22	\$105.00	\$182.21	\$182.21	\$95.79	190%

The results from the 2022/2023 BRA clearly demonstrate that PJM’s proposed approach is not reasonable.

### C. Generators’ Approach Would Permit the Exercise of Market Power

#### 1. Generators’ Goal is to Retain the Current MSOC.

Generators want to keep the MSOC at its current level. The Generators select a number of PAI in order to accomplish the primary objective of keeping the MSOC at a level in excess of the competitive level, which also keeps the penalty rate within what Generators assert are reasonable bounds.<sup>19</sup> While Generators agree that 360 PAI (or 30 PAH) is too many, the number of PAI they recommend (240 PAI or 20 PAH for Exelon/PSEG; 180 PAI or 15 PAH for Indicated Suppliers) would increase the penalty rate by a factor of 1.5 to 2.0 times its current level, while keeping the MSOC at its current level. For reference, the

<sup>18</sup> PJM proposed to calculate default MSOCs for the RTO, MAAC, EMAAC and SWMAAC LDAs, and not for individual modeled LDAs such as ATSI, ATSI-Cleveland, BGE, COMED, Dayton, DEOK, DPL-South, PEPCO, PPL, PSEG, and PSEG-North.

<sup>19</sup> See “Affidavit of Roy J. Shanker, Ph.D.,” Attachment A to Indicated Suppliers at 33 – 34.

penalty rate for the RTO Region for the 2022/2023 Delivery Year would increase from the current level of \$3,008 per MWh to \$4,513 per MWh under the Exelon/PSEG proposal, and to \$6,017 per MWh under the Indicated Suppliers' proposal.

The Generators' estimated PAI are admittedly not consistent with the supply and demand fundamentals of capacity in PJM. Exelon/PSEG agree (at 19) that it is impossible to correctly calculate the number of PAI for the delivery year in an auction. Indicated Suppliers admitted in 2019 that "operating experience" ... "has shown very few potential PAH/PAI,"<sup>20</sup> but now inflate their estimates based on allusions to extreme weather events elsewhere and propose to use equilibrium or "at criteria" installed reserve margins substantially lower than actual reserve margins.<sup>21</sup> Exelon/PSEG propose to use their estimate of the expected number of PAI as if there were significantly less supply in PJM than there actually is, what they term long term equilibrium conditions.

The Exelon/PSEG approach of simply assuming that the existing supply is less than the actual supply would perpetuate incorrect and noncompetitive price signals. Generators propose to inflate capacity market prices by ignoring the fact that supply exceeds demand. Price distortions have unintended consequences, including sending incorrect price signals for entry and exit. By assuming that the supply of capacity is less than the actual supply, prices will be inflated, uneconomic new entry will be encouraged, economic exit will be discouraged and the assumed long term equilibrium will never occur.

While the Generators recognize the existence of the stop loss provision that limits total annual penalties to 1.5 times the Net CONE, neither propose to increase the stop loss in order to maintain incentives consistent with their recommendation to increase the penalty rate. Despite their discussion of theoretical consistency, Generators fail to extend

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<sup>20</sup> Attachment RJS-2 to Indicated Suppliers at 18, n 30.

<sup>21</sup> Attachment A to Indicated Suppliers at 30. At criteria refers to reserve margins based on the target reserve margins rather than actual reserve margins.

that consistency to increasing or simply eliminating the stop loss provision. Exelon/PSEG relegate discussion of the stop loss to a single footnote (at 5, n 7). Indicated Suppliers discuss the stop loss at more length but do not propose to increase the stop loss.

## **2. Risk is Included in ACR.**

The risk associated with submitting a capacity performance offer in PJM is already included in the ACR calculation as the Capacity Performance Quantifiable Risk (CPQR) component.<sup>22</sup> The tariff defines the CPQR as the “quantifiable and reasonably-supported costs of mitigating the risks of nonperformance associated with submission of a Capacity Performance Resource offer.”

While recognizing that the ACR calculation does include risk, PJM and the Generators argue that the risk component is somehow inadequate. The Commission has previously rejected the arguments for including energy market risks in the CPQR component.<sup>23</sup> PJM argues (at 15) that other risks faced by market sellers should be included in the CPQR component, an argument that the Commission already rejected. PJM inexplicably argues for inclusion of “high fuel cost hours associated with being required to participate in the Day-ahead and Real-time Energy Markets.” The PJM tariff explicitly allows avoidable costs of procuring firm fuel supply to be included in the ACR to meet the capacity performance obligation.<sup>24</sup> Market sellers determine the best approach to procure firm fuel supply among all the options available to each resource, and include the costs in the AFAE. Fuel costs for producing energy are appropriately reflected in the energy market offers. Fuel costs determine the short run, variable cost of producing energy. The energy market already allows resource owners to set market based offers at their discretion based

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<sup>22</sup> OATT Attachment DD § 6.8 (a).

<sup>23</sup> *PJM Interconnection, L.L.C., et al.*, 155 FERC ¶ 61,157 at P 203 (2016).

<sup>24</sup> OATT Attachment DD § 6.8 (a) (Avoidable Fuel Availability Expenses (AFAE)).

on the inputs to produce energy, and allows cost-based offers to reflect fuel costs, whatever levels they may be.

PJM's and the Generators' general approach is to add a wide range of costs to ACR which they incorrectly characterize as risk. The capacity market is not a cost recovery mechanism. The capacity market is a market and there is a defined marginal cost of capacity equal to the ACR. Risk is fully accounted for in the existing definition of ACR.

Exelon/PSEG assert (at 13 and 22) that the current ACR formula does not reflect the revenue needed to operate baseload plants that primarily rely on energy revenues, and that additional risks should be included. The economic definition of avoidable costs does not depend on whether a unit runs more or fewer hours.

PJM and Exelon/PSEG misunderstand and misstate the definition of risk. Exelon/PSEG would like customers to hold them harmless from the negative tail of the distribution of all their projected market outcomes but ignore the positive tail. While Exelon/PSEG's goal of returning to reliance on subsidies and cost of service regulation is clear, undoing the capacity market design is not part of the review of the MSOC. PJM and the Generators misrepresent the fundamental economics of markets and instead argue for an unbalanced and unfair mechanism under which the risk appropriately borne by investors who have control over their risk exposure is shifted to customers.

Indicated Suppliers assert that they are disadvantaged relative to intermittent resources. Indicated Suppliers do not support their argument. The relative treatment of intermittent and firm resources is an important topic, but is not part of this matter.<sup>25</sup>

The Exelon/PSEG argument (at 23) that the unit specific ACR is administrative pricing is also incorrect. Unit specific ACRs are the marginal cost of capacity. The Exelon/PSEG logic also implies that cost-based energy offers are administrative pricing.

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<sup>25</sup> See, e.g., Docket Nos. ER21-278 & ER21-2043 (PJM's proposed Effective Load Carrying Capability (ELCC) construct).



Neither argument is correct. Both ignore the fact that requiring competitive offers is based on the existence of market power. Cost-based offers are the appropriate way to ensure competitive outcomes in the presence of structural market power.

Market power mitigation is only effective when market power is identified properly, and offers are limited to cost-based levels that result in competitive outcomes. This means setting offer caps at the competitive level for each resource. If the definition of this competitive offer is artificially inflated, applying unit specific offer caps is ineffective in preventing the exercise of market power. Inflated offers that include costs that are not justified and shift risks from suppliers to customers are another mechanism to inflate the cost-based MSOC above the competitive level.

### **3. Actual Bonus Payments Do Not Support Generators' Claims.**

Exelon/PSEG claim that the Market Monitor discriminates against resources with must offer requirements relative to those without by setting the MSOC at a level below the expected bonuses earned by energy only resources. The claim is incorrect. Actual bonus payments and expected bonus payments consistent with the history of the capacity performance design contradict the Exelon/PSEG claims. The combination of very low PAI and the implementation of the penalty and bonus rules has meant no meaningful bonus payments and no expectation of any.<sup>26</sup> As a result, capacity resources fall in the category of high ACR units for whom the competitive CP offer is net ACR plus expected CP penalties or minus expected CP bonuses.

The market approach of the Market Monitor, based in observable facts, does not discriminate against any resource type. Issues related to the capacity value of intermittent

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<sup>26</sup> IMM Initial Brief at 7–10.

resources are important and are being addressed by the Commission in other dockets but those issues are not part of this proceeding.<sup>27</sup>

#### **D. Summary**

PJM's proposal illustrates the risks associated with disregarding market principles and attempting to define market outcomes in the absence of markets and market information. The results of applying PJM's proposed method to the most recent BRA provide a dramatic example of how wrong the PJM approach is.

The actual offer behavior of suppliers in the most recent BRA demonstrates the large gap between actual supplier behavior and the assertions of Generators in this matter. Actual suppliers' behavior reveals their true views about competitive offers. Actual suppliers do not offer at the levels asserted by the Generators, although there are exceptions. The actual outcome of the BRAs is not consistent with the assertions of the Generators in this matter.

Generators' proposals do nothing to resolve the primary issue identified in the IMM Complaint and recognized by the Commission in the March 18<sup>th</sup> Order. There is no market power review of offers that potentially set or affect the clearing price in the PJM Capacity Market. Generators address market power only by asserting that there is no opportunity to exercise market power under the capacity performance design. Generators' proposal does nothing to ensure that the defined MSOC effectively mitigates market power in the capacity market.

Creating a high MSOC that applies to all resources means that market power mitigation cannot work effectively. The offer behavior in the last two BRAs has confirmed that conclusion.

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<sup>27</sup> See Docket Nos. ER21-2043 & EL19-100.

The risks of unmitigated market power far outweigh any concerns about administrative burden on either the Market Monitor or generators. The administrative work for the Market Monitor associated with the review of unit specific ACR offers is manageable and has been managed in the past. There is little administrative burden on generators associated with supporting the costs that generators already have detailed knowledge of as part of operating.

## II. CONCLUSION

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

Respectfully submitted,



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Dated: June 9, 2021

## 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 9<sup>th</sup> day of June, 2021.



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