

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

**PJM Interconnection, L.L.C.**

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**Docket No. ER21-2582-000**

**MOTION FOR LEAVE TO SUPPLEMENT PROTEST IN RESPONSE  
TO ORDC REMAND AND SUPPLEMENTAL PROTEST  
OF THE PJM POWER PROVIDERS GROUP**

Pursuant to Rule 212 of the Commission’s Rules of Practice and Procedure,<sup>1</sup> the PJM Power Providers Group (“P3”)<sup>2</sup> respectfully requests leave to supplement its August 20, 2021 protest in this proceeding (“P3 Protest”). A supplement is necessary to address the impact of the D.C. Circuit’s August 23, 2021 order<sup>3</sup> granting the Commission’s motion to voluntarily remand its orders modifying the Operating Reserve Demand Curves (“ORDCs”), Reserve Penalty Factor, and Energy and Ancillary Services (“E&AS”) Offsets employed by PJM Interconnection, L.L.C. (“PJM”).<sup>4</sup> Each of these elements plays a significant role in the formulation of capacity market prices, including the application of the Minimum Offer Price Rule (“MOPR”). Moreover, the capacity model that Dr. Cramton developed as the basis for his affidavit on behalf of PJM heavily relies on the regime established by the ORDC Orders to forecast energy price differences between the existing Expanded MOPR and PJM’s proposed Narrow MOPR in its key functions (generation market entry and exit). P3 has already identified numerous flaws in Dr. Cramton’s assumptions

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<sup>1</sup> 18 C.F.R. § 385.212 (2021).

<sup>2</sup> P3 is a non-profit organization dedicated to advancing federal, state and regional policies that promote properly designed and well-functioning electricity markets in the PJM Interconnection, L.L.C. (“PJM”) region. Combined, P3 members own over 67,000 MWs of generation assets and produce enough power to supply over 50 million homes in the PJM region covering 13 states and the District of Columbia. For more information on P3, visit [www.p3powergroup.com](http://www.p3powergroup.com). The comments contained herein represent the position of P3 as an organization, but not necessarily the views of any particular member with respect to any issue.

<sup>3</sup> See *Am. Mun. Power v. FERC*, No. 20-1372 (D.C. Cir. Aug. 23, 2021).

<sup>4</sup> See *PJM Interconnection, L.L.C.*, 171 FERC ¶ 61,153 (May 21, 2020) (“May 21, 2020 Order”), *order on reh’g*, 173 FERC ¶ 61,123 (Nov. 3, 2020) (“November 3, 2020 Rehearing Order”); *PJM Interconnection, L.L.C.*, 173 FERC ¶ 61,134 (Nov. 12, 2020) (“November 12, 2020 Compliance Order”), *order on reh’g*, 174 FERC ¶ 61,180 (Mar. 9, 2021) (“March 9, 2021 Compliance Rehearing Order”) (collectively, the “ORDC Orders”).

and conclusions. To the extent that the Commission is about to modify the ORDC Orders Dr. Cramton's analysis is even less credible.

In light of the Commission's voluntary remand of the replacement rate established in the ORDC Orders pursuant to FPA section 206, which Commission counsel explained the Chairman was "motivated" to reconsider for the reasons described in his dissenting opinions,<sup>5</sup> P3 respectfully submits that the Commission cannot accept the Narrow MOPR proposal as drafted, much less do so within the 60-day period under FPA section 205. P3 already explained that other deficiencies in PJM's hastily assembled case require rejection of the Narrow MOPR Proposal or, at a minimum, the establishment of a paper hearing to examine the relevant data and set a durable replacement rate. The decision to revisit the ORDC Orders threatens to significantly alter the market terrain in ways the Commission must confront before it can issue a reasoned decision in this proceeding. Simply put, the removal of the ORDC and the associated \$2000 penalty rates would further invalidate the only analytic justification for PJM's MOPR proposal, the Cramton modeling results. It would be arbitrary and capricious to allow the Narrow MOPR to become effective before the ORDC remand is resolved.

## **I. MOTION FOR LEAVE TO SUPPLEMENT PROTEST**

Protests and comments in this proceeding were due on August 20, 2021. The D.C. Circuit's order granting the Commission's voluntary remand of the ORDC Orders occurred three days later, on August 23, 2021. Therefore, neither P3 nor any other party—including PJM itself—could address the impact of the Commission's voluntary remand in its initial comments in this proceeding. Nor could any of the witnesses. In this situation, the Commission has good cause to

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<sup>5</sup> Motion of Respondent Federal Energy Regulatory Commission for Voluntary Remand at 2, *Am. Mun. Power v. FERC*, No. 20-1372 (D.C. Cir. Aug. 13, 2021).

grant the instant motion. Given the early stage of this proceeding, roughly at its halfway mark before an initial order is required, permitting P3 to supplement its protest will not prejudice other parties. Moreover, given the Commission's longstanding resistance to raising new arguments on rehearing,<sup>6</sup> granting this motion is necessary to avoid prejudicing P3 and other parties at later stages of this proceeding.

## II. SUPPLEMENTAL PROTEST

The relationship between the Commission's ORDC Orders and MOPR reforms is both intimate and significant. In its May 20, 2021, Order, the Commission explained:

We recognize the interaction between the directives in this order and the pending revisions to the capacity market minimum offer price rules in Docket Nos. EL16-49-000 *et al.* [i.e., the Expanded MOPR Orders]. PJM's compliance filing should therefore present an implementation schedule for the instant revisions that appropriately harmonizes the revisions here with ongoing revisions in the other proceeding while minimizing any auction delays.<sup>7</sup>

The ORDC reforms materially impacted anticipated revenues in the energy market, thus prompting the Commission to direct changes to PJM's capacity market rules. Specifically, this interaction between the ORDC reforms and capacity market rules prompted the Commission to

find, pursuant to section 206 of the FPA, that the reserve market changes adopted [t]herein render PJM's existing methodology for calculating the energy and ancillary services offset (E&AS Offset) in PJM's capacity market unjust and unreasonable, establish as the just and reasonable replacement rate a forward-looking E&AS Offset, and direct PJM to submit a compliance filing within 45 days of the date of this order to revise Attachment DD of its Tariff accordingly.<sup>8</sup>

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<sup>6</sup> See, e.g., *PennEast Pipeline Co., LLC*, 164 FERC ¶ 61,098, at P 7 & n.11 (2018) ("Finally, 'parties are not permitted to introduce new evidence for the first time on rehearing since such practice would allow an impermissible moving target, and would frustrate needed administrative finality.'") (quoting *PaTu Wind Farm, LLC v. Portland Gen. Elec. Co.*, 151 FERC ¶ 61,223, at P 42 (2015)) (citing *Potomac-Appalachian Transmission Highline, L.L.C.*, 133 FERC ¶ 61,152, at P 15 (2010)).

<sup>7</sup> May 20, 2021 Order, 171 FERC ¶ 61,153 at P 2 (footnote citing Expanded MOPR orders omitted).

<sup>8</sup> *Id.* P 22.

The Commission should recognize that its voluntary remand of the ORDC Orders now requires the Commission to incorporate that fact into its review of PJM's Narrow MOPR proposal. As the Chairman wrote in his dissent to the November 3, 2020, Rehearing Order in the ORDC proceeding, "PJM's various markets work in concert and the Commission cannot reasonably make changes to one without considering the likely effects on the others."<sup>9</sup>

PJM stated that one of the primary goals of the Narrow MOPR proposal was to reverse what it regarded as "greater revenue reliance by resources on the capacity market, rather than the energy and reserves markets" under the Expanded MOPR regime.<sup>10</sup> Withdrawing the ORDC Orders will have the opposite effect. Every dollar the Commission removes from the PJM energy market by modifying the ORDC orders on remand is a dollar suppliers will now need to recover in the capacity market. Any change in the ORDC paradigm will impact a resource's expected energy market net revenues, and thus also the price at which a resource is willing to take on a capacity obligation. Changing this fundamental building block upsets any representation and conclusions which were made regarding the adjustments to the capacity market through modification of the MOPR.

The Chairman's dissent in the ORDC proceeding describes the intimate connection between energy and capacity prices, including the interaction between energy prices and the MOPR, as follows:

26. Given the enormous costs imposed by today's order, I am pleased to see that the Commission is at least requiring PJM to implement a forward-looking energy and ancillary services offset (E&AS Offset). In theory, that should mitigate some of the enormous costs imposed by this proposal by reducing capacity market prices accordingly. But getting a forward looking E&AS Offset right is no mean feat. *And getting it right is critical to properly establishing the Net CONE value that is used to anchor the VRR Curve and that plays a central role in the sweeping*

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<sup>9</sup> November 3, 2020 Rehearing Order, 173 FERC ¶ 61,123 (Glick, Comm'r, dissenting) at P 22.

<sup>10</sup> PJM Proposal at 2 (listing this as the sixth of seven rationales for proposing the Narrow MOPR).

*administrative scheme imposed by the Commission's recent MOPR Order.* I strongly urge PJM to consider multiple options for developing this forward-looking offset and provide the relevant details to the PJM stakeholders as transparently as possible. Any proposal PJM makes on compliance must be properly vetted by PJM's stakeholders.

27. Finally, I note that the implication of the Commission's adoption of an E&AS offset is that, without such an offset reflecting the changes imposed by today's order, capacity market inputs that depend on E&AS, including Net CONE, could well be unjust and unreasonable. Accordingly, it would seem that any offset would have to be in place before the next capacity auction if the results are to be deemed just and reasonable under the Commission's own reasoning.<sup>11</sup>

By the same token, "any offset" to energy market prices caused by modifying the "enormous costs" of the ORDC orders on voluntary remand "would have to be in place before the next capacity auction if the results are to be deemed just and reasonable under the [Chairman's] own reasoning." And, again, based on the Chairman's reasoning, one would expect the Commission to send the Narrow MOPR proposal back to PJM to "be properly vetted by PJM's stakeholders" in light of possible changes to the ORDC Orders on remand. Neither PJM nor its stakeholders contemplated two major policy reversals that would simultaneously lower both energy prices and capacity market prices, which would create a serious threat of retirements. This is evident in the record, because the only analytic support offered by PJM for the Narrow MOPR—i.e., the already seriously flawed Cramton Affidavit—relies on an explicit representation of the ORDC and a \$2000 penalty factor.<sup>12</sup> Non-stakeholders who support PJM's Narrow MOPR proposal similarly relied on the ORDC reforms in formulating their positions.<sup>13</sup>

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<sup>11</sup> May 20, 2021 Order, 171 FERC ¶ 61,153 (Glick, Comm'r, dissenting) at PP 26-27 (emphasis added) (footnotes omitted).

<sup>12</sup> See *infra* notes 18-20.

<sup>13</sup> See Comments of Natural Resources Defense Council, Sustainable FERC Project, Sierra Club, and Union of Concerned Scientists ("Environmental Advocate Comments") at 42 ("PJM's operating reserve demand curve enhancements will go into effect in under a year, which will substantially increase compensation offered for multiple reserve products, while at the same time increasing energy prices.").

Modifications to the ORDC rules should precede and inform any modifications to the MOPR regime because capacity market decisions, like the capacity market rules, are driven by energy market outcomes. However, it is not feasible for the parties in this proceeding, or the Commission itself, to incorporate as-yet-unknown modifications to the ORDC regime into an initial order on the Narrow MOPR proposal when the last day to act on that proposal is September 28, 2021. P3 and other parties in this proceeding have urged the Commission not to act precipitously on MOPR reform and to take the necessary time to make thoughtful changes to the PJM's capacity market rules prior to the June 2022 BRA.<sup>14</sup> The Commission's voluntary remand of the ORDC Orders only intensifies the need for a comprehensive, interactive reform of the PJM's energy and capacity market rules. That cannot possibly occur before the December 2021 BRA. Significant tariff milestones that drive preparation for the December 2021 BRA are fast approaching or have already passed.

It is important to underscore that the economic model employed by PJM's witness Dr. Cramton explicitly and heavily relies on the energy market reforms made in the ORDC Orders.<sup>15</sup> Dr. Cramton's testimony failed to include the formulaic model on which it was based, but he refers to that model throughout his testimony and directly notes his reliance on the Commission's order that is now on remand.<sup>16</sup> He also references the related "working paper" in his bibliography.<sup>17</sup> The

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<sup>14</sup> See, e.g., P3 Protest at 94.

<sup>15</sup> See, e.g., Cramton Aff. ¶ 23 ("There are practical benefits from making the performance incentive smooth as the system moves near shortage. Continuity is achieved with reserve demand curves that increase steeply to the value of lost load as reserve quantities fall to the point where the system operator must start shedding load (Hogan 2013). In this way, the reserve demand curves cause prices to escalate quickly to the value of lost load as the market moves from near shortage to shedding load. *PJM recently adopted, and FERC approved, this best practice in their spot market for implementation on May 1, 2022.*") (emphasis added) (footnotes omitted); *id.* ¶ 24 ("One implication of adding reserve demand curves to the spot market is that, when correctly set, they restore missing money. With the demand curves administratively set to reflect consumers' preference for reliability, the spot market yields prices sufficient to motivate efficient investment despite the absence of robust demand response.").

<sup>16</sup> See, e.g., *id.* ¶ 7.

<sup>17</sup> Cramton Aff. at 12.

latest draft of that working paper—entitled “Electricity Markets in Transition”<sup>18</sup>—specifically states that it relies upon the 2020 ORDC reforms as the baseline for his analysis, including the \$2000 penalty factor to which Chairman Glick objected.<sup>19</sup> Nine pages of the working paper are devoted to an explanation of how ORDCs work in his model.<sup>20</sup> Dr. Cramton repeatedly indicates that the 2020 ORDC reforms are a key characteristic of his model and those values appear throughout his various figures and tables.<sup>21</sup> Given the centrality of the ORDC reforms to Dr. Cramton’s analysis, the Commission cannot rely on that analysis to inform its decision-making in this proceeding if the Commission intends to make significant changes to the ORDC Orders on remand. Changes to the ORDC methodology would create an entirely new defect in Dr. Cramton’s

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<sup>18</sup> The absence of this model from the record presents a difficult evidentiary problem. Dr. Shanker based his response to Dr. Cramton’s testimony on the “Electricity Markets in Transition” working paper found at <http://www.cramton.umd.edu/papers2020-2024/cramton-electricity-markets-in-transition.pdf> (hereinafter, “Cramton Working Paper”). See Shanker Aff. at 6 n.3. P3 can only assume that is correct because Dr. Cramton’s Brattle Group colleagues, Dr. Spees and Dr. Newell, cite the working paper found at that same link. See Spees/Newell Testimony at 8 n.13.

<sup>19</sup> See, e.g., Cramton Working Paper at 23 (“Following PJM (2020), we initialize the value of lost load to \$2000/MW, and set the minimum reserve requirement to 1450MW, 2175MW, and 3000MW for synchronized, quickstart, and supplemental reserves, respectively (PJM 2020).”).

<sup>20</sup> See Cramton Working Paper at 22-31.

<sup>21</sup> See, e.g., *id.* at 27 (“Finally, table 4.3 displays the mean and variance for the adjusted net-load forecast error, obtained by applying the weights displayed in tables 4.2 to the 2019 resource mix . . . to an expected median load equal to 87,000MW. Figure 4.1 display[s] the corresponding ORDCs for each of the three reserve types.”); *id.* at 29-30 figs. 4.1a & 4.1b (stating the operating reserve demand curves by time block and reserve type); *id.* at 58 (“The baseline scenario has no price-responsive demand and a constant ORDC. We also consider two side cases (mid and high) where the fraction of load that responds to prices grows by 1 and 2 percentage points per year, and another two side cases (mid and high) where the ORDC increases by \$50/MW and \$100/MW per year.”); *id.* (“We initialize the database of known instances by restricting attention to a relatively small portion of the market state. We start with a time horizon of 40 years, assuming no price responsive demand, and keeping the ORDC penalty parameter constant at \$2000/MWh.”); *id.* at 59 (“Each path is a sequence of instances. We perturb these instances to grow the dataset further and limit our priors’ effect on the results. We expand the energy mix to a corresponding set of plants and generate inputs for forced outages, planned outages, and ORDC curves, as detailed in section 4. Then, we run the energy market model for each instance and obtain an initial set of observations to estimate the energy proxy model.”); *id.* (“Consistent with these observations, we define the approximate market state M% as comprising the total nameplate capacity of each technology, the mean vintage of combustion turbines and combined cycle plants, the mean efficiency of renewables, the vector of fuel prices, the carbon price, the ORDC penalty parameter, the median load, and the fraction of price responsive demand: [formula omitted].”); *id.* at 62 (“We estimate the energy proxy model and run the multi-year simulation for the reference case defined in section 6. The carbon price increases by \$3/tCO<sub>2</sub>e, the ORDC penalty factor is constant at \$2000/MWh, and there is no price responsive load.”).

analysis, which already turns on dubious assumptions about meaningful carbon prices that do not exist, no market exit by subsidized resources (contrary to the announcements of plant owners), forecasts of capacity prices at \$300 to \$450/MW-day (against a historic high of \$175/MW-day for the PJM RTO Region), and other significant flaws detailed by Dr. Shanker and Dr. Quinn in their affidavits attached to P3's Protest.<sup>22</sup>

In sum, the Commission's voluntary remand of the ORDC Orders potentially upends fundamental assumptions upon which PJM, its stakeholders, and its key witnesses relied. The Commission cannot make a reasoned decision on the existing record without allowing parties to address the impact of ORDC reform on PJM's already ill-conceived MOPR proposal. There is no feasible way to do that between now and September 28, 2021. Therefore, in addition to the other reasons set forth in the protests submitted by P3 and other parties, the Commission should reject PJM's proposal or, at a minimum, set PJM's Narrow MOPR proposal for paper hearing, preferably in conjunction with its consideration of ORDC reforms on voluntary remand.

Respectfully submitted,

On behalf of the PJM Power Providers Group

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September 2, 2021

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<sup>22</sup> See, e.g., Quinn Aff. ¶¶ 18-24; Shanker Aff. ¶¶ 13-21



**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 in accordance with the requirements of Rule 2010 of the Rules of Practice and Procedure, 18 C.F.R. § 385.2010 (2020).

Dated at Washington, DC this 2nd day of September, 2021.

By: /s/ Diane Slifer  
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