

180 FERC ¶ 61,089  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Richard Glick, Chairman;  
James P. Danly, Allison Clements,  
Mark C. Christie, and Willie L. Phillips.

PJM Interconnection, L.L.C.

Docket Nos. ER22-1200-000  
ER22-1200-001

ORDER REJECTING PROPOSED TARIFF REVISIONS

(Issued August 15, 2022)

1. On March 4, 2022, pursuant to section 205 of the Federal Power Act (FPA),<sup>1</sup> Part 35 of the Commission's Rules of Practice and Procedure,<sup>2</sup> PJM Interconnection, L.L.C. (PJM) filed proposed revisions to the PJM Open Access Transmission Tariff (Tariff), Attachment K-Appendix, sections 1.11 and 3.2 and the parallel provisions of the Amended and Restated Operating Agreement of PJM (Operating Agreement), Schedule 1, sections 1.11 and 3.2.3 to implement Intelligent Reserve Deployment (IRD).<sup>3</sup> As discussed below, we reject PJM's proposal.

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<sup>1</sup> 16 U.S.C. § 824d.

<sup>2</sup> 18 C.F.R. pt. 35 (2021).

<sup>3</sup> PJM Interconnection, L.L.C., Intra-PJM Tariffs, [OATT ATT K APPX Sec 1.11](#), [OATT Attachment K Appendix Sec 1.11 - Real-time Dispatch \(9.0.0\)](#); [OATT ATT K Appx Sec 3.2](#), [OATT Attachment K Appendix Sec 3.2 - Market Buyers \(53.0.0\)](#); [OA Schedule 1 Sec 1.11](#), [OA Schedule 1 Sec 1.11 - Real-time Dispatch \(9.0.0\)](#); and [OA Schedule 1 Sec 3.2](#), [OA Schedule 1 Sec 3.2 - Market Buyers \(54.0.0\)](#). On May 13, 2022, PJM submitted new Tariff sheets with an updated effective date. PJM Interconnection, L.L.C., Intra-PJM Tariffs, [OATT ATT K APPX Sec 1.11](#), [OATT Attachment K Appendix Sec 1.11 - Real-time Dispatch \(9.1.0\)](#); [OATT ATT K Appx Sec 3.2](#), [OATT Attachment K Appendix Sec 3.2 - Market Buyers \(53.1.0\)](#); [OA Schedule 1 Sec 1.11](#), [OA Schedule 1 Sec 1.11 - Real-time Dispatch \(9.1.0\)](#); and [OA Schedule 1 Sec 3.2](#), [OA Schedule 1 Sec 3.2 - Market Buyers \(54.1.0\)](#). The original Tariff sheets associated with Docket No. ER22-1200-000 are therefore moot and hereby rejected.

## I. Background

2. Reserves play an important role in maintaining the reliability of the bulk power system. The North American Electric Reliability Corporation (NERC) mandates that each regional transmission organization and independent system operator (RTO/ISO), as Balancing Authorities, maintain sufficient reserves to respond to the loss of the largest single contingency on its system within 15 minutes.<sup>4</sup> Currently, in PJM, resources capable of converting reserve capability into energy in 30 minutes or less are eligible to provide 30-minute Reserves, which PJM refers to as Day-Ahead Scheduling Reserves. Resources capable of converting reserve capability into energy in 10 minutes or less are eligible to provide 10-minute Reserves, which PJM terms Primary Reserves. PJM currently procures Day-Ahead Scheduling Reserves in the day-ahead market and Primary Reserves in the real-time market. Primary Reserves, which PJM uses to meet NERC Reliability Standard BAL-002-3, are sub-divided into Synchronized<sup>5</sup> and Non-Synchronized Reserves (depending on whether the supplying resource is synchronized to the transmission system), and, currently, Synchronized Reserves are further sub-divided into Tier 1 and Tier 2 reserves.<sup>6</sup> Tier 1 reserves represent a

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<sup>4</sup> See N. Am. Elec. Reliability Corp., *Standard BAL-002 – Disturbance Control Performance* (2019).

<sup>5</sup> PJM's Tariff defines Synchronized Reserve as

the reserve capability of generation resources that can be converted fully into energy or Demand Resources whose demand can be reduced within ten minutes from the request of the Office of the Interconnection dispatcher, and is provided by equipment that is electrically synchronized to the Transmission System.

PJM, Intra-PJM Tariffs, OATT, R-S, OATT Definitions – R - S (28.1.0), (definition of Synchronized Reserve).

<sup>6</sup> Superior reserve products are eligible to satisfy the requirements for inferior reserve products. For example, while there is a Synchronized Reserve Requirement, resources providing Synchronized Reserve also contribute to meeting the Primary Reserve Requirement. *PJM Interconnection, L.L.C.*, 171 FERC ¶ 61,153, at P 4 n.4 (May 2020 Reserves Order), *order on reh'g*, 173 FERC ¶ 61,123 (2020) (November 2020 Reserves Rehearing Order); *PJM Interconnection, L.L.C.*, 173 FERC ¶ 61,134 (2020) (November 2020 Reserves Compliance Order), *order on reh'g*, 174 FERC ¶ 61,180 (March 2021 Reserves Compliance Rehearing Order), *order on remand*, 177 FERC ¶ 61,209 (2021) (Reserves Remand Order) (collectively, the Reserve Reforms Proceeding).

resource's headroom capacity, connected to and synchronized with the system, that could be converted to energy within 10 minutes based on the resource's current dispatch point and ramp rate. Tier 2 reserves are provided by resources that, absent the need for additional reserves, would be dispatched to their profit-maximizing output for energy.

3. As relevant here, in the Reserves Reform Proceeding, the Commission accepted PJM's proposed revisions to: (1) consolidate the Tier 1 and Tier 2 Synchronized Reserve products into one product with uniform commitment, compensation, and non-performance penalty structures; and (2) establish a new 30-minute Reserve Requirement in both the day-ahead and real-time markets and a new Secondary Reserve product.<sup>7</sup> PJM submitted a compliance filing with these changes expected to become effective October 1, 2022, which is currently pending in Docket No. EL19-58-012.<sup>8</sup>

4. Synchronized Reserve Events are emergency procedures triggered by PJM in order to maintain grid reliability by balancing the power generation needs in a region with load, in accordance with NERC BAL mandatory reliability standards.<sup>9</sup> These events can be caused by a variety of conditions, including loss of generation, loss of transmission elements resulting in transmission import limitations, a sudden increase in

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<sup>7</sup> See Reserve Remand Order, 177 FERC ¶ 61,209 at P 24.

<sup>8</sup> See *id.* PP 27, 47 (directing PJM to address in a compliance filing any necessary revisions to the effective dates for certain Tariff and Operating Agreement revisions accepted in the November 2020 Reserves Compliance Order). In its compliance filing in Docket No. EL19-58-012, PJM stated that it is targeting an October 1, 2022 implementation date for the changes and requested an effective date of December 31, 9998 to provide flexibility to accommodate potential delays.

<sup>9</sup> PJM Transmittal at 2. PJM's Tariff defines Synchronized Reserve Event as

a request from the Office of the Interconnection to generation resources and/or Demand Resources able, assigned or self-scheduled to provide Synchronized Reserve in one or more specified Reserve Zones or Reserve Sub-zones, within ten minutes, to increase the energy output or reduce load by the amount of assigned or self-scheduled Synchronized Reserve capability.

PJM, Intra-PJM Tariffs, OATT, R-S, OATT Definitions – R - S (28.1.0), (definition of Synchronized Reserve Event). See also Reliability Standard BAL-002-3 (Disturbance Control Standard), at R3.

load, and/or system frequency decline due to external factors.<sup>10</sup> PJM states it currently addresses Synchronized Reserve Events by issuing an “all-call message” that instructs sellers to deploy all available online resources, regardless of where the resource is located or whether it has cleared the reserves market.<sup>11</sup>

5. During normal operations, PJM operators use real-time security constrained economic dispatch (RT SCED) cases to determine the dispatch instructions that are sent to resources, which are also fed into the pricing software to determine energy and ancillary services prices. PJM explains that RT SCED cases take into account system conditions and resource-specific market data to calculate an optimized economic dispatch solution while respecting operational limitations.<sup>12</sup>

## II. Filing

6. PJM proposes Tariff provisions to implement IRD and replace its current all-call reserve deployment approach for Synchronized Reserve Events.<sup>13</sup> PJM states that IRD is a RT SCED case that simulates the loss of the largest generation contingency and that approval of the case will trigger a Synchronized Reserve Event as megawatts associated with the largest contingency will be added to the load forecast at the RTO level, to “simulate the unit loss.”<sup>14</sup> However, PJM explains that, while using an RT SCED case would be more efficient than an all-call message, RT SCED cases are not always used during Synchronized Reserve Events because, due to the timing of RT SCED case initiation and solution and the system event requiring deployment of reserves, the first

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<sup>10</sup> PJM Transmittal at 2.

<sup>11</sup> *Id.*

<sup>12</sup> See PJM, Intra-PJM Tariffs, OATT, Attach K- App. § 1.11 Real-time Dispatch (7.0.0) (“The least cost security constrained economic dispatch is the least costly means of serving load and meeting reserve requirements at different locations in the PJM Region based on forecasted operating conditions on the power grid (including transmission constraints on external coordinated flowgates to the extent provided by Tariff, Attachment K-Appendix, section 1.7.6) as described in the PJM Manuals and on the offers for energy and ancillary services at which Market Sellers have entered as described by Tariff, Attachment K-Appendix, section 1.10 and Tariff, Attachment K-Appendix, section 2.4 and on offers by Economic Load Response Participants to reduce demand that qualify to set Locational Marginal Prices in the PJM Interchange Energy Market.”).

<sup>13</sup> PJM Transmittal at 1-2.

<sup>14</sup> *Id.* at 6 & n.13.

available RT SCED case solution frequently does not reflect the actual resource loss.<sup>15</sup> Further, PJM states that the all-call approach does not allow for a full optimization of resources for reserves and that dispatch instructions are not reflected in pricing signals, which PJM argues misaligns pricing and dispatch instructions.<sup>16</sup> PJM argues that the all-call approach is imprecise, inconsistent among resources, and results in periods of under- and over-response.<sup>17</sup> Finally, PJM notes that the all-call approach involves less operational awareness than an RT SCED dispatch, as operators must wait to see the level and location of the response.<sup>18</sup>

7. PJM contends that its IRD proposal will send resource-specific basepoints to increase output for energy and reserves, generate locational marginal prices (LMP) that more accurately represent system dispatch during Synchronized Reserve Events, and deploy reserves without violating or overloading currently monitored constraints.<sup>19</sup> PJM states that IRD will better align prices with system conditions and increase reliability in the PJM Region.<sup>20</sup>

8. PJM explains that the IRD case would convert all inflexible Synchronized Reserves, such as generators operating in condenser mode, to energy and procure additional Synchronized Reserves to meet the new largest contingency.<sup>21</sup> PJM explains that an IRD case based on the system's largest contingency would be available

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<sup>15</sup> *Id.* at 4-5.

<sup>16</sup> *Id.* at 5. PJM states that, without using RT SCED to deploy reserves, the pricing signal comes from the previously approved RT SCED case that has not accounted for the loss and can lead to incorrect and sometimes conflicting pricing and dispatch signals. *Id.*

<sup>17</sup> *Id.* at 4. PJM states that response is currently inconsistent between Tier 1 and Tier 2 Synchronized Reserve resources, as only Tier 2 resources are obligated to perform once a commitment is made and are subject to potential penalties for non-performance, while Tier 1 are only paid for performance and do not face penalties for non-performance. PJM explains that the recent reserve reforms in the Reserve Reforms Proceeding have eliminated this discrepancy and consolidated Tier 1 and Tier 2 resources into one Synchronous Reserve product that faces penalties for non-performance. *Id.* at 4 & n.9.

<sup>18</sup> *Id.* at 6.

<sup>19</sup> *Id.* at 6-7.

<sup>20</sup> *Id.* at 10-12.

<sup>21</sup> *Id.* at 6.

any time, without waiting for an RT SCED case that reflects the actual system event.<sup>22</sup> PJM states that it recognizes that most Synchronized Reserve Events will not be triggered by loss of the largest contingency, and its proposal recognizes the need to modify that value based on experience.<sup>23</sup>

9. PJM states that it conducted an analysis to determine the potential outcome of implementing IRD.<sup>24</sup> To that end, PJM states that it sampled 2,900 IRD cases, 16% (or 474) of which were shortage cases, and determined that the average system energy price across all cases was \$287/MWh, compared to the existing first step of the operating reserve demand curve of \$300/MWh.<sup>25</sup> PJM contends that, although the average energy price in the sampled IRD cases was generally higher than prices during Synchronized Reserve Events under the all-call approach, the prices better reflect a significant loss on the system and the operational instructions needed to recover. PJM also states that it identified two recent late-night RTO-level Synchronized Reserve Events where ample reserves were available and that the data showed that IRD did not arbitrarily inflate prices despite deploying more than the megawatts lost. PJM states that IRD pricing was only marginally more than the actual price during the Synchronized Reserve Event initiation due to the significant amount of Synchronized Reserves available.<sup>26</sup>

10. PJM states that its proposal will increase reliability because it would replenish reserves more quickly than the contingency restoration period allowed by NERC standard BAL-002, which allows for a 90-minute period to restore reserves after a reserve deployment event.<sup>27</sup> PJM explains that replenishing reserves quickly is important because it is possible, though uncommon, to have a second event within that 90-minute

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<sup>22</sup> *Id.* at 7.

<sup>23</sup> *Id.* at 12.

<sup>24</sup> *Id.* at 16.

<sup>25</sup> *Id.* PJM's Tariff defines the operating reserve demand curve as "a curve with prices on the y-axis and megawatts on the x-axis, which defines the relationship between each incremental megawatt of reserves that can be used to meet a given reserve requirement and the value placed on maintaining that megawatt level of reserve, expressed in \$/MWh." PJM, Intra-PJM Tariffs, OATT, Definitions – O-P-Q (28.0.0) (definition of Operating Reserve Demand Curve).

<sup>26</sup> PJM Transmittal at 16.

<sup>27</sup> *Id.* at 11.

period and that IRD will ensure control of transmission constraints.<sup>28</sup> PJM states that compliance with NERC BAL-002 also requires PJM to demonstrate that it has determined its most severe single contingency and has included contingency reserves equal to or greater than that most severe single contingency in its operating process.<sup>29</sup> PJM explains that, as such, the largest contingency was the logical starting place for IRD.

11. PJM explains that, under the current paradigm, all resources are evaluated for performance by comparing the actual reserves provided to the reserve assignment, but under IRD, performance evaluation will use the lesser of the reserve assignment megawatts and the expected resource response.<sup>30</sup> PJM states that resource performance during a Synchronized Reserve Event is currently evaluated on an portfolio basis because the responses of under and over-performing resources are aggregated together. PJM proposes to discontinue this practice because IRD would include resource-specific instructions.<sup>31</sup>

### **III. Notice of Filing and Responsive Pleadings**

12. Notice of PJM's filing was published in the *Federal Register*, 87 Fed. Reg. 13,724 (Mar. 10, 2022), with interventions and protests due on or before March 25, 2022. Timely motions to intervene were filed by Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM (Market Monitor); Delaware Division of the Public Advocate; American Electric Power Service Corporation;<sup>32</sup> Rockland Electric Company; Calpine Corporation; Old Dominion Electric Cooperative; NRG Power Marketing LLC and Midwest Generation, LLC; American Municipal Power, Inc.; Shell Energy North America (US), L.P. (Shell Energy); and North Carolina Electric Membership Corporation. On March 25, 2022, Shell Energy filed supportive comments and the Market Monitor filed a protest. On April 11, 2022, PJM filed an answer. On

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<sup>28</sup> *Id.* at 11-12.

<sup>29</sup> *Id.* at 12.

<sup>30</sup> *Id.* at 9.

<sup>31</sup> *Id.* PJM explains that this excludes demand response resources, which would still be allowed to aggregate.

<sup>32</sup> On behalf of its affiliates Appalachian Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company, Wheeling Power Company, AEP Appalachian Transmission Company, Inc., AEP Indiana Michigan Transmission Company, Inc., AEP Kentucky Transmission Company, Inc., AEP Ohio Transmission Company, Inc., and AEP West Virginia Transmission Company, Inc.

May 16, 2022, Constellation Energy Generation, LLC filed a motion to intervene out of time.

**A. Market Monitor Protest**

13. The Market Monitor filed a protest arguing that IRD is unjust and unreasonable. First, the Market Monitor disagrees with PJM's claim that IRD simulates a unit loss and argues that IRD instead simulates increased load.<sup>33</sup> The Market Monitor disputes PJM's claims that IRD will generate prices that more accurately represent system dispatch during a Synchronized Reserve Event and deploy reserves without violating or overloading constraints, arguing that the IRD case assumes that the contingency that resulted in the Synchronized Reserve Event did not happen.<sup>34</sup>

14. The Market Monitor also disagrees with PJM's characterization that IRD would not arbitrarily inflate prices, arguing that the two cases PJM points to as evidence used an outdated version of IRD which had a zero load bias.<sup>35</sup> The Market Monitor states that PJM has since updated IRD to use a load bias value equal to the sum of the largest contingency and the base scenario load bias. The Market Monitor explains that, as a result of this difference, the two cases PJM mentions procured less than the largest contingency and fewer than the actual megawatts lost. The Market Monitor argues that the conclusions from these cases do not reflect the outcome if IRD were to be implemented.<sup>36</sup>

15. The Market Monitor further argues that IRD will overestimate the demand on the system compared to the disturbance because disturbances resulting in Synchronized Reserve Events in PJM are almost always less than the largest contingency on the system.<sup>37</sup> Further, the Market Monitor argues that the net changes to the load forecast of an IRD solution can be lower or higher than the largest contingency megawatts, because IRD applies a load forecast bias equal to the megawatts of the largest contingency plus the load forecast bias from the base RT SCED scenario.<sup>38</sup> The Market Monitor states that it has analyzed IRD cases for 49,183 five-minute real-time intervals and determined that

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<sup>33</sup> Market Monitor Protest at 6.

<sup>34</sup> *Id.* at 8-9.

<sup>35</sup> *Id.* at 12-13.

<sup>36</sup> *Id.* at 13.

<sup>37</sup> *Id.* at 8.

<sup>38</sup> *Id.* at 6.



the IRD would have dispatched additional megawatts above the largest contingency 32% of the time, below the largest contingency 28% of the time, and equal to the largest contingency 40% of the time.<sup>39</sup>

16. The Market Monitor argues that IRD could cause several reliability concerns.<sup>40</sup> First, the Market Monitor argues that IRD has competing objectives of finding enough energy supply to meet the increased load forecast while simultaneously holding capacity as reserves to meet the new reserve requirement. Second, the Market Monitor contends that IRD may rely on the generator which caused the contingency or resources that are not qualified to provide reserves.<sup>41</sup> Third, the Market Monitor claims that, because IRD attempts to meet the next largest contingency while simultaneously increasing energy output, it will hold back cleared reserves instead of deploying them as energy.<sup>42</sup> The Market Monitor contends that IRD relies partly on resources that did not clear as reserves to ramp up and produce more energy.<sup>43</sup> Fourth, the Market Monitor argues that IRD will result in artificially inflated prices because it requires the market to outperform NERC requirements while ignoring some available reserves, including Non-Synchronized Reserves and Secondary Reserves.<sup>44</sup> The Market Monitor argues that PJM should wait until the planned reserve changes take effect on October 1, 2022 and evaluate whether any additional reserve changes, such as IRD, are necessary at that time.<sup>45</sup>

17. The Market Monitor also argues that IRD will result in discriminatory treatment of reserves, because it would always deploy Tier 2 inflexible resources, but would only deploy other Synchronized Reserves when they are economic.<sup>46</sup> The Market Monitor contends that this practice discriminates against Tier 2 inflexible resources because they will always be called and so always subject to any performance assessment and potential penalties.

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<sup>39</sup> *Id.* at 7.

<sup>40</sup> *Id.* at 11, 14.

<sup>41</sup> *Id.* at 9, 15.

<sup>42</sup> *Id.* at 14-15.

<sup>43</sup> *Id.*

<sup>44</sup> *Id.* at 11-12.

<sup>45</sup> *Id.* at 19.

<sup>46</sup> *Id.* at 13-14.

18. The Market Monitor argues that PJM should be ordered to provide more transparency upfront as to how IRD will be implemented.<sup>47</sup> The Market Monitor contends that PJM has not provided details or Tariff changes explaining how an approved IRD solution will be used for pricing, including how many IRD cases will be used, if a single IRD case would apply to multiple intervals, and if there are defined bounds to this duration.<sup>48</sup> Further, the Market Monitor argues that, despite PJM's assertions, PJM should not need additional event experience to implement IRD or consider future modifications to IRD, as PJM already has data from all the Synchronized Reserve Events that have occurred to date that shows that using the largest contingency will always lead to overestimating demand.<sup>49</sup>

19. The Market Monitor also objects to IRD being used for Synchronized Reserve Events triggered by low Area Control Error,<sup>50</sup> as such events are caused by a load forecast error or units not following dispatch.<sup>51</sup> The Market Monitor argues that using IRD in such instances would result in charging higher prices to load for replacing output from units not following dispatch.

#### **B. Shell Comments**

20. Shell Energy filed comments in support of PJM's filing, arguing that IRD will deploy Synchronized Reserves more efficiently by allowing real-time energy prices to better reflect actual operating conditions, including locational constraints and energy dispatched from Synchronized Reserves.<sup>52</sup> Shell Energy contends that this is an improvement over the all-call approach, which converts Synchronized Reserves to energy without regard for existing congestion or location of the resource providing reserves.<sup>53</sup>

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<sup>47</sup> *Id.* at 18.

<sup>48</sup> *Id.*

<sup>49</sup> *Id.* at 8.

<sup>50</sup> Area Control Error is the instantaneous difference between a balancing authority's net actual and scheduled interchange. See NERC, *Glossary of Terms used in NERC Reliability Standards*, (defining Area Control Error) (Mar. 29, 2022), [Glossary\\_of\\_Terms.pdf\(nerc.com\)](#).

<sup>51</sup> Market Monitor Protest at 9.

<sup>52</sup> Shell Energy Comments at 1, 2-3.

<sup>53</sup> *Id.* at 3.

Shell Energy argues that it is critical to send efficient market signals during reserve deployments to ensure market participants respond correctly.<sup>54</sup>

21. Shell Energy states that, under the current all-call approach, the sudden influx of additional energy can suppress prices, which may discourage sellers from offering incremental energy supply or encourage load to increase demand, which Shell Energy argues could jeopardize reliability.<sup>55</sup> Shell Energy contends that IRD would not create similar price suppression because it would dispatch resources based on economic merit.<sup>56</sup> Shell Energy also argues that IRD will deploy Synchronized Reserves more efficiently by allowing real-time energy prices to better reflect actual operating conditions and support the reliability of the electric system.<sup>57</sup> Shell Energy argues that reserve levels should be maintained during reserve deployments and that prices should reflect that condition.<sup>58</sup>

**C. Answer**

22. In response to the Market Monitor's argument that it is not possible for IRD to correctly simulate and dispatch for an actual unit loss, PJM argues that, while the specific generator contingency is not modeled, IRD is an improvement over the all-call approach and produces a Synchronized Reserve Event resolution that is tied to the RT SCED energy dispatch.<sup>59</sup> PJM argues that speed of response is critical during such an emergency procedure and that IRD will move resources in the right direction to recover from the Synchronized Reserve Event while waiting for a subsequent RT SCED case to reflect the actual contingency.<sup>60</sup>

23. PJM also refutes the Market Monitor's contention that IRD will result in inflated pricing and not generate prices that more accurately represent system dispatch during a Synchronized Reserve Event.<sup>61</sup> PJM argues that, under the IRD proposal, pricing will

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<sup>54</sup> *Id.* at 4-5.

<sup>55</sup> *Id.*

<sup>56</sup> *Id.* at 5-6.

<sup>57</sup> *Id.* at 1.

<sup>58</sup> *Id.* at 5.

<sup>59</sup> PJM April 11 Answer at 3.

<sup>60</sup> *Id.* at 4.

<sup>61</sup> *Id.* at 4, 6.

reflect both the costs of resources that are deployed and the optimal deployment of resources given system constraints.<sup>62</sup> PJM acknowledges that the price resulting from IRD cases “is not perfect”, but emphasizes that the prices would be more accurate than under the all-call approach, which does not always price Synchronized Reserve Events.<sup>63</sup>

24. PJM states that it is unjust and unreasonable to not price Synchronized Reserve Events.<sup>64</sup> PJM also argues that it is important for prices to be aligned with dispatch to encourage resources to respond to PJM’s dispatch instructions appropriately.<sup>65</sup> PJM contends that IRD provides a least production cost solution under which some units will not receive dispatch instructions because they are not economic or would impact monitored constraints on the system.<sup>66</sup>

25. PJM argues that the Market Monitor’s concern that the IRD solution relies on resources that did not clear as reserves is unwarranted because, under IRD, all resources are provided the same incentives, which is to follow their unit-specific basepoints through dispatch.<sup>67</sup> PJM also contends that the Market Monitor’s assertion that IRD does not consider all available reserves is inaccurate.<sup>68</sup> PJM states that IRD will consider all available resources, just like RT SCED does during energy dispatch, and dispatch them to a specific level. With respect to IRD’s treatment of Non-Synchronized and 30-Minute Reserves, PJM states that the IRD proposal focuses on Synchronized Reserves given the speed necessary for system response, and that Primary and Secondary Reserves “are different products with different time horizons that are not suitable for immediate reserve deployment” in response to a Synchronized Reserve Event.<sup>69</sup>

26. PJM also argues that it has provided sufficient detail regarding how IRD will be used to determine prices and that further detail does not significantly affect rates, terms, and conditions of service, and that any additional details are more appropriately

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<sup>62</sup> *Id.* at 4.

<sup>63</sup> *Id.* at 4, 6.

<sup>64</sup> *Id.* at 6.

<sup>65</sup> *Id.* at 4.

<sup>66</sup> *Id.*

<sup>67</sup> *Id.* at 9.

<sup>68</sup> *Id.* at 4.

<sup>69</sup> *Id.* at 8.

documented in PJM's manuals.<sup>70</sup> PJM disagrees with the Market Monitor that IRD would discriminate against inflexible Tier 2 reserves, arguing that all resources will be evaluated for performance.<sup>71</sup> PJM also argues that IRD recognizes the differences in dispatchability between flexible and inflexible resources and dispatches them accordingly in response to a Synchronized Reserve Event.<sup>72</sup> PJM explains that the Ancillary Services Optimizer case commits inflexible resources and demand response on an hourly basis, whereas flexible resources are committed by RT SCED cases on a five-minute basis.

27. PJM clarifies that IRD cases will be used for all situations that warrant reserve deployment, including lost units and low Area Control Error events.<sup>73</sup> PJM also explains that IRD does not contemplate doing anything differently based on the cause of the Synchronized Reserve Event. PJM argues that Synchronized Reserves will be expected to respond to help recovery regardless of the cause of the Synchronized Reserve Event.

#### **IV. Deficiency Letter, Response, and Responsive Pleadings**

##### **A. Deficiency Letter**

28. On May 13, 2022, Commission staff issued a letter informing PJM that its filing was deficient and requesting additional information.<sup>74</sup> The Deficiency Letter requested additional information regarding a number of topics, including how IRD is defined and described in the Tariff; how IRD cases would be used and affect prices; how load bias in the approved RT SCED case affects procurement using IRD or how it will affect IRD; how IRD could send appropriate resource-specific basepoints if IRD was not based on the location and magnitude of the contingency; why IRD would give preference to

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<sup>70</sup> *Id.* at 12 & n.28 (citing *Demand Response Coal. v. PJM Interconnection, L.L.C.*, 143 FERC ¶ 61,061 (2013); *Cargill Power Mkts., LLC v. Pub. Serv. Co. of N.M.*, 141 FERC ¶ 61,141, at P 14 (2012); *Quest Energy, LLC v. The Detroit Edison Co.*, 106 FERC ¶ 61,227, at P 20, *complaint withdrawn*, 109 FERC ¶ 61,334 (2004); *Cal. Indep. Sys. Operator Corp.*, 126 FERC ¶ 61,147, at P 58 (2009); *Wis. Power & Light Co.*, 123 FERC ¶ 61,307, at P 6 (2008); *Prior Notice & Filing Requirements under Part II of the Fed. Power Act*, 64 FERC ¶ 61,139, at 61,986-89, *order on reh'g*, 65 FERC ¶ 61,081 (1993)).

<sup>71</sup> *Id.* at 9.

<sup>72</sup> *Id.* at 10.

<sup>73</sup> *Id.* at 5.

<sup>74</sup> *PJM Interconnection, L.L.C.*, Docket No. ER22-1200-000 (May 13, 2022) (Deficiency Letter).

converting the reserves from inflexible resources to energy; whether PJM intends to replenish Synchronized Reserves within a specific period; and the impact of IRD on other reserve products.

**B. Deficiency Response**

29. PJM filed a response on June 13, 2022, also requesting an updated effective date of September 1, 2022 for its Tariff revisions and Commission action by August 12, 2022 (Deficiency Letter Response).

30. PJM responds that IRD is an RT SCED case using a load bias based on an expectation of high load.<sup>75</sup> PJM argues that IRD is more targeted than the current all-call approach because it uses resource-specific basepoints while respecting system constraints.<sup>76</sup> PJM clarifies that, because IRD is an RT SCED case, it monitors the same constraints as any other RT SCED case.<sup>77</sup> PJM states that IRD will allow resources to respond to Synchronized Reserve Events until an appropriate RT SCED case solves and can be used to send basepoints to resources that reflect the actual unit loss and control constraints.<sup>78</sup> PJM states that IRD is referenced within the existing RT SCED language.<sup>79</sup>

31. PJM explains that the IRD case would be solved roughly every five minutes along with the other RT SCED cases, using the latest inputs for the upcoming real-time market interval.<sup>80</sup> PJM explains that these inputs are the same for IRD as for other RT SCED cases.<sup>81</sup> With respect to pricing, PJM explains that one IRD case may be used to price multiple real-time intervals, but the intent is for system operators to switch to regular RT SCED cases after the initial IRD initiation.<sup>82</sup> PJM states that subsequent IRD cases

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<sup>75</sup> Deficiency Letter Response at 4.

<sup>76</sup> *Id.* at 4-5.

<sup>77</sup> *Id.* at 2, 5.

<sup>78</sup> *Id.* at 4-5.

<sup>79</sup> *Id.* at 2 (arguing that IRD is referenced within the existing RT SCED details in Operating Agreement, Schedule 1, section 1.11(b) and Tariff, Attachment K-Appendix, section 1.11(b)).

<sup>80</sup> *Id.*

<sup>81</sup> *Id.* at 3.

<sup>82</sup> *Id.* at 7.

will reflect the unit loss, just as the other RT SCED cases do, but only one IRD case will be approved for each Synchronized Reserve Event. PJM clarifies that RT SCED cases will be used for the duration of a Synchronized Reserve Event once RT SCED reflects the unit loss. PJM further explains that it may take up to two intervals for this to occur due to latency in data transfers and the time required for software tools to solve.<sup>83</sup> However, PJM explains that IRD should create minimal uplift because it would align dispatch basepoints with pricing.<sup>84</sup> PJM clarifies that there may still be instances in which IRD would lead to uplift, such as, for example, if there are changes in system conditions between the Ancillary Service Optimizer optimization and the IRD case.<sup>85</sup>

32. PJM explains that IRD will result in the lowest production cost dispatch solution, given its inputs.<sup>86</sup> PJM maintains this is more efficient than the all-call approach, which deploys reserves regardless of quantity, location, or production cost.<sup>87</sup>

33. In response to the Deficiency Letter question asking whether PJM intends to replenish Synchronized Reserves within a specific period, PJM states that its goal is to replenish reserves as quickly as possible to be ready for the next possible contingency loss.<sup>88</sup> PJM argues that rapid restoration of reserves is important because it is possible to have multiple contingencies occur quickly.<sup>89</sup> PJM states that, with this goal in mind, RT SCED is designed to meet effective PJM reserve requirements (Synchronous and Primary Reserves) in each solution. PJM states that since IRD is an additional solution scenario of an RT SCED case, the same function applies.<sup>90</sup>

34. In response to questions regarding the impact of IRD on other reserve products, PJM explains that RT SCED does not currently have a 30-Minute Reserve requirement and so IRD cannot, under the current Tariff, consider 30-Minute Reserves for

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<sup>83</sup> *Id.* at 9.

<sup>84</sup> *Id.* at 8.

<sup>85</sup> *Id.* at 7.

<sup>86</sup> *Id.* at 5-6.

<sup>87</sup> *Id.* at 6.

<sup>88</sup> *Id.* at 9.

<sup>89</sup> *Id.* at 9-10.

<sup>90</sup> *Id.*

deployment.<sup>91</sup> However, PJM states that, when the new 30-Minute Reserve product becomes effective, those resources could be reassigned to meet the Synchronized and Primary Reserve requirements “with respect to ramping capability.”<sup>92</sup>

35. PJM clarifies that, because IRD does not reflect the actual event on the system, it may attempt to dispatch the resource which caused the contingency in the first place.<sup>93</sup> However, PJM explains this is unlikely to be significant because, in order for it to be a large enough contingency to merit initiation of a Synchronized Reserve Event, that resource would likely be operating close to its maximum output to begin with and so will have limited additional reserve capability.

36. PJM states that the existing all-call approach can create confusion as to whether resources should follow the all-call instructions or the subsequent RT SCED basepoints when both are active.<sup>94</sup> PJM provides an example of a recent Synchronized Reserve Event, where sellers responded to the all-call message but then the subsequent RT SCED cases that reflected the unit loss did not produce the desired result because it was not clear which dispatch instruction applied since both were active. PJM explains that, in addition to the confusion, some resources may need manual intervention to follow an RT SCED basepoint after responding to an all-call message. PJM states these factors contributed to the duration of the Synchronized Reserve Event.<sup>95</sup>

### C. Notice of Deficiency Response

37. Notice of PJM’s Deficiency Letter Response was published in the *Federal Register*, 87 Fed. Reg. 36,846 (June 21, 2022) with interventions and protests due on or before July 5, 2022. PJM Industrial Customer Coalition (PJM ICC) filed a timely motion to intervene. On July 5, 2022, the Market Monitor, PJM ICC, and Shell Energy filed comments. On July 20, 2022, PJM filed an answer.

### D. Comments on Deficiency Response

38. In its comments on the Deficiency Letter Response, the Market Monitor contends that PJM’s statement that subsequent RT SCED cases will control constraints is an

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<sup>91</sup> *Id.* at 9.

<sup>92</sup> *Id.* at 11.

<sup>93</sup> *Id.* at 4-5.

<sup>94</sup> *Id.* at 9.

<sup>95</sup> *Id.*



admission that IRD cannot control constraints, because it does not model the actual contingency.<sup>96</sup> As such, the Market Monitor argues, IRD will result in incorrect price and dispatch signals and should be rejected. PJM ICC similarly argues that IRD is not an accurate or efficient way to deploy reserves because it inaccurately models system conditions and deploys a quantity of reserves that is unrelated to the cause of the Synchronized Reserve Event.<sup>97</sup> PJM ICC argues that IRD will not result in accurate prices because the PJM system is often constrained and IRD would ignore the location of the contingency relative to those constraints.<sup>98</sup>

39. The Market Monitor argues that PJM evaded the question about uplift created as a result of approving an IRD case.<sup>99</sup> The Market Monitor states that Synchronized Reserves must be able to respond in ten minutes or less, which may be enough time for a subsequent RT SCED case that actually reflects the contingency to be approved. The Market Monitor contends that the updated RT SCED case may set prices which are not sufficient for the Synchronized Reserve resources to recover their costs.

40. The Market Monitor disputes PJM's claim that IRD will be the lowest cost solution, arguing that the fact that the all-call approach is "not efficient or appropriate does not mean that the IRD approach is an improvement."<sup>100</sup> The Market Monitor and PJM ICC argue that IRD would only result in the least cost solution given PJM's specific assumptions, which are unlikely to be accurate in practice.<sup>101</sup> The Market Monitor disagrees with PJM and argues that, should multiple contingencies occur within 90 minutes, PJM could deploy Non-Synchronized Reserves, which have the same response time as Synchronized Reserves, or other resources, such as load response or curtailing export transactions if there were insufficient Synchronized Reserves available.<sup>102</sup> PJM ICC argues that PJM's example of multiple contingencies demonstrates that immediately replenishing the entire amount of reserves often results in shortage pricing conditions when reserves are deployed and providing the service they were acquired to

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<sup>96</sup> Market Monitor Comments on Deficiency Letter Response at 2-3.

<sup>97</sup> PJM ICC Comments on Deficiency Letter Response at 1.

<sup>98</sup> *Id.* at 2.

<sup>99</sup> Market Monitor Comments on Deficiency Letter Response at 4.

<sup>100</sup> *Id.* at 3.

<sup>101</sup> *Id.*; PJM ICC Comments on Deficiency Letter Response at 3.

<sup>102</sup> Market Monitor Comments on Deficiency Letter Response at 5.

provide.<sup>103</sup> PJM ICC argues that PJM should be required to implement a reserve recovery period in its pricing algorithms as allowed by the Commission-approved NERC standard to ensure pricing outcomes are just and reasonable.<sup>104</sup>

41. In addition to reiterating its earlier comments, Shell Energy argues that IRD is just and reasonable because it will provide PJM system operators with better visibility while improving the accuracy of price signals during major system events.<sup>105</sup> Shell Energy notes that the current all-call approach would call on all available resources, which would also include the resource which caused the contingency.<sup>106</sup>

**E. Answer**

42. In its answer to the comments on PJM's Deficiency Letter Response, PJM states that it is unlikely IRD will deploy insufficient reserves because IRD is based on the largest contingency.<sup>107</sup> PJM notes that IRD could deploy excess reserves but would still be an improvement over the all-call approach. PJM explains that IRD cannot, however, include the load bias from the approved RT SCED case because IRD is executed simultaneously with the RT SCED cases.<sup>108</sup> PJM states that IRD may not exactly replicate the largest contingency on the system, but the average RT SCED load bias is significantly less than the IRD case, which should prevent the underlying under-deployment issue raised by the Market Monitor.

43. PJM also states that deploying Non-Synchronized Reserves can take up to ten minutes, as these are offline resources that have start-up requirements, whereas Synchronized Resources are online or in condensing mode.<sup>109</sup> PJM further explains that curtailing transactions requires external communications and coordination, which may

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<sup>103</sup> PJM ICC Comments on Deficiency Letter Response at 3.

<sup>104</sup> *Id.* at 3-4.

<sup>105</sup> Shell Energy Comments on Deficiency Letter Response at 2.

<sup>106</sup> *Id.* at 6.

<sup>107</sup> PJM July 20 Answer at 5.

<sup>108</sup> *Id.* at 6.

<sup>109</sup> *Id.* at 8.

delay needed response time. However, PJM emphasizes that IRD would not change PJM's existing policy to replenish reserves as quickly as possible.<sup>110</sup>

## V. Discussion

### A. Procedural Matters

44. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2021), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

45. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d), we grant Constellation's late-filed motion to intervene given its interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay.

46. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2021), prohibits an answer to a protest or answer unless otherwise ordered by the decisional authority. We accept the answers filed by PJM because they provided information that assisted us in our decision-making process.

### B. Substantive Matters

47. We reject PJM's proposed Tariff revisions because PJM has failed to show that IRD is just and reasonable. PJM argues that IRD is an improvement over the all-call approach, but, even if that characterization were true, that does not render this particular proposal to use the largest contingency in the IRD case just and reasonable.<sup>111</sup> PJM itself explains that its system will remain reliable without implementing the IRD proposal.<sup>112</sup>

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<sup>110</sup> *Id.* at 7.

<sup>111</sup> *Duke Energy Trading & Mktg., L.L.C. v. FERC*, 315 F.3d 377, 382 (D.C. Cir. 2003) (“Nothing in Section 4 [section 205] requires the pipeline to prove that its proposal is more just and reasonable than the existing system. The pipeline must only show that its proposal is just and reasonable in its own right.”). Even if we were to accept PJM's contention that pricing Synchronized Reserve Events through IRD is superior to the existing all-call approach, the resulting prices still must be just and reasonable. And, as discussed below, we find that PJM has failed to show that basing prices on the largest contingency yields just and reasonable prices.

<sup>112</sup> PJM Transmittal at 5 (acknowledging that its current practices “effectively address system reliability (restoration of system frequency and generation/load balance)”). The dissent argues that rejection of PJM's proposal presents reliability risks. *PJM Interconnection, L.L.C.*, 180 FERC ¶ 61,089 (2022) (Danly, Comm'r, dissenting).

PJM expects this proposal will achieve a least cost dispatch solution and more accurate prices during Synchronized Reserve Events,<sup>113</sup> but we find that IRD as proposed is unjust and unreasonable because it fails to model actual system conditions. It therefore is likely to result in artificially inflated prices and thus prevent PJM from achieving a least cost dispatch solution to address Synchronized Reserve Events, which could in turn produce a misalignment between prices and actual system conditions.

48. According to PJM, IRD would be an RT SCED case that increases the load forecast by the megawatts of the system's largest contingency. As such, the IRD case would not lead to accurate dispatch in most cases because as PJM acknowledges, most Synchronized Reserve Events will be caused by smaller disturbances than that modeled in the IRD case, thus causing IRD to inaccurately reflect system conditions.<sup>114</sup> Given the dispatch instructions produced by IRD, IRD would result in PJM setting prices as though the largest contingency had occurred, and then immediately procure additional reserves accordingly, without regard for the size and location of the actual system event. In sum, we agree with the Market Monitor and the PJM ICC that IRD is likely to result in artificially inflated prices and procure energy and reserves in a manner disconnected from actual system needs.<sup>115</sup>

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First, PJM's statement refutes that assertion. Second, while the dissent also suggests this is caused by the lack of non-performance penalties, *id.* P 3, this appears to be based on PJM's statement that Tier 1 Synchronized Reserves, unlike Tier 2 Synchronized Reserves, are not subject to non-performance assessments and thus do not have an incentive to meet their commitment. PJM Transmittal at 4. Indeed, PJM states that "the observed inconsistency between Tier 1 and Tier 2 synchronized resources was the genesis of this IRD initiative." However, the Commission approved PJM's proposal to consolidate Tier 1 and Tier 2 Synchronized Reserves and to apply non-performance assessment and penalties to the consolidated reserve product. *See* May 2020 Reserves Order, 171 FERC ¶ 61,153 at PP 100, 115-116; Reserves Remand Order, 177 FERC ¶ 61,209 at P 2. PJM intends to implement that change on October 1, 2022. PJM, Transmittal, Docket No. EL19-58-012, at 1 (filed Feb. 22, 2022). PJM's statement concerning the performance of Tier 1 reserves will therefore be addressed within two months from the date of this order.

<sup>113</sup> *See, e.g.*, Deficiency Letter Response at 6; PJM Transmittal at 10-11.

<sup>114</sup> PJM Transmittal at 12; Market Monitor Protest at 8.

<sup>115</sup> Market Monitor Protest at 8-9, 12-13; PJM ICC Comments on Deficiency Letter Response at 1-2 (arguing that IRD will not result in accurate prices and inaccurately models system conditions). Both the Market Monitor and the PJM ICC filed protests to PJM's IRD proposal, detailing numerous reasons each believe the IRD

49. In addition, the record indicates that even when a contingency event is the result of the largest contingency, the IRD SCED case might not be representative of actual system conditions if the contingency event occurs near a constraint or within a reserve sub-zone, like the MAD sub-zone, because IRD would model an RTO-level increase in load. As the Market Monitor notes, because IRD would not accurately model the location and magnitude of the contingency, it would not be able to accurately control for constraints.<sup>116</sup> As noted by PJM ICC, the PJM system is often constrained and IRD would ignore the location of the contingency relative to those constraints, resulting in inaccurate dispatch.<sup>117</sup> With respect to sub-zones, IRD would respond to an event in a reserve sub-zone with additional energy and reserves deployed at the RTO-level, which may not alleviate the contingency, due to the constraints that led to the creation of the sub-zone. Therefore, by failing to model the magnitude and location of the event that triggered the Synchronized Reserve Event, IRD may fail to achieve its stated purpose, which is to help the system recover from a contingency.<sup>118</sup>

50. Similarly, we are not persuaded by PJM's arguments that IRD will result in the least cost solution. As protestors point out, and PJM acknowledges, IRD will result in the least cost solution only for the specific set of assumptions used to generate the IRD SCED case (specifically, an increase in load equal to the largest contingency at the RTO-level).<sup>119</sup> PJM explains that for the majority of Synchronized Reserve Events, these assumptions will not be accurate, and as a result, PJM has not demonstrated that invoking the IRD case as proposed will result in the least cost solution in these situations.

51. Our findings herein do not foreclose PJM from proposing future improvements to the all-call approach that better align prices with actual emergency conditions, but under FPA section 205 PJM must show that any such proposed methodology produces just and

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proposal should be rejected. The Market Monitor states that it has analyzed IRD cases for 49,183 five-minute intervals and determined that IRD would have dispatched additional megawatts above the largest contingency 32% of the time, below the largest contingency 28% of the time, and equal to the largest contingency 40% of the time. Market Monitor Protest at 7.

<sup>116</sup> *Id.* at 9.

<sup>117</sup> PJM ICC Comments on Deficiency Letter Response at 1-2.

<sup>118</sup> *See, e.g.*, PJM Transmittal at 1.

<sup>119</sup> Deficiency Letter Response at 6.

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reasonable rates. Here, PJM has failed to substantiate that its proposed use of the single largest contingency will achieve that purpose.<sup>120</sup>

52. Having found that PJM has not demonstrated that IRD is just and reasonable, we decline to address protestors' other arguments.

The Commission orders:

PJM's proposed revisions to the Tariff and Operating Agreement are hereby rejected, as discussed in the body of the order.

By the Commission. Commissioner Danly is dissenting with a separate statement attached.

( S E A L )

Kimberly D. Bose,  
Secretary.

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<sup>120</sup> Further, we clarify that the initiation of a Synchronized Reserve Event does not always denote a reserve shortage.

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.

Docket Nos. ER22-1200-000  
ER22-1200-001

(Issued August 15, 2022)

DANLY, Commissioner, *dissenting*:

1. I dissent from this order rejecting PJM Interconnection, L.L.C.’s (PJM) Federal Power Act (FPA) section 205<sup>1</sup> rate proposal to implement “Intelligent Reserve Deployment,” which would have, if accepted, “increase[d] reliability in the PJM region” by protecting PJM against “back-to-back [reliability] events” while simultaneously “better align[ing] prices with actual [emergency] system conditions.”<sup>2</sup> PJM made this proposal after convening a task force to study how to improve performance and pricing during emergency “synchronized reserve deployment (‘spin’) event[s].”<sup>3</sup> The majority rejects it, finding that Intelligent Reserve Deployment’s modeling of the single largest reliability contingency “is likely to result in artificially inflated prices.”<sup>4</sup>

2. I disagree. PJM easily met its section 205 burden. I see nothing wrong with modeling the single largest reliability contingency *during a reserve shortage*, for example, when the system is dangerously exposed to a subsequent reliability event. I do not see how modeling the single largest reliability contingency *during a reserve shortage* “artificially inflate[s] prices.” Reserve shortages and other “synchronized reserve deployment (‘spin’) event[s]”<sup>5</sup> mean the system is severely exposed. It seems prudent to account for the next largest contingency during an emergency.

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<sup>1</sup> 16 U.S.C. § 824d.

<sup>2</sup> Transmittal Letter at 10-11.

<sup>3</sup> *Id.* at 1.

<sup>4</sup> *PJM Interconnection, L.L.C.*, 180 FERC ¶ 61,089 at P 47 (2022).

<sup>5</sup> Transmittal Letter at 1. The majority “clarif[ies] that the initiation of a Synchronized Reserve Event does not always denote a reserve shortage.” *PJM Interconnection, L.L.C.*, 180 FERC ¶ 61,089 at P 51, n.120. Indeed, “[s]ynchronized reserve events are *emergency procedures triggered by PJM in order to maintain grid reliability*” and “can be caused by a variety of conditions, including loss of generation (single large or multiple smaller generators), loss of transmission elements resulting in power import limitations, sudden load influx, and/or system frequency decline due to

3. Indeed, PJM fully explained the purpose of the Intelligent Reserve Deployment, including its effects on reliability and pricing, and how it would be a significant improvement over the existing “all call” messaging that PJM employs during any emergency spin event. The all-call is essentially an email blast.<sup>6</sup> It consists of a communication from PJM to all market participants to “raise to full output.”<sup>7</sup> That is it. An *en masse* message requesting a raise to full output obviously fails to “offer PJM operators visibility into the expected response either in aggregate, or from any particular resource” and apparently is routinely ignored by resources not subject to non-performance penalties.<sup>8</sup> It does not take an engineer to identify a legitimate reliability risk here.

4. Today’s order rejects a just and reasonable proposal that would institute a coherent plan to address dispatch and pricing during a reserve deployment in a system emergency. I would not reject a clear reliability enhancement merely because it results in potentially higher (albeit more efficient) prices. FPA section 205 contemplates broad discretion for utilities to grapple with challenges and opportunities as they see fit. This filing easily fits within the range of acceptable filings. And, though it makes no difference to our ultimate analysis under FPA section 205, it is nonetheless worth noting that this proposal also enjoyed a supermajority of stakeholder support with only two protests,<sup>9</sup> so it is the rare regional transmission organization proposal that affects rates yet somehow survived stakeholder scrutiny.

5. I am not sure what else we expect PJM to propose.<sup>10</sup> But I have a prediction: having rejected this proposal, we at the Commission will enthusiastically join the throngs

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external factors.” Transmittal Letter at 2 (emphasis added).

<sup>6</sup> See *id.* at 3-4 (explaining all-call messaging).

<sup>7</sup> *Id.* at 3.

<sup>8</sup> *Id.* at 4. The majority dismisses PJM’s reliability concerns by pointing out that the issue of resources ignoring PJM’s “all call” requests “will . . . be addressed within two months from the date of this order.” *PJM Interconnection, L.L.C.*, 180 FERC ¶ 61,089 at P 47, n.112. PJM is aware of that—obviously—yet still proposed Intelligent Reserve Deployment to “increase reliability in the PJM region.” Transmittal Letter at 11-12. I share PJM’s reliability concerns, including for the next two *summer* months.

<sup>9</sup> See *PJM Interconnection, L.L.C.*, 180 FERC ¶ 61,089 at PP 12, 48 n.115.

<sup>10</sup> See *id.* at P 51 (opining that “[o]ur findings herein do not foreclose PJM from proposing future improvements to the all-call approach that better align prices with actual emergency conditions.”).



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blaming PJM if, down the road, it suffers a blackout caused by back-to-back reliability events.

For these reasons, I respectfully dissent.

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James P. Danly  
Commissioner

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