

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

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PJM Interconnection, L.L.C. ) Docket No. ER23-1874-000  
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**ANSWER AND MOTION FOR LEAVE TO ANSWER  
OF THE INDEPENDENT MARKET MONITOR FOR PJM**

Pursuant to Rules 212 and 213 of the Commission’s Rules and Regulations,<sup>1</sup> Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor (“Market Monitor”) for PJM Interconnection, L.L.C. (“PJM”),<sup>2</sup> submits this answer to PJM’s Answer submitted on June 21, 2023 (“PJM Answer”) to the comments submitted by the Market Monitor on June 6, 2023 (“June 6<sup>th</sup> Comments”). On May 12, 2023, PJM proposed revisions to Schedule 6A to the OATT intended to improve the reliability of black start units by ensuring that black start units have fuel available whenever needed to restart the grid after a blackout (May 12<sup>th</sup> Filing).<sup>3</sup>

Black start is a critical service provided by PJM on a regional basis.<sup>4</sup> Ensuring fuel availability so that black start resources are ready to start with no notice in the event of a

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<sup>1</sup> 18 CFR §§ 385.212 & 385.213 (2022).

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

<sup>3</sup> *PJM Interconnection, L.L.C.*, Docket No. ER23-1874-000, Black Start Service Revisions to Enhance Fuel Assurance (May 12, 2023) (“May 12<sup>th</sup> Filing”).

<sup>4</sup> *See PJM Interconnection, L.L.C.*, 144 FERC ¶ 61,191 at P 4 (2013) (PJM states that the System Restoration Strategy Task Force determined that the system restoration planning process should be amended to include new strategies for black start service procurement so as to maximize the availability of black

blackout is essential to providing reliable black start service. PJM's proposal does not accomplish this objective and PJM's approach is not an effective or efficient way to achieve the appropriate objective of more reliable black start service. The May 12<sup>th</sup> Filing should be rejected without prejudice and PJM directed to make a new filing that corrects the identified flaws in the May 12<sup>th</sup> Filing and adds the related provisions to the PJM tariff, when approved.

PJM fails to fully define fuel assurance requirements in the tariff and does so only in the PJM manuals. As PJM has reiterated recently, PJM Manuals do not require FERC approval and PJM asserts that the manuals can be unilaterally changed by PJM at PJM's discretion.<sup>5</sup> The final black start requirements should be included in the PJM tariff to ensure full review in the event that PJM wishes to change the black start requirements.

## I. ANSWER

### A. PJM Does Not Recognize Existing Fuel Assured Resources.

PJM argues (at 6) that its proposal "neither ignores nor discriminates against existing fuel-assurance-capable Black Start Units; those units are provided the same opportunity as any other generators to offer through the RFP process to become Fuel Assured Black Start Units." PJM claims (*id.*) that the "IMM wants to mandate that every existing Black Start Unit

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start resources in the PJM region and enhancing black start capability. The System Restoration Strategy Task Force's recommendations included: (1) elimination of a "one size fits all" target restoration time, (2) increased redundancy in black start generation, (3) cross-zonal coordination, (4) clarification of PJM's responsibility for selecting black start resources and creation of a system-wide restoration plan consistent with PJM's role as the North American Electric Reliability Corporation (NERC)-registered transmission operator, (5) revision of the current 90-minute minimum start time for black start resources to a three hour or less start time requirement, (6) re-definition of "critical load" to include cranking power to all units with a hot start time of four hours or less instead of eight hours or less, (7) an RTO-wide five-year black start procurement process rather than an ad hoc procurement process, and (8) elimination of the business rule limiting the number of black start units at any one site.").

<sup>5</sup> Synchronized Reserve Requirement for Reliability, PJM, Donnie Bielak Senior Manager, Dispatch, Operating Committee (May 11, 2023) at 6, which can be accessed at: <<https://www.pjm.com/-/media/committees-groups/committees/oc/2023/20230511/20230511-item-y---synchronized-reserve-requirement-for-reliability.ashx>>.

capable of being fuel-assured must offer in the RFP process to be a Fuel Assured Black Start Unit.” PJM both makes the Market Monitor’s point and misrepresents the Market Monitor’s position.

The Market Monitor argues that units meeting the fuel assured criteria should be recognized as fuel assured for the zone in which they provide black start service so that PJM does not procure more fuel assured black start resources than necessary to meet its reliability objectives. The sole issue is recognition of every unit’s existing capabilities when determining the need for additional fuel assurance. The Market Monitor does not argue for imposing any additional obligations on any unit. PJM does ignore the existing fuel assured black start resources in defining the need for additional fuel assured black start resources. PJM does ignore the fact that its proposal could require customers to pay for unneeded new fuel assured black start resources to provide a service which existing fuel assured black start resources already provide in the PJM region. PJM has failed to explain why it would ignore existing fuel assured black start resources.

PJM would require existing fuel assured resources to go through a time consuming and potentially costly application process in order for PJM to recognize the characteristics that the resources already have. Existing black start resources that meet the fuel assurance standard should not have to go through another RFP process. PJM could easily determine whether existing black start resources meet the fuel assurance requirements through a questionnaire rather than an unnecessary application process. PJM should already know the fuel supply characteristics of all black start resources, given their critical role.

**B. PJM Would Apply a Weaker Fuel Assurance Standard to Intermittent Resources.**

PJM asserts (at 9) that “intermittent and hybrid resources can, going forward, add significant value to a restoration plan by increasing diversity among the resources that are committed as Black Start Units, and by providing price competitive options to thermal Black Start Units in future Black Start Service and Fuel Assured Black Start Service RFPs.”

PJM has no factual basis for asserting that intermittent resources will be cheaper than thermal resources. More importantly, PJM has not supported the strong and counterintuitive assertion that intermittent resources can substitute for fuel assured thermal resources in providing black start. The experience of Winter Storm Elliott provides a recent and significant counterexample to PJM's assertion. If PJM had relied on intermittent resources for black start at 5:00 PM on December 24, 2023, that black start would not have been available. The simple assertion that intermittent resources can provide black start with 90 percent confidence level is not supported. The 90 percent standard is not supported by the required detailed analysis for an issue as critical as black start availability. Casual anecdotal assertions should not be the basis for assessing the availability of black start resources.

**C. The Proposed X Factor Is Not Supported.**

The X factor determines the fixed cost revenue requirement for black start units under the base formula rate. The base formula multiplies the net cost of new entry for a CT (CONE) in dollars per MW-year by the MW size of the black start resource and by the X factor. PJM fails to explain why it is reasonable to increase the X factor by 100 percent for hydro units (at 12–13) to set it equal to the X factor for CT units. Rather than recognizing that hydro units have always received a lower X factor than CT units based on lower costs and explaining why that rationale is no longer correct, PJM simply asserts that the resources provide “similar service.” Not only does PJM not provide a cost rationale for the increase, PJM would reverse the cost-based logic in the tariff and assert another and undefined “similar service” criterion for paying for a cost-based service.

In addition, PJM never explains why hydro resources should be treated as fuel assured without an actual fuel assurance requirement comparable to that for thermal resources.

**D. The Proposed Z Factor Is Not Supported.**

The Z factor is an incentive multiplier applied to all components of black start revenue requirements under the base formula rate defined in the PJM tariff. PJM fails to explain why it is reasonable to increase the Z factor by 100 percent for all such black start resources. PJM

states (at 13) “that because participation in the Black Start Service RFPs is voluntary, it is necessary to provide the incentives as proposed.” But PJM provides no argument supporting the proposed doubling of the incentive multiplier from 10 to 20 percent.

**E. Gas Availability Is Not Adequately Defined.**

The sole basis for PJM’s review of the adequacy of gas supply for fuel assured black start resources is one sentence at the end of a paragraph in Manual 12: “For natural gas resources, PJM will validate all contractual arrangements for gas supply/delivery.”

The requirements for receiving payment for fuel assurances should be in the PJM Tariff and not in PJM manuals. Firm gas is not easily or simply defined. Consistent and carefully defined criteria are needed. The proposed standard is entirely inadequate and should be rejected.

**F. The Water Storage Level Requirement Is Not Supported.**

PJM does not explain why run of river resources should be considered fuel assured under the terms of the proposed tariff. PJM does not explain why a run of river hydro unit should not use the most restrictive river flow to determine its available MW for fuel assured black start. The simple assertion that PJM will apply a 90 percent confidence level is not a reasonable basis for qualifying such resources as black start. The 90 percent standard is not supported by the required detailed analysis for an issue as critical as black start availability.

**G. PJM’s Proposal to Use Overstated CRF Values Is in Scope and Incorrect.**

PJM proposes to apply an outdated and significantly overstated CRF value to new investments in fuel assurance at existing black start units. The CRF issue is therefore clearly within the scope of this proceeding.

The capital recovery factor (CRF) defines the revenue requirement for black start resources using the Capital Cost Recovery Rate compensation option under the tariff. The key determinants of the CRF are the term of recovery, the cost of capital and taxes. Despite the fact that the Commission approved PJM’s revised CRF rates that use the tax rates and tax benefits available to new investments under the Tax Cut and Jobs Act, PJM proposes to use

the overstated CRF rate based on incorrect tax rates to compensate the owners of black start resources for new investment in fuel assurance.<sup>6</sup>

The fact that existing resources have been significantly overpaid on their existing investment in black start as a result of the overstated CRF values does not entitle them to be overpaid for additional investments in black start resources.

This issue is very much in scope as PJM has explicitly proposed to apply a CRF that it knows to be incorrect to incremental investment in a newly defined fuel assurance capability product at existing black start units. Nothing in the tariff provides for that overpayment.

#### **H. PJM Incorrectly Asserts that Other Market Monitor Objections Are Out of Scope.**

PJM argues (at 16) that other Market Monitor arguments related to cost allocation; DERs providing black start service; and no notice testing, are outside of the scope of this proceeding. Each of these issues is part of an evaluation of PJM's proposal for fuel assurance on this merits. PJM is proposing a new product with associated rates, not just modifying existing tariff provisions. The failure to address issues important to implementing the new product supports rejection of the proposal as unjust and unreasonable.

##### **1. Black Start Service Should Be Planned Regionally and the Costs Should Be Allocated Regionally.**

PJM's approach to zonal versus regional definitions of black start and cost allocation are very much in scope because PJM proposes to define fuel assurance black start by zone rather than for the PJM region. PJM provides no support for this antiquated and balkanized view of the PJM grid. The result of this approach will be to procure too much of what PJM has defined as fuel assured black start resources and require customers to pay too much for black start service.

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<sup>6</sup> See *PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,080 at PP 42–45 (2021).

PJM continues to define required black start capability zonally, even though PJM has the authority to and recognizes that the most effective way to provide black start service is a regional approach that ignores artificial transmission zonal boundaries. Under the current rules, PJM has substantial flexibility in procuring black start resources and is responsible for black start resource selection, but Schedule 6A does not allow PJM to plan and recover the costs of black start service in the most efficient and least discriminatory manner possible.<sup>7</sup> PJM should be directed, in a separate Section 206 show cause proceeding, to revise Schedule 6A so that black start service is provided based on the needs of the PJM region, and not zone by zone.

The failure to address the zonal versus regional issue will result in customers paying unnecessary costs if PJM enforces the rule requiring at least one fuel assured resource in every zone, because fuel assurance may be provided across zonal boundaries, depending on the actual electrical details including cranking paths. PJM fails to define the level of fuel assurance required throughout the PJM region. The Tariff (Schedule 6A) should clearly define the method for determining locational needs of fuel assured black start units that recognizes that fuel assurance may be provided across zonal boundaries.<sup>8</sup> Recognizing this should also lead PJM to allocate black start costs regionally rather than by zone.

## **2. Rules for DER as Black Start Are Neither Supported nor Defined.**

PJM's filed draft tariff language does not refer to the provision of black start by Distributed Energy Resources (DERs). This issue is clearly in scope because PJM has raised it. PJM's proposal inclusion of DER resources as potential black start resources should be rejected until adequate support is provided for the unproved notion that the PJM grid can rely on DER and DR resources for black start services.

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<sup>7</sup> See Docket No. ER13-1911-000.

<sup>8</sup> June 6<sup>th</sup> Comments at 11

Nonetheless, PJM asserts that “DER Black Start Service is well-described in the PJM Manuals. Manual 12 does not describe DER, but simply states: “Fuel Assured Black Start units can be thermal, hydro, energy storage, intermittent, hybrid, or distributed energy/demand resources with onsite generator resources, if they can meet the Black Start Service requirements in PJM’s Open Access Transmission Tariff and this Manual 12.”<sup>9 10 11</sup>

There are significant unresolved issues with exactly which PJM rules apply to DERs. If PJM wants to rely on DERs for black start PJM should carefully define the requirements for DERs to participate rather than provide a general reference to the requirements for grid connected resources.

### **3. Black Start Testing Procedures Are Not Adequate.**

Black start testing changes are proposed by PJM and are therefore in scope.

PJM proposes changes to the testing requirements in Schedule 6A.<sup>12</sup> Currently the unit owner determines the time to test.

The Market Monitor proposed that PJM should determine the time of testing to better ascertain any units readiness to meet a restoration event. PJM has no substantive response.

### **4. Requirements for Review of Environmental Permits are Not Adequate**

Environmental permits may significantly affect the availability of black start resources. PJM fails to substantively address this issue. This issue is clearly in scope as PJM adds language related to environmental permits in Manual 12, page 62. The issue is raised by PJM but PJM’s proposals are not adequate to address the issues and ensure reliable black start service.

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<sup>9</sup> PJM Answer at 17

<sup>10</sup> PJM Manual 12 at 4.6.8

<sup>11</sup> Daniel Bennett affidavit (at 12) also mentions DER and DR resources as a source of fuel assured black start resources.

<sup>12</sup> May 12th Filing, Schedule 6A para. 12 and 14



PJM's proposed language states:

Fuel Assured Fuel Assured Black Start Units must provide details of their emissions permit limitations for review as requested by PJM. In order to provide additional flexibility during a restoration event, Fuel Assured Black Start Units will make best efforts to obtain emission (e.g. Title V) and effluent (e.g. NPDES) permit modifications and/or waivers to accommodate operations during a restoration situation (operating below normal economic min values), if available and feasible. This additional flexibility is above and beyond PJM's determination that the black start resource is technically viable to be selected as a Fuel Assured Black Start Unit.

PJM should require resources to have permit provisions allowing the resources to operate as black start resources to restore the grid in the event of a blackout.

## II. MOTION FOR LEAVE TO ANSWER

The Commission's Rules of Practice and Procedure, 18 CFR § 385.213(a)(2), do not permit answers to answers or protests unless otherwise ordered by the decisional authority. The Commission has made exceptions, however, where an answer clarifies the issues or assists in creating a complete record.<sup>13</sup> In this answer, the Market Monitor provides the Commission with information useful to the Commission's decision making process and which provides a more complete record. Accordingly, the Market Monitor respectfully requests that this answer be permitted.

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<sup>13</sup> See, e.g., *PJM Interconnection, L.L.C.*, 119 FERC ¶61,318 at P 36 (2007) (accepted answer to answer that "provided information that assisted ... decision-making process"); *California Independent System Operator Corporation*, 110 FERC ¶ 61,007 (2005) (answer to answer permitted to assist Commission in decision-making process); *New Power Company v. PJM Interconnection, L.L.C.*, 98 FERC ¶ 61,208 (2002) (answer accepted to provide new factual and legal material to assist the Commission in decision-making process); *N.Y. Independent System Operator, Inc.*, 121 FERC ¶61,112 at P 4 (2007) (answer to protest accepted because it provided information that assisted the Commission in its decision-making process).

### III. CONCLUSION

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

Respectfully submitted,



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Dated: July 6, 2023

## CERTIFICATE OF SERVICE

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

Dated at Eagleville, Pennsylvania,  
this 6<sup>th</sup> day of July, 2023.



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