

include elements that will result in customers overpaying for black start service and that will not result in firm fuel availability and therefore have not been shown to be just and reasonable. The specific details and definitions are not adequately supported or documented. In order to meet the intended goal of providing fuel assured black start for the PJM grid, the May 12th Filing should be rejected without prejudice and PJM directed to make a new filing that corrects the identified flaws in the May 12th Filing.

I. COMMENTS

A. PJM's Proposal Ignores Existing Fuel Assured Units and Will Require Customers to Overpay as a Result.

PJM's proposal ignores the fact that some existing black start units are already fuel assured. All black start units that meet the final requirements for fuel assured black start service should be considered fuel assured units in the PJM region. PJM's proposed revisions to Schedule 6A unreasonably treat units as fuel assured only if the unit is selected through a fuel assured RFP.³ As PJM has never previously used a fuel assured RFP, existing units cannot meet the standard by definition. The proposed approach is arbitrary and unreasonable. The proposed rule discriminates against existing units that meet the fuel assurance criteria and imposes unnecessary costs on customers. Ignoring existing fuel assured units ignores the reality of existing fuel assured black start resources and, as a result, unjustly and unreasonably increases costs for black start service. Rather than requiring existing units to apply for fuel assured status, or leaving the option to apply to resource owners, all existing units should be evaluated and treated as fuel assured if they meet the appropriate standards. Under PJM's proposal, if such existing resources that meet the criteria to be fuel assured decide not to go through the administrative process of applying to be fuel assured, PJM will not treat them as fuel assured and PJM will need to

³ May 12th Filing, Attachments D & F, OATT Schedule 6A para. 6 C. Affidavit of Thomas Hauske para 26.

procure additional fuel assured black start resources. This will result in overprocurement of black start resources and overpayment by customers for black start service.

In addition, for existing units that meet the standards to be fuel assured and are paid on the base formula rate, the result will be to pay units that apply and receive approved fuel assured status more than those same units have already agreed to be paid for providing exactly the same service.

Black start resources may elect to be paid either under a FERC approved rate that is based on a CRF value or under a FERC approved formula based rate approach defined in the tariff.⁴ PJM's proposed approach would pay too much for black start service under both approaches.

PJM should be directed to treat existing black start resources as fuel assured if they meet the standard for fuel assured, without reapplying for black start status.

B. PJM's Proposal Incorrectly Treats Intermittent Resources as if They Are Fuel Assured.

The proposed revisions to Schedule 6A provide that "intermittent or hybrid capacity resources" can be black start resources using a 90 percent confidence level to determine the MW to be fuel assured.⁵ The use of a 90 percent confidence interval is inconsistent with the goal of fuel assurance and the goal of reliable black start capability.

The 90 percent number is not based on analysis. The basis for the 90 percent threshold is the statement in Thomas Hauske's affidavit (at 15) that: "The fleet of CT plants in the PJM Region, for example, have an Equivalent Availability Factor ("EAF"), which takes account of planned, maintenance, and unforced outages, of approximately 90 percent."⁶ Black start service is not limited to CT plants. PJM did not analyze the outage

⁴ OATT Schedule 6A para. 17.

⁵ May 12th Filing, Attachments D & F, OATT Schedule 6A para. 18.

⁶ May 12th Filing Attachment C, para. 15.

rates of existing black start plants. PJM does not recognize the clear difference between forced, planned and maintenance outages.

PJM does not permit other black start resources to be available with only 90 percent confidence. Intermittent resources also have planned, maintenance and forced outages in addition to their inherent intermittency. Intermittent resources should not be relied upon for system restoration after a blackout event, and should not be allowed to be fuel assured black start units unless they can demonstrate the same level of reliability as other black start resources. PJM failed to add the 90 percent confidence level to the tariff, meaning that PJM can arbitrarily change the 90 percent without stakeholder or Commission review. The confidence interval directly affects the rates paid for black start service, and the rule setting its level belongs in the tariff under the rule of reason.⁷

Intermittent resources is not a defined term. Footnote 34 to PJM's filing letter states: "PJM notes that it is not using for this filing or the accompanying Tariff, Schedule 6A revisions the Tariff-defined term "Intermittent Resources" since that term is defined to include only Capacity Resources, and Black Start Units are not limited to Capacity Resources." PJM does not capitalize the terms intermittent or hybrid, leading to the conclusion that these are not defined terms. PJM also uses the undefined term "intermittent hybrid" at page 21 of the filing letter. PJM is apparently assuming discretion over the definition of these terms as well as the 90 percent threshold. Although not in the proposed

⁷ See, e.g., *Energy Storage Ass'n v. PJM Interconnection, L.L.C.*, 162 FERC ¶ 61,296, 62538 (2018); *Cal. Indep. Sys. Operator Corp.*, 119 FERC ¶ 61,076, at P 656 (2007) ("Our policy is that all practices that significantly affect rates, terms and conditions fall within the purview of section 205(c) of the FPA, and, therefore, must be included in a tariff filed with the Commission. Further, we have found that our 'rule of reason' test requires a case-by-case analysis..."); see also *Prior Notice and Filing Requirements Under Part II of the Federal Power Act*, 64 FERC ¶ 61,139 (1993), citing *City of Cleveland v. FERC*, 773 F.2d 1368, 1376 (D.C. Cir. 1985).

tariff language, the Hauske affidavit (at 15) also asserts that the 90 percent threshold will apply to run of river hydro.⁸

PJM's proposed language simply assumes that intermittent resources at a 90 percent confidence level are the equivalent of other black start resources. PJM does not explain why run of river should be treated like CTs or intermittent or hybrid resources. PJM does not make clear whether PJM is proposing to include run of river hydro as potential black start resources for the first time as part of this filing. If it is not the first time, PJM does not explain why it is weakening the standard for run of river resources to a 90 percent confidence level. If it is the first time, PJM does not explain why run of river resources should be considered fuel assured under the terms of the proposed tariff. For example, 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.

PJM's definition of the 90 percent confidence calculation does not actually explain how the confidence level would be calculated. The tariff language is not a mathematical or statistical definition:

The 90% confidence MW value is calculated using Black Start Unit historical data to determine the hourly MW value the resource can provide each day in each month for 16 hours. The hourly MW value is then iterated until the confidence level of the unit providing the MW value on a monthly basis for 16 hours is 90%.⁹

The use of a 90 percent confidence level should be rejected as unsupported, unjust and unreasonable.

⁸ May 12th Filing Attachment C, para 15.

⁹ May 12th Filing at 20–21.

C. PJM Proposes an Arbitrary 100 Percent Increase to the Black Start Capacity Payment.

The fixed charge for black start (BSSC) is defined in Equation 1, where Net CONE is the net cost of new entry as determined in the Quadrennial Review process and X is a defined number equal to .01 for hydro resources and .02 for CTs. The proposed revisions to Schedule 6A would increase the value of X by 100 percent from .01 to .02 for fuel assured hydro units.¹⁰

Equation 1 Fixed Black Start Service Cost

$$\text{Fixed BSSC} = \text{Net CONE} \times \text{Black Start Unit Capacity} \times X$$

Hydro resources that are awarded fuel assured black start service would receive twice the fixed payments under the black start tariff. In addition to the direct doubling of the incentive factor, the effect of the increase in the Z factor is to double the impact of the X factor because the X factor is multiplied by $(1 + Z)$.

PJM has failed to explain the reasons for this increase in X and the multiplied effect on X of the Z increase and has failed to explain the reasons for the increase or explain why customer should pay more or what associated value customers receive for this increase. The proposed 100 percent increase in X should be rejected as unsupported, unjust and unreasonable.

D. PJM Proposes an Arbitrary 100 Percent Increase to the Incentive Payment.

For a black start resource paid under the tariff defined base formula rate, the entire cost of the resource, including the X factor, is increased by the Z factor. The current Z factor is 10 percent, meaning that the incentive payment is 10 percent of all black start costs. PJM proposes to increase the incentive payment by 100 percent from 10 percent to 20 percent without any clear rationale or detailed support. (See Equation 2.)

¹⁰ May 12th Filing, Attachments D & F, OATT Schedule 6A para. 18.

Equation 2 Annual Revenue Requirement

Annual Revenue Requirement

$$= \left\{ \begin{array}{l} (Fixed\ BSSC) + (Variable\ BSSC) + (Training\ Costs) \\ + (Fuel\ Storage\ Costs) \end{array} \right\} \times (1 + Z)$$

The proposed 100 percent increase in Z should be rejected as unsupported, unjust and unreasonable.

E. PJM Would Apply Inflated CRF Values to Some Fuel Assurance Investments

Under this proposal, PJM would pay inflated and demonstrably incorrect CRF values for additional investments associated with fuel assurance for units selected for black start service prior to June 6, 2021.¹¹ Those CRF values are significantly in excess of the correct values because they fail to account for the significant tax reduction provided for in the Tax Cuts and Job Act (TCJA) of 2017.¹² The TCJA lowered the corporate tax rate to 21 percent and introduced bonus depreciation for capital investments placed in service after September 27, 2017.¹³ PJM's proposal in Docket No. ER21-1635 to continue to pay black start service providers at current rates that do not reflect the significantly reduced costs that resulted from the TCJA results in an unambiguous windfall for current black start service providers.¹⁴ The Commission set the proposal for investigation, and that investigation is now subject to settlement judge proceedings.¹⁵ Holding aside the fact that the CRF is

¹¹ May 12th Filing, Attachments D & F, OATT Schedule 6A para. 18; Dockets Nos. ER21-1635 & EL21-91.

¹² Tax Cuts and Jobs Act, Pub. L. No. 115-97, 131 Stat. 2096, Stat. 2105 (2017).

¹³ See 26 U.S. Code §168(k)(6)(A).

¹⁴ See Comments of the Independent Market Monitor for PJM, Docket Nos. ER21-1635-000, EL23-91 (April 28, 2021).

¹⁵ See *PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,080 (2021).

inflated as applied to investments already made, there is no reason to perpetuate the overpayment by using the incorrect CRF values for new investment in fuel assurance.

PJM should be required to use the approved CRFs that reflect current tax laws for any additional investments in fuel assurance. The continued use of CRFs that are not based on current tax laws should be rejected as unsupported, unjust and unreasonable.

F. PJM Fails to Address Environmental Permits

PJM's filed draft tariff language does not require black start unit owners to inform PJM about any environmental permits that could limit the ability of the units to provide black start service when required.

The tariff should require black start unit owners to inform PJM about any environmental permits that could limit the ability of the units to provide black start service when required and any modifications to those permits when any modifications occur.

G. PJM Does Not Define the Rules for the Provision of Black Start by DERs

PJM's filed draft tariff language does not refer to the provision of black start by Distributed Energy Resources (DERs). But the affidavit of Daniel Bennet Testimony (at 12) states: "Under the adopted approach, Fuel Assured Black Start Units can be thermal, hydro, energy storage, intermittent, hybrid, or distributed energy/demand resources with on-site generator resources, if they can meet PJM's Black Start Service requirements in the Tariff and manuals." 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.

H. PJM Should Test Units Without Notice.

If PJM is to rely on black start resources when they are needed to restore power after a black out, PJM should be as confident as possible that the resources will be available. As the experience of Winter Storm Elliott demonstrates, the current testing approach is not

adequate. Simply relying on units to test at times determined by unit owners and relying on unit owners to prepare units for severe weather did not work.

PJM's proposed Schedule 6A continues to state, without modification but now also applicable to fuel assured units: "The Black Start Unit owner shall determine the time of the annual test."¹⁶

The proposed testing approach is not acceptable. System restoration after a black out will not be scheduled as determined by the unit owner. Black start service will be required with little or no notice.

PJM should be required to test all black start resources multiple times a year, including summer and winter, with no advance notice to the owner. As a specific example, when PJM is testing for the availability of fuel from multiple pipelines, the test should simultaneously include all pipelines relied on for fuel assurance status.

I. PJM's Proposal Fails to Address Availability of Gas.

While the purpose of PJM's filing is to provide increased reliability of black start service, PJM's proposal does not define exactly what is meant by primary firm transportation contracts for gas service (May 12th Filing at 10). The proposed tariff language does not define the term. Given the recent lessons of Winter Storm Elliott, it is clear that not all firm gas supply is equivalent. PJM's proposal needs to define more precisely the type of gas service that meets the definition of fuel assurance including both transportation and commodity. PJM's proposal needs to explain how black start resources will address notification issues related to gas nomination cycles.

PJM should be required to define the characteristics of gas supply consistent with the supply of fuel assured black start service.

¹⁶ May 12th Filing, Attachments D & F, OATT Schedule 6A para. 12.

J. PJM’s Proposal Fails to Address Stored Water Level.

The proposed revisions to Schedule 6A address fuel stored on site but fail to address the required levels of stored water that apply either to reservoirs or pumped hydro.¹⁷

PJM should be required to add requirements and penalties for not maintaining required water levels that parallel the provisions for not maintaining required fuel storage levels.

K. Reporting Requirements Are Not Adequate.

The proposed revisions to Schedule 6A address testing and onsite fuel requirements for the past 13 months for testing purposes.¹⁸ Because of the importance of black start units being available when called on, testing should be more frequent, and reporting should be required. The rules should require that an owner notify PJM immediately if the levels of fuel and non-fuel consumables fall below the minimum level needed. The proposed changes to Schedule 6A state the consequences of a failure to maintain required levels of fuel and non-fuel consumables but do not require reporting of the levels of fuel and non-fuel consumables or provide for PJM checking the levels of fuel and non-fuel consumables.¹⁹

PJM should be required to add provisions to the tariff that require regular and frequent testing and immediate reporting of failure to meet the standards for the levels of fuel and non-fuel consumables.

¹⁷ May 12th Filing, Attachments D & F, OATT Schedule 6A para. 14.

¹⁸ *Id.*

¹⁹ May 12th Filing, Attachments D & F, OATT Schedule 6A para. 22A.

L. Black Start Service Should Be Planned Regionally and the Costs Should Allocated Regionally.

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.²⁰ PJM should be directed 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.

²⁰ See Docket No. ER13-1911-000.

II. CONCLUSION

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

Respectfully submitted,



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Dated: June 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 6th day of June, 2023.



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