UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.	)	Docket No. ER21-1635-000

PROTEST OF
AMERICAN MUNICIPAL POWER, INC. AND
OLD DOMINION ELECTRIC COOPERATIVE

On April 7, 2021, PJM Interconnection, L.L.C. ("PJM") submitted, pursuant to Federal Power Act ("FPA") section 205, revisions to Schedule 6A of its Open Access Transmission Tariff ("Tariff") that, *inter alia*, amend the Capital Recovery Factor ("CRF") component of the formula rate that will determine compensation owed to Black Start Units that are selected to provide Black Start Service after June 6, 2021. PJM proposes that the CRF applicable to these units will change "from a stated percentage to a value derived according to a formula that is set forth in PJM Manual 15 and that is adjusted annually based on changes in federal and state income taxes and debt interest rates,"[1] but "PJM proposes to retain the existing CRF stated percentages for existing Black Start Units."[2] Pursuant to Rule 211 of the Commission's Rules of Practice and Procedure[3] and the Commission's filing notice,[4] American Municipal Power, Inc. ("AMP") and Old Dominion Electric Cooperative ("ODEC") hereby protest PJM's filing, including the proposed revisions to Tariff Schedule 6A.[5]

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1 PJM, Black Start Revisions Filing, Docket No. 21-1635-000, at 18-19 (filed April 7, 2021).

2 *Id.* at 18.

3 18 C.F.R. § 385.211.

4 Combined Notice of Filings #1 (April 7, 2021).

5 AMP submitted its doc-less intervention in the captioned proceedings on April 23, 2021, and ODEC submitted its doc-less intervention on April 14, 2021.

PJM's filing fails to adequately protect transmission service customers from unjust and unreasonable rates for Black Start Service provided by Black Start Units selected to provide Black Start Service before June 6, 2021 and provide Black Start Service for various prospective periods. This is because the CRF component of these rates will not be adjusted to reflect the reduction in the marginal federal corporate income tax rate in effect since January 1, 2018 under the Tax Cuts and Jobs Act.[6] Nor would the CRF component of these rates be adjusted to reflect updates in state tax rates, debt interest rates, capital structure and cost of capital. PJM's filing is unduly discriminatory because the filing will treat similarly situated Black Start Units differently, based solely and arbitrarily upon the date that these units were selected to provide Black Start Service. Accordingly, the Commission should reject PJM's filing, institute an investigation under FPA section 206 *sua sponte*, determine that the existing CRFs are unjust, unreasonable, unduly discriminatory and preferential, and direct PJM to apply the formula-derived CRFs proposed in this proceeding to all Black Start Service commitments on a prospective basis. Alternatively, PJM's filing should be rejected by the Commission.

I. BACKGROUND

A. Capital Recovery Factors for Black Start Units under the Tariff.

CRFs are a component of PJM's formula rate for Black Start Service. Specifically, CRFs are applied to determine the Black Start Unit's annual revenue requirement associated with the costs of providing Black Start Service.[7] Currently effective PJM Tariff

[6] Filing at 19 n.60 ("PJM does not propose to adjust the CRF percentages for existing section 6 Black Start Units retroactively, to be effective as of January 1, 2018, for the Tax Cuts and Jobs Act of 2017.").

[7] Filing at 7-8 ("Schedule 6A, section 18 provides a formula for calculating an owner's Black Start Service revenue requirement based on relevant costs such as: Fixed Black Start Service Costs, Variable Black Start Service Costs, Training Costs, and Fuel Storage Costs.").

Schedule 6A, section 18 contains a CRF table that provides Levelized CRFs corresponding to the age of the Black Start Unit. Black Start Unit revenue requirements resulting from this formula are allocated to and recovered from network and point-to-point transmission service customers within each transmission zone.[8]

PJM's filing includes a prospective change in the CRFs that will apply only to new Black Start Unit commitments. Under the proposal, the CRFs used in calculating the annual revenue requirement for existing Black Start Unit commitments will be based on the existing CRF table, without any adjustment to account for reduction of the marginal federal corporate income tax rate. PJM's filing claims that "the stated CRF values currently set forth in the Tariff are essentially 'black box' numbers, as neither the Tariff nor the PJM Manuals specify their bases or how they were calculated."[9] However, PJM is well aware of the derivation of the CRF values included in the currently effective Tariff. As described by PJM in 2019:

> The CRF table has several different assumptions such as: the Capital Recovery Factor based on a levelized pro forma for a 100 MW Combustion Turbine for $1M, 2.5 percent inflation, 36 percent federal tax rate, 9 percent state tax rate, income tax rate 41 percent, 50 percent equity and 50 percent debt with a 7 percent interest rate, and a 12 percent internal rate of return on equity.[10]

The factors underlying the currently effective CRFs, as described by PJM above, mirror the factors included in PJM's proposed methodology for determining the CRFs applicable to Black Start Units selected to provide Black Start Service after June 6, 2021.

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[8] *See* Tariff, Schedule 6A, sections 25-27.

[9] Filing at 12 (citing Hauske Aff. ¶ 10).

[10] PJM Operation Analysis & Compliance Department, Review of Black Start Formula and Cost Components, at 8 (October 2019), attached hereto as **Exhibit A**.

B. Non-rate reliability measures included in PJM's filing.

PJM's filing also addresses a number of non-rate reliability issues related to Black Start Service provided under PJM's Tariff by Black Start Units. These include provisions governing: commitment and termination; outage obligations and substitution; testing requirements; involuntary termination and revenue forfeiture; and minimum tank suction level. PJM presented the package of Tariff revisions reflected in its filing for approval at the March 29, 2021 meeting of PJM's Members Committee. Notwithstanding the Members Committee's vote rejecting PJM's proposal, PJM filed it with the Commission on April 7, 2021.

AMP and ODEC support all aspects of PJM's filing except for PJM's failure to propose application of the CRF amendments to Black Start Units that are selected to provide Black Start Service before June 6, 2021. PJM's proposed non-rate provisions are intended to ensure that the PJM system can recover from a "total system outage" that requires the availability of units with black start capability.[11] AMP and ODEC indicated their support for these provisions in a joint letter to the PJM Board of Managers dated March 31, 2021,[12] and are not aware of any stakeholder opposition to them. These provisions are important reliability measures and it is beyond disappointing that PJM has tethered them to the divisive CRF rate proposal.

II. PROTEST

PJM has no reasonable justification for continuing to provide compensation to existing Black Start Units that reflects an obsolete 36% marginal federal corporate income

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[11] Filing at 3.

[12] Attached hereto as **Exhibit B**.

tax rate, while compensating new Black Start Units based on the lower currently applicable marginal federal corporate income tax rate. Further, there is no reasonable justification for not also updating all the input assumptions, which include state tax rates, debt interest rates, capital structure and cost of capital. Black Start Units are governed by the same federal and state corporate income tax rules, regardless of the date they begin providing service. PJM's proposal to retain the existing CRFs for some prospective Black Start Unit compensation, while at the same time adopting the new CRF formula for new Black Start Unit compensation, is unjust, unreasonable, unduly discriminatory and preferential.

A. PJM's irrational speculation that existing Black Start Units will retire and new units will not offer to provide Black Start Service if the same amended CRF applies to all units does not justify discriminatory treatment.

PJM proposes to treat existing Black Start Units differently than new Black Start Units with respect to CRFs, which means that customers will pay different rates for Black Start Service based on whether the service is provided by an existing Black Start Unit or a new one. Rates are unduly discriminatory where similarly situated entities are not treated the same.[13] PJM's proposal with respect to CRFs is, therefore, unduly discriminatory.

PJM argues that this discriminatory treatment is necessary because "applying the new formulaic CRF to 'existing Black Start Units that rely on a CRF . . . could incent some of those owners [of existing Black Start Units] to seek to terminate their current Black

[13] *E.g., Otter Tail Power Co.*, 2 F.P.C. 134, 150 (1940) ("unless there are substantial lawful circumstances which justify a difference, the same rate schedule should be made available to all customers in a given class.").

Start Unit commitments.'"[14] Additionally, PJM predicts that "'a major change to past multi-year commitments could cause new prospective providers to account for the possibility of major unanticipated changes to their commitments going forward.'"[15] Neither of PJM's rationales justify this patently discriminatory treatment.

PJM's filing proposes that both current and new Black Start Units will be able to retire after providing one-year of notice, with PJM's consent.[16] PJM also proposes that certain reasons must apply in order to terminate a commitment to provide Black Start Service.[17] These include: "Black Start Unit retirement or deactivation; expiration of permit(s) required for Black Start Unit operation or service; or required additional capital to maintain Black Start capability."[18] These requirements will prevent a Black Start Unit owner from arbitrarily or spitefully electing to terminate its Black Start Service commitment. Even in the absence of these specific requirements, PJM has discretion to reasonably withhold its consent to termination. This should include withholding consent until such time as a replacement Black Start Unit is available. Therefore, PJM has the ability to preclude the circumstances that underlie PJM's first purported justification. Moreover, there is no logical reason why a Black Start Unit owner would forgo recovery of any capital it has invested in black start capability simply because recovery under the Tariff rate has been reduced by perhaps several percentage points.

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[14] Filing at 18 (quoting Bryson Aff. ¶ 16).

[15] *Id.*

[16] *Id.* at 9.

[17] *Id.* ("at least one of the following reasons to terminate apply: Black Start Unit retirement or deactivation; expiration of permit(s) required for Black Start Unit operation or service; or required additional capital to maintain Black Start capability.").

[18] *Id.*

PJM's second rationale—that changing the CRF applicable to existing Black Start Units would somehow discourage new units from offering to supply Black Start Service—is equally illogical. PJM's filing proposes to apply a CRF to these new units that will vary depending on, among other things, the marginal federal corporate income tax rate. Thus, PJM's own proposed treatment of new Black Start Units expressly exposes those units to a reasonable level of uncertainty with respect to how their annual revenue requirements will be determined. This uncertainty is reasonable because the CRF will vary depending upon the Black Start Unit owner's potential federal income tax liability and other tangible costs. PJM has provided no evidence supporting its irrational speculation that similarly adjusting the CRF applicable to existing Black Start Units would somehow be a disincentive to new units that are already exposed to this very same reasonable risk.

B. Black Start Service compensation under PJM Tariff Schedule 6A is a formula rate that may be prospectively changed.

PJM proposes to retain the existing stated CRF percentages for existing Black Start Units while updating the CRFs for new Black Start Units. PJM's proposal to retain the existing CRFs is based in part on its representation of the "reasonable expectations of the owners of existing Black Start Units . . . ."[19] PJM indicates that these owners "have made the required capital investments in reliance on those stated [CRF] percentages."[20]

PJM's rationale fails to justify preferential rate treatment for existing Black Start Units, to the detriment of customers. Existing Black Start Units are not entitled to

[19] Filing at 18.

[20] *Id.*

insulation from prospective rate changes. To the contrary, compensation due all Black Start Units under the Tariff is the formula rate that can be changed prospectively.[21]

Under PJM Tariff Schedule 6A, compensation is not fixed but instead is based on a formula whereby revenue requirements are calculated annually. Schedule 6A provides that Black Start Units may seek a case-specific FERC-filed rate instead of the Schedule 6A formula rate, although none appear to have done so.[22] Black Start Units that do not seek such a case-specific filed rate are compensated based on the formula rate set forth in the PJM Tariff. As PJM explained in its filing:

> Schedule 6A, section 18 provides a *formula* for calculating an owner's Black Start Service revenue requirement based on relevant costs such as: Fixed Black Start Service Costs, Variable Black Start Service Costs, Training Costs, and Fuel Storage Costs. The fixed cost calculations are based in part on PJM's net cost of new entry ("Net CONE") values. The fixed cost component for Black Start Units recovering new or additional Black Start Capital Costs under section 6 includes a CRF based on a table of stated CRF percentages that vary by the age of the Black Start Unit. The table of CRF percentages also establishes various Black Start commitment terms based on the ages of Black Start Units.[23]

ODEC and AMP disagree with PJM's assertion that owners of existing Black Start Units have a "reasonable expectation" that the current CRFs would be in place for the entire duration of their Black Start Service commitments. There is no such provision in the Tariff and PJM does not cite any binding commitment to retain the existing CRFs. Instead, the CRFs are a component of the formula for calculating revenue requirements

[21] *See* FPA § 205, 16 U.S.C. § 824d; *Atlantic City Elec. Co. v. FERC*, 295 F.3d 1, 9 (D.C. Cir. 2002) ("Section 205 of the Federal Power Act gives a utility the right to file rates and terms for services rendered . . . .").

[22] Tariff, Schedule 6A, section 17 ("Black Start Service revenue requirements for each Black Start Unit shall be based, at the election of the owner, on either (i) a FERC-approved rate for the recovery of the cost of providing such service . . . , or (ii) the formula rates set forth in section 18 of this Schedule 6A.").

[23] Filing at 7-8 (citations omitted, emphasis added).

for Black Start Units. PJM's "reasonable expectation" argument implies that changes in the CRFs would deprive existing Black Start Unit owners of reasonable notice that the rates might change. However, that simply is not the case. The filed rate, PJM Tariff Schedule 6A, is a formula rate which by its nature is subject to revision. As the Court of Appeals for the District of Columbia Circuit has recognized:

> no violation of the filed rate doctrine occurs when 'buyers are on adequate [advance] notice that resolution of some specific issue may cause a later adjustment to the rate being collected at the time of service.' . . . When the very terms of the filed rate warn customers, at the time they contract for service, that the price charged will fluctuate based on an identified formula with specified cost drivers, then the rate is allowed to change when fluctuations in those cost drivers occur. That, after all, is how formulae work . . . .[24]

This same principle should apply to the "reasonable expectations" of owners of existing Black Start Units. Their compensation is established annually, based on the formula in the PJM Tariff that includes CRFs subject to change on a prospective basis. To the extent owners of existing Black Start Units were under a mistaken belief that the CRFs were not subject to change despite the clear formula in PJM's Tariff, their misunderstanding should not be perpetuated and does not justify preferential rate treatment. Taken to its logical conclusion, PJM's position here—and the Commission's acceptance of same—would create a precedent whereby formula rates can be changed on a prospective basis but only for new commitments, not existing ones. That is not consistent with precedent or the proper function of formula rates.

[24] *Old Dominion Elec. Coop. v. FERC*, 892 F.3d 1223, 1231 (D.C. Cir. 2018) (citations omitted).

C. PJM's notification letters to Black Start Units do not justify the unduly discriminatory and preferential treatment proposed by PJM.

PJM's refusal to revise the CRFs for existing Black Start Units appears to derive from comments in the PJM stakeholder process by owners of those units who made the unsupported assertion that compensation owed to existing Black Start Units is defined by contract and cannot be changed absent satisfaction of the *Mobile-Sierra*[25] public interest standard. Any such reliance on the notification letters is without merit. First, the filed rate with respect to Black Start Unit compensation is PJM Tariff Schedule 6A. PJM has not contended that there is any other filed rate in force and ODEC and AMP are not aware of any other rate on file with the Commission that governs payments to Black Start Units in PJM. The notification letters from PJM to Black Start Unit owners acknowledging each unit's Black Start Service commitment provide the opportunity to recover new or additional Black Start Capital Costs, as set forth in PJM Tariff Schedule 6A.[26] Thus, existing Black Start Unit commitments are subject to the Schedule 6A formula and CRFs that may be changed by FERC order.

Second, the notification letters do not qualify for *Mobile-Sierra* protection. There is no public interest standard protection for the notification letters provided to Black Start Units because the notification letters are not contracts,[27] do not contain *Mobile-Sierra*

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[25] *United Gas Pipeline Co. v. Mobile Gas Serv. Corp.*, 350 U.S. 332 (1956) ("*Mobile*"); *Federal Power Comm'n v. Sierra Pac. Power Co.*, 350 U.S. 348 (1956) ("*Sierra*").

[26] *See* PJM Manual 14D, section 10.1.2(H) ("PJM will notify new black start units that were selected through the process described in this Manual."). *See also* Sample PJM Notification Letter, attached hereto as **Exhibit C**.

[27] *See, e.g., Devon Power LLC,* 134 FERC ¶ 61,208, at P 11 (2011) ("the 'public interest' presumption does not apply, of its own force, when the parties have not agreed to set rates by contract." (citing *Morgan Stanley Capital Group, Inc. v. Pub. Util. Dist. No. 1*, 554 U.S. 527, 553 (2008)); *reh'g denied* 137 FERC ¶ 61,073, P 21 (2011) ("The Commission reaffirms its findings that the rates set by the forward capacity auctions represent tariff, not contract, rates and that, therefore, they are not entitled to a presumption that they are just and reasonable.")).

clauses, and were not filed with FERC for approval. FERC regulations require specific language where parties to a contract intend to prevent unilateral rate changes and there has been no indication that the existing Black Start Unit notification letters include such language.[28] Moreover, to AMP's and ODEC's knowledge, no PJM Black Start Unit has on file with FERC any contract or agreement with PJM related to Black Start Service. As a result, the notification letters are not binding contracts and there can be no argument that existing Black Start Unit commitments are subject to rates that cannot be changed by FERC order under FPA section 205, or that such changes are subject to a higher public interest standard.

The notification letters were not filed with FERC in accordance with the Prior Notice requirements imposed by FPA section 205(d)[29] and related FERC regulations.[30] FPA section 205(d) requires that, unless ordered otherwise by the Commission, public utilities give sixty days notice to the public and the Commission by filing new rate schedules. PJM does not have a FERC-filed standard form of notification letter and therefore the notification letters are not eligible for the exception provided in Order No. 2001 for standard forms of agreement.[31] Prior Notice violations can potentially result in refunds of

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[28] *See* 18 C.F.R. § 35.1(d)(3) (requiring specific contract language to address circumstances where "it is the intent of the contracting parties to withhold from the party furnishing service the right to file any unilateral rate changes under section 205. . . .").

[29] 16 U.S.C. § 824d(d).

[30] *See* 18 C.F.R. pt. 35.

[31] *See* 18 C.F.R. § 35.1(g); *Revised Public Utility Filing Requirements,* Order No. 2001, 99 FERC ¶ 61,107, at P 19 (2002) ("agreements for transmission, cost-based power sales, and other generally applicable services that do not conform to an applicable standard form of agreement in a public utility's tariff, including agreements with individualized terms and conditions or unexecuted agreements for any service, must continue to be filed with the Commission for approval before going into effect.").

interest, examination of whether the rate charged is just and reasonable, and refunds of excess charges, rather than application of *Mobile-Sierra* principles.[32]

III. REQUEST FOR RELIEF

As discussed above, AMP and ODEC support the non-rate reliability proposals in PJM's filing. AMP and ODEC also support PJM's proposed CRF formula. However, PJM's proposal to retain fixed CRFs in its Tariff for existing Black Start Units is unjust, unreasonable, unduly discriminatory and preferential, for the reasons stated above.

Because PJM's filing does not satisfy FPA section 205 standards, the Commission cannot accept it as filed.[33] However, given the importance of Black Start Service in maintaining reliability and in light of the improvements proposed in PJM's filing, AMP and ODEC believe the Commission can and should preserve the changes proposed by PJM, while also remedying the unjust and unreasonable aspects of Black Start Unit compensation provided by PJM. Specifically, AMP and ODEC request that rather than reject the filing outright, the Commission institute an investigation under FPA section 206,[34] determine that PJM's existing CRFs are unjust and unreasonable for failing to reflect current state and federal tax levels, and direct PJM to adopt the CRF changes proposed in its filing to be applied to all Black Start Units—new and existing.[35] With this action, the Commission will retain the reliability improvements made in PJM's filing, as

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[32] *See, e.g.*, Prior Notice, 64 FERC ¶ 61,139, at 61,979 (1993).

[33] *NRG Power Mktg., LLC v. FERC*, 862 F.3d 108, 116 (D.C. Cir. 2017).

[34] FPA section 206(d); 16 U.S.C. § 824e(d).

[35] FPA section 206(a); 16 U.S.C. § 824e(a). *E.g., New York v. FERC*, 535 U.S. 1, 27 (2002) ("Were FERC to investigate this alleged discrimination and make findings concerning undue discrimination . . . , § 206 of the FPA would require FERC to provide a remedy for that discrimination.").

well as provide for Black Start Unit compensation that is just, reasonable, and not unduly discriminatory or preferential.

IV. CONCLUSION

WHEREFORE, for the foregoing reasons, AMP and ODEC respectfully request that the Commission: (1) reject PJM's filing; (2) invoke its authority under FPA section 206 and determine that PJM's existing CRFs are unjust and unreasonable; (3) direct PJM to submit a filing containing an amended CRF formula that applies universally to all Black Start Units, along with the non-rate reliability proposals included in PJM's instant filing; and (4) grant such further relief as the Commission may deem appropriate.

Respectfully submitted,

/s/ *Adrienne E. Clair*
Adrienne E. Clair
Rebecca L. Shelton
Thompson Coburn LLP
1909 K Street, N.W., Suite 600
Washington, D.C. 20006-1167
(202) 585-6900
aclair@thompsoncoburn.com
rshelton@thompsoncoburn.com

Counsel to Old Dominion Electric Cooperative

/s/ *Lisa G. McAlister*
Lisa G. McAlister
Senior Vice President & General Counsel for Regulatory Affairs
Gerit F. Hull
Deputy General Counsel for Regulatory Affairs
American Municipal Power, Inc.
1111 Schrock Road, Suite 100
Columbus, OH 43229
(614) 540-1111
lmcalister@amppartners.org
ghull@amppartners.org

Dated: April 28, 2021

CERTIFICATE OF SERVICE

I hereby certify that I have on this date caused a copy of the foregoing document to be served on each person included on the official service list maintained for this proceeding by the Commission's Secretary, by electronic mail or such other means as a party may have requested, in accordance with Rule 2010 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.2010.

/s/ Lisa G. McAlister
Lisa G. McAlister
Senior Vice President & General Counsel
for Regulatory Affairs
American Municipal Power, Inc.
1111 Schrock Road, Suite 100
Columbus, OH 43229
(614) 540-1111
lmcalister@amppartners.org

Dated at Columbus, Ohio, this 28th day of April, 2021.

Exhibit A

PJM Operation Analysis & Compliance Department
Review of Black Start Formula and Cost Components
October 2019

Review of Black Start Formula and Cost Components

PJM Operation Analysis & Compliance Department

PJM Interconnection

October 2019

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Black Start: Executive Summary

Black Start Service is used to restart the grid after a loss of electrical service and is needed because most generators require electricity to start. Traditional black start is the ability of generating units to start without an outside electrical supply. Another type of black start unit is an Automated Load Rejection (ALR) unit that is a generator with a high operating factor and the demonstrated ability[1] to automatically remain operating at reduced levels when disconnected from the grid.

The PJM Open Access Transmission Tariff (tariff) [2] requires PJM to review the formula and cost components utilized to compensate Black Start Service providers at least every five years. Specifically, Schedule 6A: Section 18 states:

Every five years, PJM shall review the formula and its costs components set forth in this section 18, and report on the results of that review to stakeholders. [3]

This paper is intended to document the review as required by Schedule 6A, and is not intended to provide information and updates regarding the current PJM Operating Committee Special Sessions for Fuel Requirements for Black Start Resources. Current and future updates of the PJM Operating Committee Special Session for Fuel Requirements for Black Start Resources may be found via PJM's website for the PJM Operating Committee.[4]

Since the 2014 prior review of Schedule 6A, Section 18, a revision to the tariff language took effect on November 16, 2017 to clearly define the initial annual black start revenue requirement review process for new black start units. The initial review process for new black start units includes an initial annual black start revenue estimate to be collected during the document and compensation review period. This change has resulted in minimizing the potential for large after the fact black start rebilling charges to network service customers and point-to-point reservations.

During the past five years, PJM has held an RTO Wide Black Start Request for Proposal and four Black Start Incremental Request for Proposals with three completed and one currently under review. Generator Owner interest and black start service bidding remains active with multiple RFP responses. As a result, PJM is not recommending modifications to the current version of Schedule 6A, Section 18.

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[1] Subject to Transmission Provider concurrence
[2] https://agreements.pjm.com/oatt/3897
[3] Schedule 6A Black Start Service Section 18 Effective Date: 9/1/2018
[4] https://www.pjm.com/committees-and-groups/committees/oc.aspx

Schedule 6A Changes since 2014 Review

Initial Review for New Black Start Units

On September 22, 2017, Docket No. ER17-2332-000, the Commission issued an Order accepting revisions to PJM Tariff, Schedule 6A setting forth a process for establishing the initial revenue requirement for a new Black Start Unit entering service in PJM (effective date November 16, 2017). The new process can be found in the tariff, Section 17B which allows for the submittal of new Black Start Service revenue requirements (including supporting data and documentation) to PJM and the Market Monitoring Unit for review and analysis by no later than 90 days after entering Black Start Service. The Market Monitoring Unit has a 90-day period to review the submittals and calculate the new Black Start Unit's annual revenue requirement and submit to PJM and the Black Start Unit owner. More time is allotted in the event of more than three new Black Start owner submittals. In this case, the Marketing Monitoring Unit has an additional 90 days to review the next set of three submittals and so on until complete. The Black Start Owner has 7 days to notify PJM and the Marketing Monitoring Unit if it disagrees with the Market Monitoring Unit's determination. PJM shall determine within 30 days if the values submitted by the Black Start Unit owner meet the requirements of the Tariff and PJM Manuals. If PJM does not accept the values submitted by the Black Start Unit owner, the owner may file its proposed values with the Commission for approval. If PJM accepts the Black Start Unit owner's Black Start revenue requirements, the Market Monitoring Unit may petition the Commission for an order that would require the Black Start Unit owner to utilize the values determined by the Market Monitoring Unit or PJM or such other values determined by the Commission.

During this initial period, PJM will hold the new Black Start Unit owner's monthly credits in a non-interest bearing account. Following acceptance of the new Black Start Unit owner's annual revenue requirement (per Section 17B), the Black Start owner will begin to receive monthly credits, including any monthly credits held by PJM back to the date the unit enters Black Start Service (Section 22). Zonal rates will be based on Black Start Service capability or share of generation units designated by the Transmission Provider and allocated to network service customers and point-to-point reservations. Zonal rates will include estimated annual revenue requirements as estimated by the unit entering Black Start Service. Any estimated annual revenue requirement true up will be included in the monthly bill following the acceptance of the new Black Start unit's annual revenue requirement (Section 25)

Black Start: Current Total Revenue Requirements

Black start service supplies electricity for system restoration in the unlikely event that the entire PJM Interconnection grid would lose power. In the event that power would be lost across the entire grid, black start service is to be used to supply electricity to help restore the system. Black start service is provided by generating units that have the ability to start up and deliver power to the grid without an outside source of power – or units that can remain in operation at reduced output levels when disconnected from the grid. Such units must be able to reconnect to the grid within 180 minutes after a request from the Transmission Owner (specific to the Transmission Owner's System Restoration Plan). They also must be able to maintain frequency and voltage under varying loads. To be designated as a black start resource, a generating facility must pass a series of performance tests every 13 months. In a system-restoration situation, black start units can be used to reestablish the regional electric system. Once connected, they supply power to other generating units and help restore load. This must be a careful, deliberate process that keeps generation in balance with load in order to avoid the possibility of another loss of service.

The owners of black start units receive payments for providing the service to the grid. A generator's Annual Black Start Service Revenue Requirement is the amount of compensation a black start unit receives per delivery year if it fulfills all the black start requirements under the tariff. The PJM tariff Schedule 6A outlines the formulas used to calculate the revenue requirements.

Traditional Black Start Units

The primary formula to calculate a traditional black start generator's Annual Black Start Service Revenue Requirement can be found in the tariff, Section 18 of Schedule 6A is as follows:

$$\text{Generator's Annual Black Start Service Revenue Requirement} = \{\text{Fixed BSSC} + \text{Variable BSSC} + \text{Training Costs} + \text{Fuel Storage Costs}\} * (1 + \text{Z})$$

Where:

- Fixed BSSC = Fixed Black Start Service Cost
- Variable BSSC = Variable Black Start Service Costs
- Training Costs = $3,750 per plant per delivery year (50 staff hours per plant per year multiplied by $75 per staff hour)
- Fuel Storage Cost is the cost defined in the tariff for oil units with onsite storage (discussed below)
- Z = the incentive factor of 10 percent

The Annual Black Start Service Revenue Requirements is allotted monthly, and may change every delivery year (June 1 – May 31). PJM records the tests of all black start units receiving compensation through the PJM tariff and alerts PJM Settlements to stop payment if requirements are not met.

Automatic Load Rejection Units (ALR) or Units with a High Operating Factor

Automatic Load Rejection Units are generating units with a high operating factor that have demonstrated the ability (subject to Transmission Provider concurrence) to automatically remain operating at reduced levels when disconnected from the grid. These units can be considered black start where appropriate, but they do not receive the same black start payments as black start units that start without an outside electrical supply. The revenue requirements for ALR units are as follows[5]:

$$\text{ALR Generator's Annual Black Start Service Revenue Requirement} = \text{Training Costs} * (1 + \text{Z})$$

- Where Z is a 10 percent incentive factor
- Training costs are calculated as 50 staff hours per plant per year multiplied by $75 per staff hour = $3,750 per plan per delivery year

For ALR units, the total annual compensation from black start is $4,125 per plant per delivery year.

[5] https://agreements.pjm.com/oatt/3897

Fixed Black Start Service Cost (FBSSC)

Fixed Black Start Service Cost can be recovered through the PJM tariff or through a FERC approved rate. Fixed Black Start Service Costs recovered through the tariff are calculated in three possible ways depending on whether the unit is recovering costs under Paragraph 5[6] or Paragraph 6[7] of Schedule 6A with the central difference being whether the black start unit owner seeks to recover new or additional capital costs. The following figure shows the three methods for recovery of Fixed BSSC.

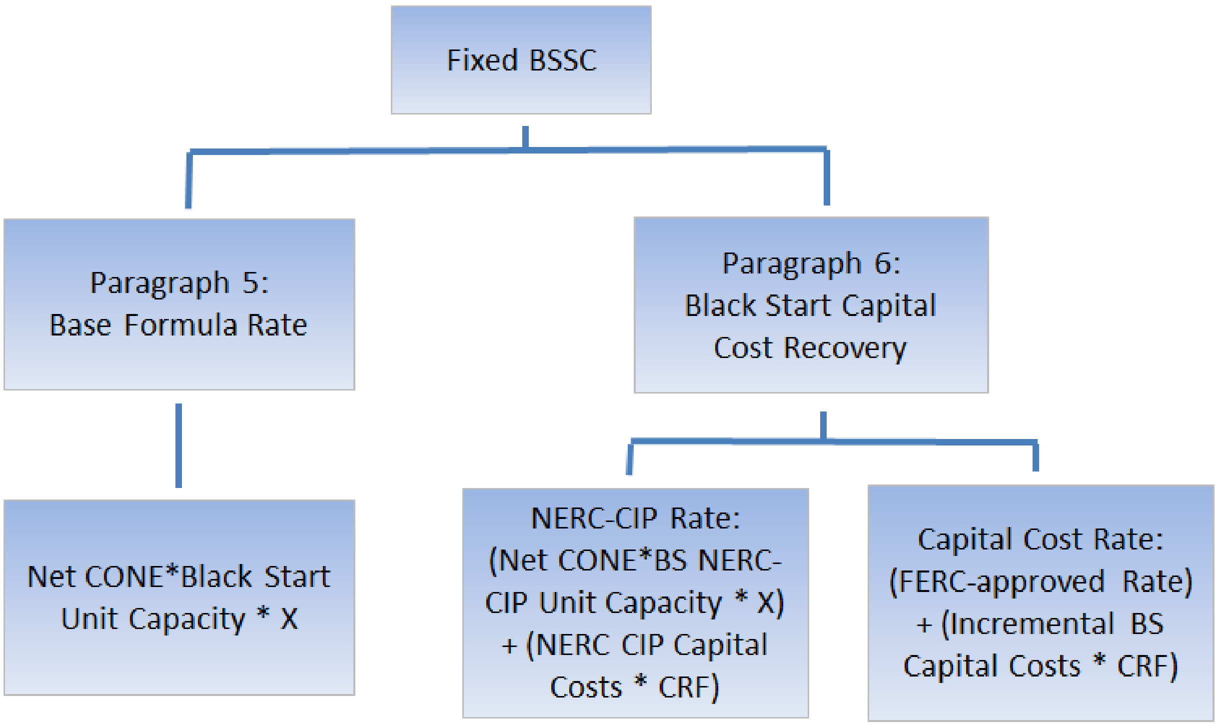

Figure 1: Three methods to recover fixed black start costs per Schedule 6A

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[6] Owners of Black Start Units selected to provide Black Start Service in accordance with section 4 of this Schedule 6A and electing to forego any recovery of new or additional Black Start Capital Costs shall commit to provide Black Start Service from such Black Start Units for an initial term of no less than two years and authorize the Transmission Provider to resell Black Start Service from its Black Start Units. The term commitment shall continue to extend until the Black Start Unit owner, or the Transmission Provider provides written, one-year advance notice of its intention to terminate the commitment or the commitment is involuntarily terminated pursuant to section 15 of this Schedule 6A.

[7] Owners of Black Start Units selected to provide Black Start Service in accordance with section 4 of this Schedule 6A and electing to recover new or additional Black Start Capital Costs shall commit to provide Black Start Service from such Black Start Units for a term based upon the age of the Black Start Unit or the longest expected life of the Incremental Black Start Capital Cost, as set forth in the applicable CRF Tables in section 18 of this Schedule 6A. For those Black Start Units that elect to recover new or additional Black Start Capital Costs in addition to a prior, FERC-approved cost recovery rate, the applicable commitment period shall be the longer of the FERC-approved recovery period or the applicable term of commitment as set forth in the CRF Tables in section 18 of this Schedule 6A. The Transmission Provider may terminate the commitment with one year advance notice of its intention to the Black Start Unit owner, but the Black Start Unit owner shall be eligible to recover any amount of unrecovered Fixed Black Start Service Costs over a period not to exceed five years. A Black Start Unit owner may terminate the provision of Black Start Service with one year advance notice and consent of the Transmission Provider (or its commitment period may be involuntarily terminated pursuant to the section 15 below). Such Black Start Unit shall forego any otherwise existing entitlement to future revenues collected pursuant to this Schedule 6A and fully refund any amount of the Black Start Capital Costs recovered under a FERC-approved rate (recovered on an accelerated basis pursuant to the provisions of section 17(i) of this Schedule 6A) in excess of the amount that would have been recovered pursuant to section 18 of this Schedule 6A during the same period. At the conclusion of the term of commitment established under this section 6 of this Schedule 6A, a Black Start Unit shall commence a new term of commitment under either section 5 or 6 of this Schedule 6A, as applicable.

If units recover Fixed BSSC through Paragraph 5, they are electing to forgo any recovery of black start capital costs and fall into the lower left-hand box in Figure 1. If units prefer to recover through Paragraph 6, then they do submit capital costs for recovery and fall into the lower two right-hand boxes in Figure 1. Units recovering costs under a FERC approved rate can also recover new or additional black start capital costs through the PJM tariff and fall into the lower right hand box in Figure 1.

Paragraph 5 Fixed Black Start Service Cost for Units not requesting Capital Cost Recovery

For units recovering costs under Paragraph 5, Fixed Black Start Service Costs are calculated using the Base Formula Rate below:

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

Where Net CONE is "*the then current installed capacity ("ICAP") net Cost of New Entry (expressed in $/MW year) for the CONE Area where the Black Start Unit is located*". The CONE areas are:

CONE Area 1: AE, DPL, JCPL, PECO, PS, RECO
CONE Area 2: BGE, PEPCO
CONE Area 3: AEP, APS, ATSI, ComEd, Dayton, DEOK, Dominion, Duquesne (DLCo), EKPC, OVEC
CONE Area 4: MetEd, Penelec, PPL

Net Cone Area $/MW day may be found by delivery year via PJM's website:
https://www.pjm.com/markets-and-operations/rpm.aspx
Each delivery year contains a workbook titled "Planning Period Parameters for Base Residual Auction" with the values listed in the Net CONE worksheet.

Black Start Unit Capacity is defined, as "*the Black Start Unit's installed capacity, expressed in MW*."

The term X is defined as *"the Black Start Service allocation factor unless a higher or lower value is supported by the documentation of the actual costs of providing Black Start Service. For such units qualifying as Black Start Units on the basis of demonstrated ability to operate at reduced levels when automatically disconnected from the grid, X shall be zero. For Black Start Units with a commitment established under paragraph 5, X shall be .01 for Hydro units, .02 for Diesel or CT units."*

Paragraph 6 Fixed Black Start Service Cost for Units requesting Capital Cost Recovery

For units recovering NERC-CIP black start capital costs under Paragraph 6, Fixed Black Start Service Costs are calculated using the following equation:

$$\begin{aligned}\text{Fixed BSSC} = {} & (\text{Net CONE} * \text{Black Start NERC-CIP Unit Capacity} * X) \\ & + (\text{Incremental Black Start NERC-CIP Capital Costs} * \text{CRF})\end{aligned}$$

Where Net CONE is "*the then current installed capacity ("ICAP") net Cost of New Entry (expressed in $/MW year) for the CONE Area where the Black Start Unit is located*".

Black Start NERC-CIP Unit Capacity is *"the Black Start Unit's installed capacity, expressed in MW, but, for the purposes of this calculation, capped at 100 MW for Hydro units, or 50 MW for CT units."*

The term X is defined as *"the Black Start Service allocation factor unless a higher or lower value is supported by the documentation of the actual costs of providing Black Start Service. For such units qualifying as Black Start Units on the basis of demonstrated ability to operate at reduced levels when automatically disconnected from the grid, X shall be zero. For Black Start Units with a commitment established under paragraph 5, X shall be .01 for Hydro units, .02 for Diesel or CT units."*

Incremental Black Start NERC-CIP Capital Costs are defined as *" those capital cost documented by the owner or accepted by the Commission for the incremental equipment solely necessary to enable a Black Start Unit to maintain compliance with mandatory Critical Infrastructure Protection Reliability Standards (as approved by the Commission and administered by the applicable Electric Reliability Organization ".*

"CRF" or "Capital Recovery Factor" is equal to the levelized CRF as set forth in the applicable CRF Table set forth below.

For units recovering incremental black start capital costs under Paragraph 6, Fixed Black Start Service Costs are calculated using the following equation;

Fixed BSSC = (FERC-approved rate) + (Incremental Black Start Capital Costs * CRF)

"FERC-approved rate" is "*the Black Start Unit's current FERC-approved recovery of costs to provide Black Start Service, if applicable. To the extent that a Black Start unit owner is currently recovering black start costs pursuant to a FERC-approved rate, which cost recovery will be included as a formulaic component for calculating the Black Start Unit's annual revenue requirement pursuant to this paragraph 18. However, under no circumstances will PJM or the Black Start Unit owner restructure or modify that existing FERC-approved rate without FERC approval."*

Incremental Black Start Capital Costs are defined as *the new or additional capital cost documented by the owner or accepted by the Commission for the incremental equipment solely necessary to enable a unit to provide Black Start Service in addition to whatever other product or services such unit may provide. Such costs shall include those incurred by a Black Start Owner in order to meet NERC Reliability Standards that apply to Black Start Units solely on the basis of the provision of Black Start Service by such unit. However, incremental Black Start Capital Costs shall not include any capital costs that the Black Start unit owner is recovering for that unit pursuant to a FERC-approved recovery rate."*

"CRF" or "Capital Recovery Factor" is "*equal to the Levelized CRF based on the age of the Black Start Unit, which is modified to provide Black Start Service, as present in the CRF Table below:"*

Age of Black Start Unit	Years of Remaining Life of Black Start Unit	Levelized CRF
1 to 5	20	0.125
6 to 10	15	0.146
11 to 15	10	0.198
16+	5	0.363

The CRF table has several different assumptions such as: the Capital Recovery Factor based on a levelized proforma for a 100MW Combustion Turbine for $1M, 2.5 percent inflation, 36 percent federal tax rate, 9 percent state tax rate, income tax rate 41 percent, 50 percent equity and 50 percent debt with a 7 percent interest rate, and a 12percent internal rate of return on equity.

Optionally, a Black Start unit owner may elect to apply an alternative Capital Recovery Factor (CRF), in lieu of the age-based CRF table listed on page 7, which is based upon the expected capital Improvement Lifespan of the new or additional capital improvements (as determined by the applicable depreciation period of the capital improvement, as published from time to time by the US Internal Revenue Service).The Applicable Recovery Period and the term of Black Start Service Commitment shall be the same and determined by the expected Capital Improvement Lifespan. In the event that the Black Start unit seeks recovery of capital improvements that are included in more than one category of Capital Improvement Lifespan (as set forth below), its Applicable Recovery period and term of commitment to provide black start service for such Black Start unit shall be the longest expected life of those new or additional capital improvements.

Capital Improvement Lifespan (years)	Applicable Recovery Period/Term of Commitment (years)	Levelized CRF
16-20	20	0.125
11-15	15	0.146
6-10	10	0.198
1-5	5	0.363

In those circumstances where a Black Start Unit owner has elected to recover incremental Black Start Capital Costs, in addition to a FERC-approved recovery rate, its applicable term of commitment shall be the greater of: (i) the FERC-approved recovery period, or (ii) the applicable term of commitment as established by the CRF Tables above. After a Black Start Unit has recovered its allowable Incremental Black Start Capital Costs or Incremental Black Start NERC-CIP Capital Costs, as provided by the applicable Capital Cost Recovery Rate, and has satisfied its applicable commitment period required under Schedule 6A: Paragraph 6, the Black Start Unit shall be committed to providing black start in accordance with Paragraph 5 of Schedule 6A and calculate its Fixed BSSC in accordance with the Base Formula rate.

A. Variable Black Start Service Cost (VBSSC)

$$\text{Variable Black Start Service Cost} = \text{Black Start Unit O\&M} * \text{Y}$$

Where Black Start Unit O&M is *"the operations and maintenance cost attributable to supporting Black Start Service and must equal the annual variable O&M outlined in the PJM Cost development Guidelines set forth in the PJM Manuals. Such costs shall include those incurred by a Black Start Owner in order to meet NERC Reliability Standards that apply to a Black Start unit solely on the basis of the provision of Black Start Service by the unit."*
Y is 0.01, "*unless a higher or lower value is supported by documentation of costs. If a value of Y is submitted for this cost, a (1-Y) factor must be applied to the Black Start unit's O&M costs on the unit's cost-based energy schedule, calculated based on the Cost Development Guidelines in the PJM Manuals"*

For unit qualifying as Black Start Units on the basis of a demonstrated ability to operate at reduced levels when automatically disconnected from the grid (ALR), there are no variable costs associated with providing Black Start Service and the value for Variable BSSC shall be zero.

B. Training Cost

$$\text{Training Costs} = 50 \text{ staff hours/year/plant} * \$75/\text{hour}$$

C. Fuel Storage Cost

Black Start Units that do not use oil as their fuel must set their Fuel Storage Costs to zero. Black Start units that can use oil for fuel shall calculate Fuel Storage Costs as:

$$\text{Fuel Storage Costs} =$$

$$(\text{Minimum Tank Suction Level} + (\text{\# of Run Hours Required} * \text{Fuel Burn Rate})) * (\text{12 month forward strip} + \text{basis}) * \text{Bond Rate}$$

Where Minimum Tank Suction Level is *"and shall apply where no direct current pumps are available for the black Start Unit"*.

Number of Run Hours are *"the actual number of hours a transmission provider requires a Black Start Unit to run. Run Hours shall be at least 16 hours or as defined by the Transmission Owner restoration plan, whichever is less".*
Fuel Burn rate is *"actual fuel burn rate for the Black Start Unit"*.

12 Month Forward Strip is *"the average of forward prices for the fuel burned in the Black Start unit traded the first business day on or following May 1"*.

Basis is *"the transportation costs from the location referenced in the forward price data to the Black Start unit plus any variable taxes".*

Bond rate is *"the value determined with reference to the Moody's Utility Index for bonds rated BAA1 reported the first business day on or following May 1".*

D. Z Factor

The Z factor shall be an incentive factor solely for Black Start Units with a commitment established under Schedule 6A Paragraph 5 and shall be ten percent. For those Black Start units that elect to recover new or additional Black Start Capital Costs under Paragraph 6, the incentive factor (Z), shall be equal to zero.

Request for Proposal (RFP) since 2014

April 11, 2014: Black Start Incremental Request for Proposal for AEP Zone. PJM requested bids for additional black start capability within the AEP transmission zone.

November 24, 2014: Black Start Incremental Request for Proposal for Northeast Ohio and Western Pennsylvania. PJM requested additional black start capability within Northeastern Ohio and Western Pennsylvania.

July 28, 2015: Second Incremental Request for Proposal for Northeast Ohio and Western Pennsylvania. PJM determined the need for additional black start capability within Northeastern Ohio and Western Pennsylvania.

February 01, 2018: PJM 2018 RTO Wide Black Start Request for Proposal. This was the second PJM RTO-wide black start Request for Proposal process and requested bids for new black start capability in accordance with the Five-Year Black Start Selection Process as documented in PJM Manual 14D.

February 01, 2019: Black Start Incremental Request for Proposal for BGE/PEPCO Zones. PJM requested bids for additional black start capability within the BGE transmission zone.

Conclusion

PJM Manual 14D: Generator Operational Requirements; Section 10: Black Start Generation Procurement outlines the PJM black start selection process and includes the RTO wide black start RFPs, PJM incremental black start RFPs and PJM Reliability Backstop processes. Resources that are awarded black start service are compensated under Schedule 6A of the Tariff, with the associated formula and its cost components documented in this paper. PJM has received, reviewed, and approved several resources during the multiple RFPs listed above. As a result, no additional changes are needed due to the response following the above mentioned RTO Wide and Incremental RFPs.

Exhibit B

AMP and ODEC
Letter to the PJM Board of Managers
March 31, 2021

March 31, 2021

VIA ELECTRONIC MAIL

Ake Almgren, Chairman
Manu Asthana, President & CEO
The PJM Board of Managers
2750 Monroe Blvd.
Audubon, PA 19408

Re: Black Start Unit Testing, Capital Recovery Factors, Involuntary Termination, MTSL, and Substitution Rules

Dear Dr. Almgren, Mr. Asthana, and the PJM Board of Managers:

The undersigned PJM Members hereby provide their position on proposed revisions to the PJM Tariff regarding Black Start Unit Testing, Capital Recovery Factors ("CRFs"), Involuntary Termination, Minimum Tank Suction Level Recovery ("MTSL"), and Substitution.

As the Board knows, on March 29, 2021, the Members Committee voted to reject a proposal to modify certain PJM Tariff provisions applicable to the provision of Black Start Service. Old Dominion Electric Cooperative ("ODEC") and American Municipal Power, Inc. ("AMP") voted against the proposal. ODEC and AMP recognize the critical role of Black Start Units in providing for reliable restoration of the PJM transmission system. ODEC and AMP support aspects of the proposal that would provide reliability improvements, and we would have preferred to see those provisions approved. However, ODEC and AMP voted in opposition to the proposal because the proposed treatment of Capital Recovery Factors ("CRFs") is unduly discriminatory.

CRFs are a component of PJM's formula rate for Black Start Service. Specifically, CRFs are used to determine the generator's annual revenue requirement. PJM Tariff Schedule 6A contains a CRF table that provides Levelized CRFs corresponding to the age of the Black Start Unit. The proposal voted on at the March 29, 2021 Members Committee meeting included a prospective change in the CRFs that would apply only to new Black Start Unit commitments. Under the proposal, the CRFs used in calculating the annual revenue requirement for existing Black Start Unit commitments would be based on the existing CRF table, without any adjustment to account for reduction of the marginal federal corporate income tax rate.

ODEC and AMP oppose continued application of the existing CRFs to some Black Start Units, while reducing the CRFs applicable to others. There is no substantive or legal basis for such discriminatory treatment. Moreover, PJM's determination that the CRFs should be reduced to reflect a lower tax burden means that continued application of the existing CRFs to a subset of Black Start Units would subject transmission customers to unreasonably high rates for Black Start Service.

ODEC and AMP have considered claims that revisions to the CRFs for existing commitments are subject to a higher legal standard—the *Mobile-Sierra* public interest standard—and therefore cannot be changed. Parties have contended that their Black Start Unit commitments are contracts subject to special protection from revisions by FERC. ODEC and AMP respectfully disagree. To the contrary, compensation due all Black Start Units under the PJM Tariff is the filed rate that must be followed, and may be prospectively changed by FERC order.

Under PJM Tariff Schedule 6A, compensation is not fixed but instead is based on revenue requirements that are calculated annually. Schedule 6A provides that Black Start Units may seek a case-specific FERC-filed rate instead of the Schedule 6A formula rate. Black Start Units that do not seek such a case-specific filed rate are compensated based on the formula rate set forth in the PJM Tariff. ODEC and AMP's understanding is that the notification letters from PJM to Black Start Units provide the opportunity to recover new or additional Black Start Capital Costs, as set forth in PJM Tariff Schedule 6A. Thus, existing Black Start Unit commitments are subject to the Schedule 6A formula and CRFs, which may be changed by FERC order.

Further, there is no public interest standard protection for the notification letters provided to Black Start Units. FERC regulations require specific language where parties to a contract intend to prevent unilateral rate changes and there has been no indication that the existing Black Start Unit notification letters include such language. Moreover, to ODEC and AMP's knowledge, no PJM Black Start Unit has on file with FERC any contract or agreement with PJM related to Black Start Service. Accordingly, there can be no argument that existing Black Start Unit commitments are subject to rates that cannot be changed by FERC order under Federal Power Act section 205, or that such changes are subject to a higher public interest standard.

For these reasons, ODEC and AMP urge the Board to submit to FERC revisions to the CRFs that would reduce the annual revenue requirement of all Black Start Units to account for the reduced tax burden, on a prospective basis, and to implement the reliability enhancements previously endorsed by PJM staff.

Respectfully,

D. Richard Beam
Senior Vice President of Power Supply and COO
Old Dominion Electric Cooperative

Pamala M. Sullivan
Chief Operating Officer
American Municipal Power, Inc.

Exhibit C

Sample PJM Notification Letter

PJM Interconnection
Valley Forge Corporate Center
2750 Monroe Blvd
Audubon, PA 19403-2497

March xx, 20xx

Mr. John Doe
ACME Generation
3000 Energy Road
Small Town, Any State xxxxx

Re: Energy Generation CT1 and CT2
Black Start RFP Proposal Acceptance

Mr. Doe:

This letter is in response to ACME Generation's (ACME) Black Start Proposal submittal to PJM Interconnection, L.L.C. ("PJM") dated May 31, 2018 regarding the PJM RTO Wide Five Year Selection Process Request for Proposal dated February 1, 2018 ("RFP") seeking submissions for replacement black start capability in all PJM transmission zones. ACME's proposed black start project capital expenditures estimated in the amount of $x,xxx,xxx at the ACME Energy Facility, which were deemed necessary by ACME Energy to enable one or more of the ACME Energy Facility's Gas Combustion Turbines ("ACME CTs") located in Small Town, Any State, to be upgraded to Black Start Units.[1]

PJM is hereby providing notification that ACME's black start proposal for $x,xxx,xxx has been accepted for ACME Energy CT1 and ACME Energy CT2 of the Gas Combustion Turbines at the ACME Facility to provide black start service ("ACME Project Costs"). The proposed ACME Project Costs to convert the units to Black Start Service have been reviewed and the purpose of this correspondence is to memorialize the terms associated with providing ACME the opportunity to recover new or additional Black Start Capital Costs as set forth in paragraph 6 of Schedule 6A of the Tariff.[2] At this time, PJM expects ACME Energy CT1 and ACME Energy CT2 to provide Black Start Service as of April x, 20xx.

Recovery of ACME Project Costs to convert the units to Black Start Service will occur in accordance with the Black Start Service revenue requirement formula set forth in Paragraph 18 of Schedule 6A of the Tariff. As ACME Energy is electing to recover Black Start Capital Costs in a manner consistent with the approach specified in Paragraph 6 of Schedule 6A of the Tariff, the Fixed Black Start Service Costs for each Black Start Unit shall be the product of (i) the Incremental Black Start Capital Cost for such Black Start Unit and (ii) the applicable Capital Recovery Factor ("CRF") as set forth in the Capital Recovery Factor table in Schedule 6A of the Tariff (the "CRF Table"). For the purposes of the ACME Energy CT1 and ACME Energy CT2,

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1 Capitalized terms not otherwise defined herein shall have the meaning ascribed to them as set forth in PJM's Open Access Transmission Tariff, the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. and/or PJM Manuals, as appropriate and applicable.

2 Importantly, this correspondence makes reference to and incorporates certain provisions of Schedule 6A of the Tariff, and where helpful to resolve ambiguity, the terms set forth herein should be construed in a manner consistent with the Tariff and/or Schedule 6A thereto.

PJM has determined that the appropriate CRF and recovery period will be five (5) years, and that the applicable CRF for the purposes of the Project will be 0.363.

Similarly, based upon the reasonable expected life of the ACME CTs upon completion of the project, ACME Energy is committing to provide Black Start Service from ACME Energy CT1 and ACME Energy CT2 for five (5) years. For its part, by submitting the ACME Project Costs for recovery, ACME Energy acknowledges that consistent with Schedule 6A of the Tariff, ACME Energy CT1 and ACME Energy CT2, shall not be eligible to recover any incentive rate for providing Black Start Service, including provisions for Fixed BSSC calculated under Paragraph 18 in accordance with Paragraph 5 of Schedule 6A, the “Z” incentive factor, or any similar successor provisions. However, consistent with the allowance for revenue recovery provided in Schedule 6A the ACME CTs may recover Variable BSSC, Training Costs and Fuel Storage Costs if applicable.

The five (5) year cost recovery period for the ACME Energy CT1 and ACME Energy CT2 shall commence on the first day of the first month following (i) completion of upgrading the ACME Energy CT1 and ACME Energy CT2 to a Black Start Unit, (ii) successful completion of a Black Start test in accordance with PJM’s manual requirements, and (iii) the addition of ACME Energy CT1 and ACME Energy CT2 as Black Start resources in the xxxxxx Restoration Plan. Prior to this date ACME will provide PJM with a best estimate of each unit’s annual revenue requirement. Initially, upon entering Black Start Service, ACME’s Black Start credits will be held by PJM in a non-interesting bearing account until approval of ACME Energy CT’s annual revenue requirement has been approved in accordance with Paragraph 17B of Schedule 6A to the Tariff. However, for each month during the applicable five (5) year cost recovery period, including the months when revenues were withheld by PJM during the revenue approval process, that the ACME Energy CT1 and ACME Energy CT2 has successfully complied with all applicable Black Start testing requirements, ACME Energy will be paid, for the ACME Energy CT1 and ACME Energy CT2: (a) Black Start Service Revenue Requirements for the applicable unit for such year calculated in accordance with the Black Start Service Revenue Requirement set forth in Paragraph 18 of Schedule 6A to the Tariff divided by (b) twelve (12) (the amount calculated by dividing (a) by (b) shall be the “Monthly Black Start Service Revenue Requirement”). For the months when revenues were withheld by PJM during the revenue approval process, PJM will reconcile the estimated annual revenue requirement with the final approved annual revenue requirement pursuant to Paragraph 17B of Schedule 6A to the Tariff and issue credits or charges based on the final approved annual revenue requirement.

Importantly, ACME Energy shall not include in its RPM avoided costs rates (ACR or APIR – Section 6.8 of Attachment DD to the Tariff) any Black Start Capital Costs or any avoidable costs associated with black start service during this five (5) year term of commitment.

Finally, in the event that during the five (5) year cost recovery period ACME Energy maintains that an additional amount of capital investment is required in order for ACME Energy CT1 and ACME Energy CT2 to provide Black Start Service, the period for recovery of any such additional capital investment (assuming approval) shall be determined in accordance with Paragraph 18 of Schedule 6A. ACME Energy acknowledges that the period of recovery of such additional capital investment may run concurrently with the recovery of the costs contemplated in this correspondence.

If you should have any questions or concerns, please do not hesitate to contact me at 610-666-xxxx.

Sincerely,

CC: Joseph Bowring, President, Monitoring Analytics