

January 31, 2024

**VIA ELECTRONIC FILING**

Honorable Debbie-Anne A. Reese, Acting Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, DC 20426

Re: *PJM Interconnection, L.L.C.*, Docket No. EL21-91-00\_  
Settlement Agreement and Offer of Settlement

Dear Secretary Reese:

Pursuant to Rule 602 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (“Commission”), 18 C.F.R. § 385.602, PJM Interconnection, L.L.C. (“PJM”) hereby files the attached Settlement Agreement and Offer of Settlement (“Settlement”) resolving all issues set for hearing in the above-referenced proceeding. PJM respectfully request that these materials be transmitted to the Presiding Judge, Joel deJesus in accordance with Rule 602(b)(2)(i).<sup>1</sup>

**I. DOCUMENTS ENCLOSED**

This filing consists of the following:

- This transmittal letter;
- Offer of Settlement;
- Explanatory Statement;
- Attachment A: Pro forma Tariff Revisions (redline); and
- Attachment B: Pro forma Tariff Revisions (clean).

Filed simultaneously with this Settlement PJM files with the Chief Administrative Law Judge a Motion to place into the Settlement rates into effect on an interim basis, the rates (“Motion”). Such interim rates shall remain in effect while the Commission considers the

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<sup>1</sup> Rule 602(b)(2)(i) directs the filing of an Offer of Settlement with the Secretary and the Secretary transmits the offer to the presiding officer if the offer is filed after a hearing has been ordered but before the presiding officer certifies the record to the Commission. 18 C.F.R. § 385.602(b)(2)(i).

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Settlement. PJM also includes with the Motion a revised rate schedule to be effective January 1, 2024 in eTariff format.

## **II. SERVICE**

Copies of the Settlement will be electronically served on all parties in the above-referenced proceeding and all persons required to be served in accordance with Rule 602(d).<sup>2</sup> In accordance with Rule 602(f), comments on this Settlement may be filed not later than February 20, 2024 and reply comments may be filed not later than March 1, 2024, unless otherwise provided by the Commission or the presiding officer.<sup>3</sup>

Respectfully submitted,

By: /s/ Ruth Porter

Ruth Porter

Wendy Warren

Wright & Talisman P.C.

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Washington, D.C.

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*Attorneys for*

*PJM Interconnection, L.L.C.*

January 31, 2024

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<sup>2</sup> 18 C.F.R. § 385.602(d).

<sup>3</sup> 18 C.F.R. § 385.602(f).

**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 Washington, DC, this 31st day of January 2024.

*/s/ Ruth Porter*  
Ruth Porter  
WRIGHT & TALISMAN, P.C.  
1200 G Street, N.W., Suite 600  
Washington, DC 20005-3898  
(202) 393-1200

***Attorney for the  
PJM Interconnection, L.L.C.***

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

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

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**Docket No. EL21-91-00\_**

**SETTLEMENT AGREEMENT**

**January 31, 2024**

This Settlement Agreement (“Settlement”) is entered into as of January 31, 2024 by and among PJM Interconnection, L.L.C. (“PJM”); American Municipal Power, Inc., Dynegy Marketing and Trade, LLC, Hazelton Generation, LLC, J-POWER USA Development Co., Ltd., LS Power Development, LLC, Old Dominion Electric Cooperative, PJM Industrial Customer Coalition, and Vistra Corp. (collectively the “Settling Parties”).

This Settlement is filed with the Federal Energy Regulatory Commission (“Commission” or “FERC”), pursuant to Rule 602 of the Commission’s Rules of Practice and Procedure, 18 C.F.R. § 385.602, to resolve all issues set for hearing in the above-captioned docket. The Settling Parties are not aware of any opposition to the Settlement, except by Monitoring Analytics, LLC in its capacity as the Independent Market Monitor for PJM. The terms and conditions of this Settlement comprise an interrelated package that reflects negotiated compromises among the Settling Parties to achieve an agreed resolution, thereby avoiding the time, expense, and uncertainty of protracted litigation. The Settlement is subject in every particular respect to the conditions set forth herein, and is made with the understanding that each term, including the attachments to this Settlement, is material and integral to the Settlement as a whole. For the avoidance of doubt, any workpapers provided during the process that led to this Settlement have been provided as

a courtesy, are not part of this Settlement, and changes to those workpapers will not necessitate amendment to this Settlement or any type of filing with the Commission.

## **ARTICLE I BACKGROUND**

- 1.1.** On April 7, 2021,<sup>1</sup> as amended June 11, 2021,<sup>2</sup> pursuant to section 205 of the Federal Power Act (“FPA”), PJM filed revisions to Schedule 6A of its Open Access Transmission Tariff (“Tariff”) seeking to revise certain rate and non-rate terms and conditions for the provision of Black Start Service<sup>3</sup> in competitive solicitations.<sup>4</sup> Specifically, PJM proposed to offer a formula-based rate option applicable to generators that PJM selects for Black Start Service in competitive solicitations held after the proposed effective date of June 6, 2021.<sup>5</sup>
- 1.2.** On August 10, 2021, the Commission accepted PJM’s proposed revisions to Schedule 6A of its Tariff effective June 6, 2021, to provide a formula-based rate option for Black Start Service on a going-forward basis,<sup>6</sup> but initiated this proceeding pursuant to FPA section 206 to investigate whether PJM’s existing rates in Schedule 6A for units selected to provide Black Start Service prior to the

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<sup>1</sup> *PJM Interconnection, L.L.C.*, Tariff, Schedule 6A, Black Start Revisions of PJM Interconnection, L.L.C., Docket No. ER21-1635-000 (Apr. 7, 2021) (“Black Start Filing”).

<sup>2</sup> *PJM Interconnection, L.L.C.*, Submission of Response to Deficiency Letter, Docket No. ER21-1635-000 (June 11, 2021).

<sup>3</sup> Capitalized terms used, but not defined, in this motion have the meaning set forth in the Tariff.

<sup>4</sup> Black Start Filing at 1-2.

<sup>5</sup> See Black Start Filing at 1-3.

<sup>6</sup> *PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,080, at P 1 (2021).

June 6, 2021 effective date for the formula rate, remain just and reasonable.<sup>7</sup> In particular, the Commission instituted this proceeding to investigate whether PJM’s existing rates for units providing Black Start Service “which are based on a federal corporate income tax rate that pre-dates the Tax Cuts and Jobs Act of 2017 [], remain just and reasonable.”<sup>8</sup> The Commission directed PJM to either “(1) propose revisions to its Black Start Service rates to reflect changes in the federal corporate income tax rate and describe the methodology used for making those revisions; or (2) show cause why it should not be required to do so.”<sup>9</sup>

**1.3.** The Settling Parties each filed a timely motion to intervene.<sup>10</sup>

**1.4.** On October 12, 2021, PJM responded to the Commission’s August 10, 2021 order.<sup>11</sup>

**1.5.** On March 24, 2023, the Commission issued an order establishing hearing and settlement judge procedures to determine the Capital Recovery Factor (“CRF”) values for the pre-June 6, 2021 Black Start Units.<sup>12</sup>

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<sup>7</sup> *Id.* at P 2.

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

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

<sup>10</sup> *See PJM Interconnection, L.L.C.*, 182 FERC ¶ 61,194, at P 8, *order on reh’g*, 184 FERC ¶ 61,077 (2023).

<sup>11</sup> *PJM Interconnection, L.L.C.*, PJM Interconnection, L.L.C. Response to Commission’s Show Cause Order, Docket No. EL21-91-000 (Oct. 12, 2021).

<sup>12</sup> *See generally PJM Interconnection, L.L.C.*, 182 FERC ¶ 61,194.

- 1.6.** On March 31, 2023, the Chief Judge designated Judge Patricia E. Hurt the Settlement Judge and directed Judge Hurt to report on the status of settlement discussions within 60 days.<sup>13</sup>
- 1.7.** On April 21, 2023, Vistra Corp. and Dynegy Marketing and Trade, LLC (collectively “Vistra”) filed a request for rehearing of the Commission’s March 24, 2023 order establishing a hearing.<sup>14</sup> The Commission denied Vistra’s request for rehearing by operation of law on May 22, 2023.<sup>15</sup> Vistra filed a petition for review of the March 24, 2023 order and the notice denying rehearing by operation of law on July 17, 2023 in the U.S. Court of Appeals for the District of Columbia Circuit (“D.C. Circuit”).<sup>16</sup>
- 1.8.** On August 4, 2023, the Commission issued an order addressing the arguments raised by Vistra on rehearing and denied rehearing.<sup>17</sup> Vistra timely filed a petition for review of the August 4, 2023 order in the D.C. Circuit.<sup>18</sup> The D.C. Circuit

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<sup>13</sup> *PJM Interconnection, L.L.C.*, Order of Chief Judge Designating Settlement Judge, Docket No. EL21-91-000 (Mar. 31, 2023).

<sup>14</sup> *PJM Interconnection, L.L.C.*, Request for Rehearing of Vistra Corp. and Dynegy Marketing and Trade, LLC, Docket No. EL21-91-000 (Apr. 21, 2023).

<sup>15</sup> *PJM Interconnection, L.L.C.*, 183 FERC ¶ 62,094 (2023).

<sup>16</sup> Petition for Review, *Vistra Corp. v. FERC*, Case No. 23-1186 (D.C. Cir. July 17, 2023).

<sup>17</sup> *PJM Interconnection, L.L.C.*, 184 FERC ¶ 61,077 (2023).

<sup>18</sup> Petition for Review, *Vistra Corp. v. FERC*, Case No. 23-1228 (D.C. Cir. Aug. 22, 2023).

consolidated Vistra’s petitions for review on August 23, 2024.<sup>19</sup> The consolidated petitions for review remain pending before the D.C. Circuit.

- 1.9.** Judge Hurt convened formal settlement conferences on April 25, July 18, and August 22, 2023.<sup>20</sup> The participants were unable to reach an agreement during those conferences and therefore requested that Judge Hurt declare an impasse.<sup>21</sup> Judge Hurt issued an order declaring an impasse and recommending the termination of settlement procedures on August 23, 2023.<sup>22</sup>
- 1.10.** On August 25, 2023, the Chief Judge terminated settlement procedures, designated Joel deJesus the presiding administrative law judge, and set this proceeding for a Track III procedural schedule.<sup>23</sup>
- 1.11.** Following further settlement discussions, the Settling Parties reached a settlement in principle. Accordingly, Commission Trial Staff filed a motion to suspend the

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<sup>19</sup> *Vistra Corp. v. FERC*, Case No. 23-1186 (D.C. Cir. Aug. 23, 2023) (order consolidating Nos. 23-1186 & 23-1228).

<sup>20</sup> *PJM Interconnection, L.L.C.*, Order Declaring Impasse, Docket No, EL21-91-000, at P 2 (Aug. 23, 2023).

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

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

<sup>23</sup> *PJM Interconnection, L.L.C.*, Order of Chief Judge Terminating Settlement Judge Procedures, Designating Presiding Administrative Law Judge, and Establishing Track III Procedural Time Standards, Docket Nos. EL21-91-000, -003 (Aug. 25, 2023).

procedural schedule on January 10, 2024.<sup>24</sup> On January 16, 2024, the Chief Judge granted the motion to suspend the procedural schedule.<sup>25</sup>

**ARTICLE II  
RATE MATTERS**

**2.1 Settlement Rates.** PJM will revise Schedule 6A of its Tariff as shown in redline and clean on the pro forma tariff sheets provided as Attachments A and B, respectively, to this Settlement, which reflect the following CRF values as settlement rates for units selected prior to June 6, 2021 (“Settlement Rates”), to provide Black Start Service:

<b>Age of Black Start Unit in Years</b>	<b>Term of Black Start Commitment in Years</b>	<b>Levelized CRF</b>
1 to 5	20	0.1180
6 to 10	15	0.1348
11 to 15	10	0.1767
16+	5	0.3097

Concurrent with the filing of this Settlement with the Commission, PJM will file a motion to place these Settlement Rates in effect as of January 1, 2024 on an interim basis pending the Commission’s approval of this Settlement (“Interim Settlement Rates”).

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<sup>24</sup> *PJM Interconnection, L.L.C.*, Motion of Commission Trial Staff to Suspend the Procedural Schedule and Shorten Answer Period, Docket No. EL21-91-003 (Jan. 10, 2024).

<sup>25</sup> *PJM Interconnection, L.L.C.*, Order of Chief Judge Suspending Procedural Schedule, Docket No. EL21-91-003 (Jan. 16, 2024) (advising the Participants either to file this Settlement by January 31, 2024 or a status report detailing progress made on the preparation of settlement documents).

**2.2** *Effective Date of Settlement Rates.* Subject to this Settlement becoming effective in accordance with Article III below, the Settlement Rates shall be effective on a permanent basis as of January 1, 2024.

**2.3** *Refunds.* No refunds will be required with respect to the CRF values in Schedule 6A of the Tariff for Black Start Service rendered prior to January 1, 2024 by units PJM selected for Black Start Service prior to June 6, 2021. To the extent the motion contemplated in Section 2.1 above to place the Interim Settlement Rates into effect is denied, or the Interim Settlement Rates are permitted to take effect later than January 1, 2024, provided the Settlement subsequently becomes effective in accordance with Article III below, PJM will refund any and all amounts collected in excess of the Settlement Rates for Black Start Service rendered January 1, 2024 or later, by units PJM selected for Black Start Service prior to June 6, 2021. Such refunds will be issued within sixty (60) days of the Settlement Effective Date as defined in Section 3.1 and will include interest calculated in accordance with 18 C.F.R. § 35.19a. PJM will file a refund report with the Commission within thirty (30) days following refund issuance.

**2.4** *Surcharge in the Event of Commission Rejection or Material Modification.* It is expressly agreed and understood that, in the event that either the Commission rejects this Settlement by final order or PJM terminates this Settlement in accordance with Section 4.1, PJM shall file with the Commission, and the other Settling Parties will not oppose, a request to reinstate the CRF rates currently set forth in Schedule 6A of the Tariff for units selected prior to June 6, 2021, subject to refund, pending the final outcome of this proceeding, and to resettle the amounts

collected during any period when the Interim Settlement Rates were in effect, to collect and distribute amounts that would have been collected under the CRF rates in effect prior to filing the Interim Settlement Rates.

### **ARTICLE III EFFECTIVE DATE**

- 3.1 *Severability and Effective Date.*** The various provisions of this Settlement are not severable, and shall become binding and effective upon issuance of a Commission order approving this Settlement without material modification or condition or subject to modification or condition acceptable to all Settling Parties, including as provided in Article IV hereof, and such Commission order becomes final and non-appealable (“Final Commission Order”). For the purposes of this Settlement, the Commission order shall be deemed a Final Commission Order on one of the following dates, whichever is applicable (the “Settlement Effective Date”): (1) the date on which all requests for rehearing of the Commission order approving the Settlement are denied and the right to petition for review expires; (2) in the absence of any requests for rehearing, the date on which the right to request rehearing expires; or (3) if a petition for review of a rehearing order is filed in any federal court of appeals, the date that proceedings on review are complete or any orders on remand are not subject to further rehearing or review.
- 3.2 *Withdrawal of Petition for Review.*** Within ten (10) days of the Settlement Effective Date, Vistra will file to withdraw the pending petitions for review described in Sections 1.7 and 1.8 herein from the D.C. Circuit.

**ARTICLE IV  
MODIFICATION OR CONDITION OF SETTLEMENT**

**4.1** *Conditions to Effectiveness of the Settlement.* This Settlement is expressly conditioned upon the approval of all provisions in the Settlement by the Commission in accordance with Rule 602, without modification, provided that, if the Commission conditions its approval of this Settlement or requires modification of the Settlement, any Settling Party may notify the other Settling Parties within five (5) business days of the issuance of such order that it opposes the Settlement as so conditioned or modified. In such event, the Settling Parties shall meet or confer within ten (10) business days after such notification is provided to evaluate whether the concerns of the Settling Party(ies) can be addressed through a revision to the Settlement. If a revised offer of settlement cannot be reached and the concerns of the Settling Party(ies) cannot otherwise be adequately addressed within five (5) business days of such meeting or conference (unless mutually extended by the Settling Parties), the Settlement shall be of no force and effect and the objecting Settling Party(ies) shall so inform the Commission. Any Settling Party that does not so communicate its objections to any such condition or modification in accordance with this Section 4.1 shall be deemed to have waived all objections and may not seek rehearing of the Commission order conditioning its approval of this Settlement or modifying this Settlement. No Settling Party shall be bound by any part of this Settlement and the Settlement shall be null and void unless it becomes effective in the manner provided by Article III and this Article IV.

- 4.2** *Cooperation in Filing and Approval of the Settlement.* Each Settling Party shall cooperate with, and shall not take any action inconsistent with: (i) the filing of this Settlement with the Commission, or (ii) efforts to obtain Commission approval of this Settlement and the Tariff, Schedule 6A revisions shown in Attachments A and B without change or condition.
- 4.3** *Support for the Settlement.* The Settling Parties are obligated to make reasonable efforts to support and defend the terms of the Settlement against any attempt to modify or nullify any terms of the Settlement at the Commission, before other regulatory agencies, or in the courts. This Settlement will not limit any Settling Party's right to respond to any pleading or other filing, submitted by a participant other than a Settling Party, to the Commission or in any other forum that seeks to alter or terminate the effectiveness of any term or provision of the Settlement, provided that any such response is consistent with the Settling Party's obligation to support and defend the terms of the Settlement.

**ARTICLE V  
MISCELLANEOUS PROVISIONS AND RESERVATIONS**

- 5.1** *Entire Agreement.* This Settlement, including any exhibits or attachments, constitutes the entire agreement with regard to the matters in the captioned proceeding and implies no right, duties, or other restrictions not expressly set forth herein. No other agreement with regard to these matters shall be binding on the Settling Parties except by written amendment agreed to by all Settling Parties. The terms of this Settlement may only be submitted as an integrated whole, and it is understood that each provision of this Settlement is in consideration and support of

all the other provisions, and expressly conditioned upon approval by the Commission as provided for herein. Except for the terms and conditions enumerated herein, the Settling Parties acknowledge and agree that they have not made any other promises, warranties, or representations to each other regarding any aspect of the resolution of the matters addressed in this Settlement. Each Settling Party acknowledges that it has read this Settlement and executed it without relying upon any other promise, warranty, or representation, written or otherwise, of any other party.

**5.2 Filing Rights.** Provided the Settlement becomes effective in accordance with Article III of this Settlement, the Settling Parties agree to refrain from making any filings pursuant to section 205 or 206 of the FPA to modify the Settlement Rates for a period of two years following the Settlement Effective Date (“Keep-Out Period”). After the Keep-Out Period, nothing contained in this Settlement shall be construed as affecting in any way PJM’s right unilaterally to make an application to the FERC for a prospective change in rates, terms or conditions of service under section 205 of the FPA, or as affecting in any way any Settling Party’s right to comment upon or protest any such application. Any such section 205 application shall not propose any modification to the rates, terms, or conditions of Black Start Service provided during the Keep-Out Period. After the Keep-Out Period, nothing contained in this Settlement will be construed as affecting in any way any Settling Party’s rights to unilaterally submit filings to FERC under section 206 of the FPA seeking a prospective change in concerning PJM’s rates, terms or conditions of service.

**5.3 Declaration of Privilege.** The discussions that produced this Settlement have been conducted with the explicit understanding that all such discussions and documents, including offers of settlement, are and shall remain privileged, and shall be without prejudice to the positions of any Settling Party or participant presenting any such offer or participating in any such discussion, and are not to be publicly disclosed, except that the Settlement as filed at the Commission and as approved by the Commission may be publicly disclosed; provided however that Settling Parties may introduce matters pertaining to the Settlement in any proceeding seeking to enforce the terms hereof. In the event the Commission rejects the Settlement, Rule 602(e) of the Commission's Rules of Practice and Procedure will apply to bar the admissibility, in this proceeding or otherwise, of this Settlement and of any data submissions, document submissions, and/or negotiations leading up to this Settlement.

**5.4 No Admission.** This Settlement is entered into upon the understanding that it constitutes an integrated, negotiated agreement and, except as explicitly set forth herein, no Settling Party shall be deemed to have approved, accepted, agreed to, or consented to any principle or position advanced or taken in this proceeding by any other participant, or to have prejudiced positions taken or that may be taken by such Settling Party in this or any other proceeding.

**5.5 No Precedent or Settled Practice.** This Settlement shall not be cited or relied upon as precedent for any purpose or as establishing any issue or principle. Neither the Settling Parties nor the Commission shall be deemed to have approved, accepted, agreed, or otherwise consented to any ratemaking principle or methodology or to

any Tariff interpretation or modification or to any other factor or concept underlying or supposed to underlie any of the matters herein, unless expressly provided in this Settlement. The Commission’s approval of this Settlement shall not constitute precedent nor be used to prejudice any otherwise available rights or arguments of any party in a future proceeding (including but not limited to proceedings before the Commission or other regulatory bodies or proceedings in a court), other than to enforce the terms of this Settlement, and shall not be used as evidence that a particular method is a “long standing practice” as that term is used in *Columbia Gas Transmission Corp. v. FERC*, 628 F.2d 578 (D.C. Cir. 1979), or a “settled practice” as that term is used in *Public Service Commission of New York v. FERC*, 642 F.2d 1335 (D.C. Cir. 1980).

**5.6 Standard of Review.** The standard of review for any proposed changes to the terms of this Settlement unilaterally sought by any party to this proceeding shall be the “public interest” standard of review commonly referred to as the “*Mobile Sierra*” standard of review.<sup>26</sup> The standard of review for any modifications to this Settlement proposed by any other person or entity, including any modifications resulting from the Commission acting *sua sponte*, will be the ordinary just and reasonable standard. For clarification, nothing in this Section 5.6 is intended to limit a Settling Party’s future filing rights pursuant to Section 5.2 of this Settlement.

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<sup>26</sup> See *NRG Power Mktg., LLC v. Me. Pub. Utils. Comm’n*, 558 U.S. 165 (2010); *Morgan Stanley Cap. Grp. Inc. v. Pub. Util. Dist. No. 1*, 554 U.S. 527 (2008); *United Gas Pipe Line Co. v. Mobile Gas Serv. Corp.*, 350 U.S. 332 (1956); *FPC v. Sierra Pacific Power Co.*, 350 U.S. 348 (1956).

- 5.7 Waiver.** No provision of this Settlement may be waived if such waiver would cause financial injury to any other party to this Settlement, unless the injured party consents in writing.<sup>27</sup> No provision of this Settlement may be waived except through a writing signed by an authorized representative of the waiving party. Waiver of any one provision of this Settlement shall not be deemed to waive any other provision.
- 5.8 Successors and Assigns.** This Settlement is binding upon and for the benefit of the Settling Parties and their successors and assigns.
- 5.9 Requisite Waivers.** The Commission’s approval of this Settlement shall constitute the requisite grant of any waivers of any regulations as may be necessary to permit the implementation of the provisions of this Settlement by its terms.
- 5.10 Ambiguities.** This Settlement is the result of negotiations among, and has been reviewed by, each Settling Party and its respective counsel. Accordingly, no ambiguity shall be construed in favor of or against any Settling Party on the basis that a particular party was or was not the drafter.
- 5.11 Headings.** Section headings are used in this Settlement solely for convenience of reference and shall not be used to interpret or modify the terms of this Settlement.

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<sup>27</sup> See *CPV Fairview, LLC*, 174 FERC ¶ 61,029, at P 12 (2021); *Midcontinent Indep. Sys. Operator, Inc.*, 154 FERC ¶ 61,059, at P 7 (2016).

IN WITNESS WHEREOF, this Settlement is entered into as of the date first written above by and between the Settling Parties through their authorized representatives, who represent that they are fully authorized to do so on behalf of their principals.

Respectfully submitted,

By: /s/ Neil Levy

Date: January 31, 2024  
Neil Levy  
Partner, McDermott Will & Emery LLP  
on behalf of LS Power Development,  
LLC

By: /s/ Neil Levy

Date: January 31, 2024  
Neil Levy  
Partner, McDermott Will & Emery LLP  
on behalf of J-POWER USA  
Development Co., Ltd.

By: /s/ Stephen Hug

Date: January 31, 2024  
Stephen Hug  
Partner, Akin Gump Strauss Hauer &  
Feld LLP  
on behalf of Vistra Corp.

By: /s/ Emily Mallen

Date: January 31, 2024  
Emily Mallen  
Partner, Akin Gump Strauss Hauer &  
Feld LLP  
on behalf of Dynegy Marketing and  
Trade, LLC

By: /s/ Kenneth Stark

Date: January 31, 2024  
Kenneth Stark  
Attorney, PJM Industrial Customer  
Coalition

By: /s/ Adrienne Clair

Date: January 31, 2024  
Adrienne Clair  
Partner, Thompson Coburn LLP  
on behalf of Old Dominion Electric  
Cooperative

By: /s/ Jason Gray

Date: January 31, 2024  
Jason Gray  
Partner, Duncan & Allen LLP  
on behalf of American Municipal Power,  
Inc.

By: /s/ Allison Salvia

Date: January 31, 2024  
Allison Salvia  
Counsel, Eversheds Sutherland (US) LLP  
on behalf of Hazelton Generation, LLC

By: /s/ Steve Pincus

Date: January 31, 2024

Steve Pincus

Managing Counsel, Sr. Director, PJM  
Interconnection, L.L.C.

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

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

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**Docket No. EL21-91-00\_**

**OFFER OF SETTLEMENT AND EXPLANATORY STATEMENT OF PJM  
INTERCONNECTION, L.L.C. AND THE SETTLING PARTIES**

Pursuant to Rule 602 of the Federal Energy Regulatory Commission’s (“Commission”) Rules of Practice and Procedure,<sup>1</sup> PJM Interconnection, L.L.C. (“PJM”) submits this Explanatory Statement to the accompanying Offer of Settlement (“Settlement”). The Settlement is joined by American Municipal Power, Inc., Dynegy Marketing and Trade, LLC, Hazelton Generation, LLC, J-POWER USA Development Co., Ltd., LS Power Development, LLC, Old Dominion Electric Cooperative, PJM Industrial Customer Coalition, and Vistra Corp. (together with PJM, the “Settling Parties” and each a “Settling Party”). In addition to the Settling Parties, Maryland Office of People’s Counsel, Office of the People’s Counsel for the District of Columbia, the Public Utilities Commission of Ohio Office of the Federal Energy Advocate, and the Delaware Division of the Public Advocate do not oppose the Settlement.

The Settlement resolves all issues set for hearing by the Commission in Docket Nos. ER21-91-000, et al. Moreover, the Settlement is in the public interest, and PJM respectfully requests that the Commission approve the Settlement on its terms, without modification or condition. This Explanatory Statement summarizes the Settlement and the procedural history leading up to the filing of the Settlement and does not alter any

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<sup>1</sup> 18 C.F.R. § 385.602.

provision of the Settlement. To the extent any language in this Explanatory Statement differs from language in the Settlement, the Settlement controls.

## **I. BACKGROUND**

On April 7, 2021,<sup>2</sup> as amended June 11, 2021,<sup>3</sup> pursuant to section 205 of the Federal Power Act (“FPA”), PJM filed revisions to Schedule 6A of its Open Access Transmission Tariff (“Tariff”) seeking to revise certain rate and non-rate terms and conditions for the provision of Black Start Service in competitive solicitations.<sup>4</sup> Specifically, PJM proposed to offer a formula-based rate option applicable to generators that PJM selects for Black Start Service in competitive solicitations held after the proposed effective date of June 6, 2021.<sup>5</sup>

On August 10, 2021, the Commission accepted PJM’s proposed revisions to Schedule 6A of its Tariff effective June 6, 2021, to provide a formula-based rate option for Black Start Service on a going-forward basis,<sup>6</sup> but initiated this proceeding pursuant to FPA section 206 to investigate whether PJM’s existing rates in Schedule 6A for units selected to provide Black Start Service<sup>7</sup> prior to the June 6, 2021 effective date for the formula rate remain just and reasonable.<sup>8</sup> In particular, the Commission instituted this proceeding to investigate whether PJM’s existing rates for units providing Black Start Service “which are based on a federal corporate income tax rate that pre-dates the Tax

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<sup>2</sup> *PJM Interconnection, L.L.C.*, Tariff, Schedule 6A, Black Start Revisions of PJM Interconnection, L.L.C., Docket No. ER21-1635-000 (Apr. 7, 2021) (“Black Start Filing”).

<sup>3</sup> *PJM Interconnection, L.L.C.*, Submission of Response to Deficiency Letter of PJM Interconnection, L.L.C., Docket No. ER21-1635-000 (June 11, 2021).

<sup>4</sup> Black Start Filing at 1-2.

<sup>5</sup> *See id.* at 1-3.

<sup>6</sup> *PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,080, at P 1 (2021).

<sup>7</sup> Capitalized terms used, but not defined, in this motion have the meaning set forth in the Tariff.

<sup>8</sup> *PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,080, at P 2.

Cuts and Jobs Act of 2017 [], remain just and reasonable.”<sup>9</sup> The Commission directed PJM to either “(1) propose revisions to its Black Start Service rates to reflect changes in the federal corporate income tax rate and describe the methodology used for making those revisions; or (2) show cause why it should not be required to do so.”<sup>10</sup>

The Settling Parties each filed a timely motion to intervene.<sup>11</sup> On October 12, 2021, PJM responded to the Commission’s August 10, 2021 order.<sup>12</sup>

On March 24, 2023, the Commission issued an order establishing hearing and settlement judge procedures to determine the Capital Recovery Factor (“CRF”) values for the pre-June 6, 2021 Black Start Service units.<sup>13</sup> On March 31, 2023, the Chief Judge designated Judge Patricia E. Hurt the Settlement Judge and directed Judge Hurt to report on the status of settlement discussions within 60 days.<sup>14</sup>

On April 21, 2023, Vistra Corp. and Dynegy Marketing and Trade, LLC (collectively “Vistra”) filed a request for rehearing of the Commission’s March 24, 2023 order establishing a hearing.<sup>15</sup> The Commission denied Vistra’s request for rehearing by operation of law on May 22, 2023.<sup>16</sup> Vistra filed a petition for review of the March 24,

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<sup>9</sup> *Id.* at PP 1-2.

<sup>10</sup> *Id.* at P 2.

<sup>11</sup> See *PJM Interconnection, L.L.C.*, 182 FERC ¶ 61,194, at P 8 (2023).

<sup>12</sup> *PJM Interconnection, L.L.C.*, PJM Interconnection, L.L.C. Response to Commission’s Show Cause Order, EL21-91-000 (Oct. 12, 2021).

<sup>13</sup> *PJM Interconnection, L.L.C.*, 182 FERC ¶ 61,194 (2023).

<sup>14</sup> *PJM Interconnection, L.L.C.*, Order of Chief Judge Designating Settlement Judge, Docket No, EL21-91-000 (Mar. 31, 2023).

<sup>15</sup> *PJM Interconnection, L.L.C.*, Request for Rehearing of Vistra Corp. and Dynegy Marketing and Trade, LLC, Docket No. EL21-91-000 (Apr. 21, 2023).

<sup>16</sup> *PJM Interconnection, L.L.C.*, Notice of Denial of Rehearing by Operation of Law and Providing for Further Consideration, Docket No. EL21-91-002 (May 22, 2023).

2023 order and the notice denying rehearing by operation of law on July 17, 2023 in the U.S. Court of Appeals for the District of Columbia Circuit (“D.C. Circuit”).<sup>17</sup>

On August 4, 2023, the Commission issued an order addressing the arguments raised by Vistra on rehearing and denied rehearing.<sup>18</sup> Vistra timely filed a petition for review of the August 4, 2023 order “D.C. Circuit”.<sup>19</sup> The D.C. Circuit consolidated Vistra’s petitions for review on August 23, 2024.<sup>20</sup> The consolidated petitions for review remain pending before the D.C. Circuit.

Judge Hurt convened formal settlement conferences on April 25, July 18, and August 22, 2023.<sup>21</sup> The participants were unable to reach an agreement during those conferences and therefore requested that Judge Hurt declare an impasse.<sup>22</sup> Judge Hurt issued an order declaring an impasse and recommending the termination of settlement procedures on August 23, 2023.<sup>23</sup> On August 25, 2023, the Chief Judge terminated settlement procedures, designated Joel deJesus the presiding administrative law judge, and set this proceeding for a Track III procedural schedule.<sup>24</sup>

Following further settlement discussions, the Settling Parties reached a settlement in principle. Accordingly, Commission Trial Staff filed a motion to suspend the

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<sup>17</sup> Petition for Review, *Vistra Corp.*, v. *FERC*, No. 23-1186 (D.C. Cir. July 17, 2023).

<sup>18</sup> *PJM Interconnection, L.L.C.*, 184 FERC ¶ 61,077 (2023).

<sup>19</sup> Petition for Review, *Vistra Corp.* v. *FERC*, No. 23-1228 (D.C. Cir. Aug. 22, 2023).

<sup>20</sup> *Vistra Corp.* v. *FERC*, No. 23-1186 (D.C. Cir. Aug. 23, 2023) (order consolidating Nos. 23-1186 & 23-1228).

<sup>21</sup> *PJM Interconnection, L.L.C.*, Order Declaring Impasse, Docket No, EL21-91-000, at P 2 (Aug. 23, 2023).

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

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

<sup>24</sup> *PJM Interconnection, L.L.C.*, Order of Chief Judge Terminating Settlement Judge Procedures, Designating Presiding Administrative Law Judge, and Establishing Track III Procedural Time Standards, Docket Nos. EL21-91-000, -003 (Aug. 25, 2023).

procedural schedule on January 10, 2024.<sup>25</sup> On January 16, 2024, the Chief Judge granted the motion to suspend the procedural schedule.<sup>26</sup>

## **II. DESCRIPTION OF THE SETTLEMENT**

Article 1 of the Settlement provides the background regarding the proceeding, the procedural history, and the parties.

Article 2 provides that PJM will reduce the CRF values in Schedule 6A of its Tariff for units selected prior to June 6, 2021, to provide Black Start Service as shown on the pro forma tariff sheets provided herewith in Attachments A and B. In addition, PJM will move to place the settlement rates into effect January 1, 2024 concurrently with filing the Settlement. Section 2.2 states that the settlement rates shall be effective as of January 1, 2024. Article 2.3 provides that no refunds will be required with respect to the CRF values in Schedule 6A for Black Start Service rendered prior to January 1, 2024 by units selected for Black Start Service prior to June 6, 2021. Finally, Section 2.4 provides that in the event the Commission rejects the Settlement or the Settlement is terminated in accordance with its terms, the Settling Parties will not oppose PJM reinstating the CRF rates for units selected prior to June 6, 2021 in Schedule 6A of the Tariff effective as of the date of filing this Settlement, subject to refund, pending the final outcome of this proceeding.

Article 3 provides that the terms of the Settlement are not severable and sets the effective date of the Settlement as the date the Commission issues an order approving the Settlement without modification or condition and that order is deemed final and non-

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<sup>25</sup> *PJM Interconnection, L.L.C.*, Motion of Commission Trial Staff to Suspend the Procedural Schedule and Shorten Answer Period, Docket No. EL21-91-003 (Jan. 10, 2024).

<sup>26</sup> *PJM Interconnection, L.L.C.*, Order of Chief Judge Suspending Procedural Schedule, Docket No. EL21-91-003 (Jan. 16, 2024).

appealable (“Settlement Effective Date”). Section 3.2 provides that within ten (10) days of the Settlement Effective Date, Vistra Corp. and Dynegy Marketing and Trade, LLC will file to withdraw their petitions for review of the Commission’s orders in Docket Nos. EL21-91, et al. from the D.C. Circuit.

Article 4 establishes that the Settlement’s terms and conditions are contingent upon the Commission’s approval or acceptance of the Settlement without modification or condition. If the Commission conditions its approval or acceptance of the Settlement or requires material modification, any Settling Party may notify the other Settling Parties within five (5) business days that it opposes the Settlement as so conditioned or modified, and the Settling Parties shall meet or confer within ten (10) business days after such notification. If a revised offer of settlement cannot be reached and the concerns of the Settling Party(ies) cannot otherwise be adequately addressed within five (5) business days of such meeting or conference (unless mutually extended by the Settling Parties), the Settlement shall be of no force and effect. Section 4.2 states that each Settling Party will cooperate with the filing of the Settlement and efforts to obtain Commission approval. Section 4.3 states that the Settling Parties will make reasonable efforts to support and defend the Settlement, but that the Settlement will not limit any Settling Party’s right to respond to a pleading or filing submitted by a participant other than a Settling Party.

Section 5.1 provides that the Settlement constitutes the entire agreement with regard to the matters addressed in the captioned proceedings and implies no right, duties, or other restrictions not expressly set forth in the Settlement.

Section 5.2 provides that the Settling Parties will not make any filing to modify the Settlement Rates for a period of two years following the Settlement's effective date. After that two-year period, nothing in the Settlement will be construed as affecting PJM's right to unilaterally make an application to the Commission to modify its rates or terms of conditions of service pursuant to FPA sections 205, or for any Settling Party to oppose such a filing made or unilaterally take action under FPA section 206.

Under Section 5.3 all settlement communications and discussions are (1) privileged and not to be publically disclosed, (2) without prejudice to the position of any party or participant making those communications or participating in any such discussions, and (3) not to be used in this proceeding or otherwise except to the extent necessary to enforce the terms of the Settlement. In the event the Commission rejects the Settlement, Rule 602(e) of the Commission's Rules of Practice and Procedure will apply to bar the admissibility of the Settlement.<sup>27</sup>

Sections 5.4 and 5.5 provide that the Settling Parties and the Commission will not be deemed to have approved, accepted, agreed, or consented to any ratemaking principle or methodology or any Tariff interpretation or modification. The Commission's approval of the Settlement will not constitute precedent, will not prejudice any otherwise available rights or arguments of any Settling Party in a future proceeding (other than to enforce the terms of the Settlement), and will not be used as evidence that a particular method is a "long standing practice" or "settled practice."

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<sup>27</sup> 18 C.F.R. § 385.602.

Section 5.6 sets the “public interest” standard of review, commonly referred to as the “*Mobile Sierra*” standard of review,<sup>28</sup> as the standard of review for any changes to the Settlement proposed by any party to this proceeding and the ordinary just and reasonable standard for any changes to the Settlement proposed by any other person or entity. This section also clarifies that this standard is not intended to apply to future filings made in accordance with Section 5.2.

Section 5.7 establishes that no provision of the Settlement may be waived if waiver would cause financial injury to any other Settling Party, unless the injured Settling Party consents in writing. No provision of the Settlement can be waived except through a signed writing by an authorized representative of the waiving party. Section 5.8 makes the Settlement binding on and for the benefit of the Settling Parties and their successors and assigns. Section 5.9 provides that the Commission’s approval of the Settlement shall constitute the requisite grant of waivers of any regulation as may be necessary to permit the implementation of the Settlement.

Section 5.10 establishes that the Settlement is the product of each Settling Party, and no ambiguity will be construed in favor of or against any Settling Party on the basis of that party being the drafter.

Section 5.11 sets forth the Settlement’s rules of interpretation and construction. Under Section 5.11, the title and headings of the sections of the Settlement are for reference purposes only and are not to be construed or considered in interpreting the Settlement.

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<sup>28</sup> See *NRG Power Mktg. v. Me. Pub. Utils. Comm’n*, 558 U.S. 165 (2010); *Morgan Stanley Cap. Grp. Inc. v. Pub. Util. Dist. No. 1*, 554 U.S. 527 (2008); *United Gas Pipe Line Co. v. Mobile Gas Serv. Corp.*, 350 U.S. 332 (1956); *FPC v. Sierra Pac. Power Co.*, 350 U.S. 348 (1956).

### **III. POLICY AND OTHER ISSUES ARISING UNDER THE SETTLEMENT**

Consistent with Commission policy, PJM addresses policy and other issues arising under the Settlement.

#### **A. Does the Settlement Affect Other Pending Cases?**

The Settlement does not affect other pending cases.

#### **B. Does the Settlement Involve Issues of First Impression?**

The Settlement does not involve any issues of first impression.

#### **C. Does the Settlement Depart from Commission Precedent?**

The Settlement does not depart from Commission precedent.

#### **D. Does the Settlement Seek to Impose a Standard of Review Other than the Ordinary Just and Reasonable Standard with Respect to Any Changes to the Settlement that Might be Sought by Either a Third Party or the Commission Acting *Sua Sponte*?**

Section 5.6 of the Settlement sets the standard of review for any proposed changes to the Settlement sought by any party to this proceeding as the “public interest” standard of review commonly referred to as the “*Mobile Sierra*” standard of review. Otherwise, the Settlement applies an ordinary just and reasonable standard to changes sought by third parties or the Commission acting *sua sponte*.

### **IV. CONCLUSION**

For the reasons set forth above, the Settling Parties respectfully request that the Commission issue an order approving the Settlement without change or condition.

# Attachment A

## Revisions to the PJM Open Access Transmission Tariff

(Marked/Redline Format)

## **SCHEDULE 6A Black Start Service**

References to section numbers in this Schedule 6A refer to sections of this Schedule 6A, unless otherwise specified.

To ensure the reliable restoration following a shut down of the PJM transmission system, Black Start Service is necessary to facilitate the goal of complete system restoration. Black Start Service enables the Transmission Provider to designate specific generators called Black Start Units whose location and capabilities are required to re-energize the transmission system following a system-wide blackout. The Transmission Provider shall administer the provision of Black Start Service. PJMSettlement shall be the Counterparty to the purchases and sales of Black Start Service.

### **TRANSMISSION CUSTOMERS**

1. All Transmission Customers and Network Customers must obtain Black Start Service through the Transmission Provider, with PJMSettlement as the Counterparty, pursuant to this Schedule 6A.

### **PROVISION OF BLACK START SERVICE**

2. A Black Start Unit is a generating unit that has equipment enabling it to start without an outside electrical supply or a generating unit with a high operating factor (subject to Transmission Provider concurrence) with the demonstrated ability to automatically remain operating, at reduced levels, when disconnected from the grid. A Black Start Unit shall be considered capable of providing Black Start Service only when it meets the criteria set forth in the PJM manuals. The expected life of the Black Start Unit shall take into consideration expectations regarding both the enabling equipment and the generation unit itself.

A Fuel Assured Black Start Unit is a Black Start Unit that is capable of starting without an outside electrical supply and running 16 hours or more at full load and either stores at least 16 hours of fuel on site, can operate independently on 2 or more interstate pipelines, is directly connected to a natural gas gathering system or is an intermittent or hybrid resource that has been evaluated by the Transmission Provider to be capable of providing 16 hours of full load operation with 90% confidence and meets any other requirements specified in the PJM manuals. Unless otherwise specified as only applicable to Fuel Assured Black Start Units, all terms and conditions set forth in this Tariff, Schedule 6A applicable to Black Start Units shall be deemed to include Fuel Assured Black Start Units.

3. A Black Start Plant is a generating plant that includes one or more Black Start Units. A generating plant with Black Start Units electrically separated at different voltage levels will be considered multiple Black Start Plants.

4. The Transmission Provider is responsible for developing a coordinated and efficient system restoration plan that identifies all of the locations where Black Start Units are needed. The PJM Manuals shall set forth the criteria and process for selecting or identifying the Black

Start Units necessary to commit to providing Black Start Service at the identified locations. No Black Start Unit shall be eligible to recover the costs of providing Black Start Service in the PJM Region unless it agrees to provide such service for a term of commitment established under section 5, 6, or 6A below.

5. Owners of Black Start Units selected to provide Black Start Service in accordance with Schedule 6A, section 4 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. Black Start Units that are selected to provide Black Start Service after June 6, 2021, pursuant to Schedule 6A, section 6 that subsequently transition from the Capital Cost Recovery Rate to the Base Formula Rate shall have a lifetime commitment and can only terminate for the reason specified in Schedule 6A, section 6(ii).

6. (i) Owners of Black Start Units selected to provide Black Start Service prior to June 6, 2021, 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 Table 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 Table 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.

(ii) Owners of Black Start Units selected to provide Black Start Service after June 6, 2021, in accordance with Schedule 6A, section 4 and electing to recover new or additional Black Start Capital Costs shall commit to provide Black Start Service from such Black Start Units for an initial capital recovery period based upon the age of the Black Start Unit plus the remaining life of the Black Start equipment. 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 initial capital recovery period based upon the age of the Black Start Unit plus the remaining life of the Black Start equipment.

(iii) Black Start Units selected to be Fuel Assured Black Start Units in accordance with Schedule 6A, section 4 and electing to recover new or additional Fuel Assurance Capital Costs or new and additional Fuel Assurance Costs and Black Start Capital Costs shall commit to provide Black Start Service from such Black Start Units for an initial capital recovery period based upon the age of the Black Start Unit plus the remaining life of the Black Start equipment. For those Fuel Assured 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 initial capital recovery period based upon the age of the Black Start Unit plus the remaining life of the Black Start equipment. For those Fuel Assured Black Start Units that elect to recover new or additional Fuel Assurance Capital Costs, the applicable capital recovery period shall be the fuel assurance capital recovery period based upon the age of the Fuel Assured Black Start Unit .

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 including any amount of unrecovered Fuel Assurance Capital 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), provided the Black Start Unit's owner demonstrates to the satisfaction of the Transmission Provider at least one of the following reasons for such termination apply:

- a. Black Start Unit retirement or deactivation with at least one year's notice;
- b. Expiration of a state, federal, or other governmental agency permit(s) required for Black Start Service with at least one year's notice; or
- c. Additional capital is required by the Black Start Unit owner to maintain Black Start Service capability (in which case, the Black Start Unit will apply for Black Start Service selection in accordance with the procedures set forth in Manual 12 and only continue to provide Black Start Service if selected for Black Start Service by the Transmission Provider).

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 and/or Fuel Assurance 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 Schedule 6A, section 18 during the same period.

6A. Black Start Units which are owned or contracted for by a Transmission Owner to provide Black Start Service as a result of the black start reliability backstop process defined in the PJM Manuals, shall be subject to cost recovery through such Transmission Owner's annual revenue requirement under such Transmission Owner's Tariff, Attachment H, as filed with, and accepted by, FERC under Section 205 of the Federal Power Act and in accordance with Tariff, Part I, section 9, or through such other cost recovery mechanism, provided that such cost recovery mechanism is filed with and accepted by FERC. The relevant Transmission Owner shall commit to provide, or effectuate the provision of, Black Start Service from such a Black Start Unit for the FERC-approved cost recovery period. The Transmission Provider may terminate the commitment with one year advance notice of its intention to the Transmission Owner. Provision of Black Start Service from a Black Start Unit obtained through the black start reliability backstop process defined in the PJM Manuals shall be subject to sections 7 through 13 of this Schedule 6A. The Revenue Requirements, Credits, and Charges provisions contained in sections 16 through 27 of this Schedule 6A, shall not apply to Black Start Units obtained as a result of the black start reliability backstop process defined in the PJM Manuals.

6B. In the event that a Black Start Unit fails to fulfill its commitment established under section 5 to provide Black Start Service, receipt of any Black Start Service revenues associated with the non-performing Black Start Unit shall cease and, for the period of the unit's non-performance, the Black Start Unit owner shall forfeit the Black Start Service revenues associated with the non-performing Black Start Unit that it received or would have received had the Black Start Unit performed, not to exceed revenues for a maximum of one year.

In the event that a Black Start Unit fails to fulfill its commitment established under section 6 above, such 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, but such unit remains eligible to establish a new commitment under section 5 or 6 of this Schedule 6A. Provided, however, Black Start Units that are selected to provide Black Start Service after June 6, 2021, pursuant to Schedule 6A, section 6 that subsequently transition from the Capital Cost Recovery Rate to the Base Formula Rate shall have a lifetime commitment and can only terminate for a reason specified in Schedule 6A, section 6(ii).

### **Performance Standards and Outage Restrictions**

7. In addition to the performance capabilities set forth in the PJM Manuals, Black Start Units must have the capabilities listed below. These capabilities must be demonstrated in accordance with the criteria set forth in the PJM manuals and will remain in effect for the duration of the commitment to provide Black Start Service.

- a. A Black Start Unit must be able to close its output circuit breaker to a dead (de-energized) bus within the time specified in the PJM Manuals.

- b. A Black Start Unit must be capable of maintaining frequency and voltage under varying load.
  - c. A Black Start Unit must be able to maintain rated output for a period of time identified by each Transmission Owner's system restoration requirements, in conjunction with the Transmission Provider.
  - d. A Fuel Assured Black Start Unit must meet the fuel assurance requirements as specified in the PJM Manuals.
8. Each owner of Black Start Units or Black Start Plants must maintain procedures for the start-up of the Black Start Units.
9. If a Black Start Unit is a generating unit with a high operating factor (subject to Transmission Provider concurrence) with the ability to automatically remain operating at reduced levels when disconnected from the grid, this ability must be demonstrated in accordance with the criteria set forth in the PJM manuals.
10. No more than one Black Start Unit at a Black Start Plant may be subject to a Generator Planned Outage or Generator Maintenance Outage at any one time without written approval of the Transmission Provider and the Transmission Owner in the Zone receiving Black Start Service from the Black Start Plant. This restriction excludes outages on common plant equipment that may make all units unavailable. A Black Start Unit not selected for providing Black Start Service in accordance with this Schedule 6A, section 4 and the PJM Manuals may be substituted for a Black Start Unit that is subject to a Generator Planned Outage to permit a concurrent planned outage of another critical Black Start Unit at the same Black Start Plant. The Black Start Unit used as a substitute shall not receive compensation for additional capital expenditures to qualify for Black Start Service, will not increase the current Black Start Unit capital recovery commitment period, must be connected at the same voltage level and cranking path, must be similar age as the current Black Start Unit, must provide equivalent Black Start Unit Capacity, and must have had a valid annual test within the previous 13 months. Black Start Unit substitutions may be permitted for reasons other than Generator Planned Outages if requested by the Black Start Unit owner and if approved by the Transmission Provider; provided, however, all requests for Black Start Unit substitutions must be supported by documentation and information demonstrating operational or technical reasons for the substitution satisfactory to the Transmission Provider and may only occur once within a 12-month period.
11. Concurrent planned outages at multiple Black Start Plants within a zone may be restricted based on Transmission Owner requirements for Black Start Service availability. Such restrictions must be predefined and approved by Transmission Provider in accordance with the PJM manuals.

### **Testing**

12. To verify that they can be started and operated without being connected to the Transmission System, Black Start Units shall be tested annually in accordance with the Tariff

and the PJM Manuals. Fuel Assured Black Start Units that are dual fuel must conduct an annual test on both fuels. The Black Start Unit owner shall determine the time of the annual test.

13. Compensation under this Schedule 6A for energy output delivered to the Transmission System during the annual test shall be provided for the Black Start Unit's minimum run time at the higher of the unit's cost-capped offer or real-time Locational Marginal Price plus start-up and no-load costs for up to two start attempts, if necessary. For Black Start Units that are generating units with a high operating factor (subject to Transmission Provider's concurrence) with the ability to automatically remain operating at reduced levels when disconnected from the grid, an opportunity cost will be provided to compensate the unit for lost revenues during testing.

14. All Black Start Units must have a successful annual test on record with the Transmission Provider within the preceding 13 months. A Black Start Unit receiving revenues under Section 5 or Section 6 above that does not have a successful annual test on record with the Transmission Provider within the preceding 13 months will not qualify to receive Black Start Service revenues. A Fuel Assured Black Start Unit that stores fuel on-site and fails in any month to store the fuel and non-fuel consumables needed to meet its fuel assurance run hour requirements except for allowable conditions specified in the PJM Manuals, and except when the Fuel Assured Black Start Unit can also operate independently on 2 or more interstate pipelines, does not qualify to receive Black Start revenues in that month.

15. If a Black Start Unit fails the annual test, the unit may be re-tested within a ten-day period without financial penalty. If the Black Start Unit does not successfully re-test within that ten-day period, monthly Black Start Service revenues under this Schedule 6A will be forfeited by that unit from the time of the first unsuccessful test until such time as the unit passes an annual test. If the Black Start Unit owner does not make the necessary repairs to enable the Black Start Unit to pass the annual test within 90 days of the due date for the annual test pursuant to section 14 above, the Black Start Unit will immediately cease to qualify as a Black Start Unit and, if applicable, will have failed to fulfill its commitment pursuant to section 5 or section 6 above, whichever is applicable, of this Schedule 6A and will be subject to the additional forfeiture of revenues set forth in section 6B of this Schedule 6A. The 90 day period may be extended up to 1 year by the Transmission Provider in accordance with the PJM Manuals. If the 90 day period is extended, the Black Start Unit owner will continue to forfeit all revenues starting in the month of the first failed test until the Black Start Unit has demonstrated to the Transmission Provider that a successful test has been completed.

### **Revenue Requirements**

16. A Black Start Unit Owner's annual Black Start Service revenue requirement shall be the sum of the annual Black Start Service revenue requirements for each generator that is designated as providing Black Start Service and has provided the Transmission Provider with a calculation of its annual Black Start Service revenue requirements. A separate line item shall appear on the participants' Transmission Provider bill for Black Start Service charges and credits.

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 for the entire duration of the commitment term set forth in either section 5 or 6 of this Schedule 6A, as applicable, or (ii) the formula rates set forth in section 18 of this Schedule 6A for the commitment term set forth in section 5 or 6 of this Schedule 6A as applicable. Each generator's Black Start Service revenue requirements shall be an annual calculation.

#### **17A. Annual Review for all Black Start Units**

Requests for Black Start Service revenue requirements and for changes to the Black Start Service revenue requirements must be submitted to the Market Monitoring Unit for review and analysis, with supporting data and documentation, pursuant to Tariff, Attachment M–Appendix, section III and the PJM Manuals, with a copy to the Office of the Interconnection, by no later than May 3 of each year. The Market Monitoring Unit and the Black Start Unit owner shall attempt to come to agreement on the level of each component included in the Black Start Service revenue requirements by no later than May 14 of each year. By no later than May 21 of each year, the Black Start Unit owner shall notify the Office of the Interconnection and the Market Monitoring Unit in writing whether it agrees or disagrees with the Market Monitoring Unit's determination of the level of each component included in the Black Start Service revenue requirements. The Black Start Unit owner may also submit Black Start Service revenue requirements that it chooses to the Office of the Interconnection by no later than May 21 of each year, provided that (i) it has participated in good faith with the process described in this section and in Tariff, Attachment M-Appendix, section III (ii) the Black Start Service revenue requirements are no higher than the level defined in any agreement reached by the Black Start Unit owner and the Market Monitoring Unit that resulted from the foregoing process, and (iii) the Black Start Service revenue requirements are accepted by the Office of the Interconnection subject to the criteria set forth in the Tariff and PJM Manuals.

The Office of the Interconnection shall determine whether to accept the values submitted by the Black Start Unit owner subject to the requirements of the Tariff and the PJM Manuals by no later than May 27. If the Office of the Interconnection does not accept the values submitted by the Black Start Unit owner in such case, the Black Start Unit owner may file its proposed values with the Commission for approval. Pursuant to Tariff, Attachment M-Appendix, section III, if the Office of the Interconnection accepts the Black Start Service revenue requirements submitted by the Black Start Unit owner in such case, 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 the Office of the Interconnection or such other values as determined by the Commission. The annual calculation of Black Start Service revenue requirements shall become effective on June 1 of each year, except that no change to a Black Start Service revenue requirement shall become effective until the existing revenue requirement has been effective for at least twelve months. Notwithstanding the foregoing, the deadlines set forth in this section 17 shall not apply to a Black Start Unit owner's election to select a new method of recovery for its Fixed BSSC.

#### **17B. Initial Review for New Black Start Units or existing Black Starts Units that require Fuel Assured Capital Cost**

Requests for new Black Start Service revenue requirements and/or Fuel Assured Capital Costs must be submitted to the Market Monitoring Unit for review and analysis, with supporting data and documentation, pursuant to Tariff, Attachment M–Appendix, section III and the PJM Manuals, with a copy to the Office of the Interconnection, by no later than 90 days after entering Black Start Service or qualifying to be a Fuel Assured Black Start Unit. The Market Monitoring Unit and the Black Start Unit owner shall attempt to come to agreement on the level of each component included in the Black Start Service revenue requirements by no later than 90 days after the Black Start Unit owner’s submittal of final black start capital costs (if applicable), variable black start costs, and fuel storage cost documentation. By no later than 90 days of the Black Start Unit owner’s submittal of final black start cost documentation, the Market Monitoring Unit shall calculate the new Black Start Unit’s annual revenue requirement and submit it to the Office of the Interconnection and the Black Start Unit owner. If more than three Black Start Unit owners submit documentation within a 90-day period, the Market Monitoring Unit shall complete the review of the first three submittals within 90 days and the next set of three within the following three months and so on until all are complete. The Black Start Unit owner shall notify the Office of the Interconnection and the Market Monitoring Unit in writing if it disagrees with the Market Monitoring Unit’s determination of the level of any component included in the Black Start Service revenue requirements within 7 days after the Market Monitoring Unit’s submittal of the annual revenue requirement to the Office of the Interconnection. The Black Start Unit owner shall also submit Black Start Service revenue requirements that it proposes to the Office of the Interconnection provided that (i) it has participated in good faith with the process described in this section and in Tariff, Attachment M–Appendix, section III; (ii) the Black Start Service revenue requirements are no higher than the level defined in any agreement reached by the Black Start Unit owner and the Market Monitoring Unit that resulted from the foregoing process; and (iii) the Black Start Service revenue requirements are accepted by the Office of the Interconnection subject to the criteria set forth in the Tariff and PJM Manuals.

The Office of the Interconnection shall determine whether to accept the values submitted by the Black Start Unit owner subject to the requirements of the Tariff and the PJM Manuals by no later than 30 days after its receipt of the Black Start Unit owner’s written notice of a disagreement. If the Office of the Interconnection does not accept the values submitted by the Black Start Unit owner in such case, the Black Start Unit owner may file its proposed values with the Commission for approval. Pursuant to Tariff, Attachment M–Appendix, section III, if the Office of the Interconnection accepts the Black Start Service revenue requirements submitted by the Black Start Unit owner in such case, 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 the Office of the Interconnection or such other values as determined by the Commission. The annual calculation of Black Start Service revenue requirements shall become effective the day the unit enters Black Start Service or becomes fuel assured.

18. The formula for calculating a generator’s annual Black Start Service revenue requirement is:

$$\{(\text{Fixed BSSC}) + (\text{Variable BSSC}) + (\text{Training Costs}) + (\text{Fuel Storage Costs})\} * (1 + Z)$$

For units that have the demonstrated ability to operate at reduced levels when automatically disconnected from the grid, the formula is revised to:

$$(\text{Training Costs}) * (1+ Z)$$

Where:

### **Fixed BSSC**

Black Start Units with a commitment established under section 5 of this Schedule 6A shall calculate Fixed BSSC or “Fixed Black Start Service Costs” in accordance with the following Base Formula Rate:

#### **Base Formula Rate:**

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

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.

“Black Start Unit Capacity” is either: (i) the Black Start Unit’s installed capacity, expressed in MW, for those Black Start Units which are not Fuel Assured Black Start Units that are Generation Capacity Resources; (ii) the awarded MWs in the Transmission Provider’s request for proposal process under the PJM Manuals, for those Black Start Units, which are not Fuel Assured Black Start Units, that are Energy Resources; (iii) the Fuel Assured Black Start Unit’s installed capacity for fuel assured non-intermittent Capacity Resources; or (iv) the monthly 90% confidence MW value calculated by the Transmission Provider for fuel assured intermittent or hybrid Capacity Resources. 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%.

“X” is 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 non-fuel assured Black Start Units with a commitment established under section 5 of this Schedule 6A, X shall be .01 for Hydro units, .02 for CT units. For fuel assured Black Start Units with a

commitment established under section 5 of this Schedule 6A, X shall be .02 for all units.

Black Start Units with a commitment established under section 6 above shall calculate Fixed BSSC or “Fixed Black Start Service Costs” in accordance with one of the following formulas, as applicable:

**Capital Cost Recovery Rate – NERC-CIP Specific Recovery**

$(\text{Net Cone} * \text{Black Start NERC-CIP Unit Capacity} * X) + (\text{Incremental Black Start NERC-CIP Capital Costs} * \text{CRF}) + (\text{Fuel Assurance Capital Costs} * \text{CRF})$

Where:

“Net Cone” is the then current installed capacity (“ICAP”) net Cost of New Entry (expressed in \$/MW year) for the CONE are 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 purposes of this calculation, capped at 100 MW for Hydro units, or 50 MW for CT units.

“Incremental Black Start NERC-CIP Capital Cost” are those capital costs 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).

“Fuel Assurance Capital Costs” are the new or additional capital costs documented by the owner for the installation of equipment necessary for the unit to meet the fuel assurance criteria specified in the PJM manuals.

“CRF” or “Capital Recovery Factor” is equal to the levelized CRF as set forth in the applicable CRF table posted on the PJM website in accordance with Tariff, Schedule 6A, section 18 and Manual 15.

A Black Start Unit may elect to terminate forward cost recovery under this Capital Cost Recovery Rate – NERC-CIP Specific Recovery at any time and seek cost recovery under the Capital Cost Recovery Rate, pursuant to the terms and conditions set forth below.

**Capital Cost Recovery Rate**

$(\text{FERC-approved rate}) + (\text{Incremental Black Start Capital Costs} * \text{CRF}) + (\text{Fuel Assurance Capital Costs} * \text{CRF})$

Where:

“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, that cost recovery will be included as a formulaic component for calculating the Black Start Unit’s annual revenue requirement pursuant to this section 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 the new or additional capital costs 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 Unit 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.

“Fuel Assurance Capital Costs” are the new or additional capital costs documented by the owner for the installation of equipment necessary for the unit to meet the fuel assurance criteria specified in the PJM manuals. However, Fuel Assurance Capital Costs shall not include any capital costs that the Fuel Assured Black Start Unit owner is recovering for that unit pursuant to a FERC-approved recovery rate.

The Capital Recovery Factor (“CRF”) is equal to the Levelized CRF based on the age of the Black Start Unit, which is modified to provide Black Start Service.

Effective January 1, 2024, tThe CRF applicable to Black Start Capital Costs of Black Start Units selected for Black Start Service prior to June 6, 2021, shall continue to be determined in accordance with the following table:

Age of Black Start Unit	Term of Black Start Commitment	Levelized CRF
1 to 5	20	0.1 <del>18025</del>
6 to 10	15	0.1 <del>34846</del>
11 to 15	10	0.1 <del>76798</del>
16+	5	0.3 <del>09763</del>

The CRF applicable to Black Start Capital Costs and/or for Fuel Assurance Capital Costs, of Black Start Units selected for Black Start Service after June 6, 2021, shall be updated annually on March 1 for (i) federal income tax rates as utilized by the U.S. Internal Revenue Service in effect at the time of the annual CRF update; (ii) average state tax rate; and (iii) debt interest rates and shall be posted on the PJM website by March 31 each year

as shown in the table below. Interested parties shall have until April 15 of each year to contest PJM’s calculation of the annual CRF value before it becomes effective on June 1 of each year.

PJM determines annual CRF inputs	March 1
PJM posts annual CRF	March 31
Deadline for contesting annual CRF	April 15
Annual revenue requirement calculation	May 3 through May 27
Annual revenue requirement with CRF in effect	June 1

The CRF values shall be calculated for a recovery period based on the age of the Black Start Unit using the equation below:

$$CRF = \frac{r(1+r)^N \left[ 1 - \frac{sB}{\sqrt{1+r}} - s(1-B)\sqrt{1+r} \sum_{j=1}^L \frac{m_j}{(1+r)^j} \right]}{(1-s)\sqrt{1+r}[(1+r)^N - 1]} \dots$$

Where:

Formula Symbol	Description
<i>r</i>	After Tax Weighted Average Cost of Capital (ATWACC), which equals (equity percentage)(cost of equity) + (debt percentage)(debt interest rate)(1 – effective tax rate)
<i>s</i>	Effective Tax Rate, which equals (1 – state tax rate)(federal tax rate) + state tax rate
<i>B</i>	Bonus depreciation percent in effect at the Black Start Unit in-service date
<i>N</i>	Cost recovery period based on the age of the unit in years, as established in the Age of Unit/Applicable Recovery Period table below
<i>L</i>	The lesser of N or 16 years
<i>M<sub>j</sub></i>	Modified Accelerated Cost Recovery System (MACRS) depreciation

The following assumptions are used in the calculation:

The current federal tax and depreciation rates are as established by U.S. Internal Revenue Service;

The state tax rate is an average of the income tax rates for all the states in the PJM Region;

The capital investment necessary to make a unit qualify for Black Start Service is made up of 50 percent equity;

The capital investment necessary to make a unit qualify for Black Start Service is made up of 50 percent debt;

The debt interest rate is based on the most recent Net CONE quadrennial review after-tax weighted average cost of capital (ATWACC) and shall be updated as follows:

The debt interest rate will be updated during the Net CONE quadrennial review; and  
If the 2-year change in the Moody Utility Index for bonds rated Baa1 is more than 200 basis points, this change will be added to the interest rate used in the most recent Net CONE quadrennial review and will be used as the current year's debt interest rate.

The debt term is equal to the applicable recovery period specified in the Age of Unit/Applicable Recovery Period table below; and

The cost of equity shall be equal to an after tax internal rate of return on equity of 12%.

Any changes to the debt and equity percentages and after tax internal rate of return on equity components stated above shall be included in revisions to this section 18.

Age of the Unit (years)	Incremental Black Start Capital Costs Applicable Recovery Period (years)	Fuel Assurance Capital Costs Recovery Period (years)
1-5	20	20
6-10	15	15
11-15	10	10
16+	5	10

In those circumstances where a Black Start Unit owner has elected to recover Incremental Black Start Capital Costs and/or Fuel assurance 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 set forth in the Age of Unit/Applicable Recovery Period table above.

After a Black Start Unit has recovered its allowable Incremental Black Start Capital Costs, Incremental Black Start NERC-CIP Capital Costs, and/or Fuel assurance Capital Costs as provided by the applicable Capital Cost Recovery Rate, and has satisfied its applicable commitment period required under section 6 of this Schedule 6A, the Black Start Unit shall be

committed to providing black start in accordance with section 5 of this Schedule 6A and calculate its Fixed BSSC in accordance with the Base Formula Rate.

### **Variable BSSC**

All Black Start Units shall calculate Variable BSSC or “Variable Black Start Service Costs” in accordance with the following formula:

$$\text{Black Start Unit O\&M} * Y$$

Where:

“Black Start Unit O&M” are the operations and maintenance costs 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 the Black Start Unit solely on the basis of the provision of Black Start Service by unit.

“Y” is 0.01, unless a higher or lower value is supported by the 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 units qualifying as Black Start Units on the basis of a demonstrated ability to operate at reduced levels when automatically disconnected from the grid, there are no variable costs associated with providing Black Start Service and the value for Variable BSSC shall be zero.

Black Start Units with the demonstrated ability to automatically remain operating, at reduced levels, when disconnected from the grid may receive NERC compliance costs associated with providing Black Start Service in addition to the formula above, if approved in accordance with the procedures in section 17 of this Schedule 6A.

### **Training Costs:**

All Black Start Units shall calculate Training Costs in accordance with the following formula:

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

### **Fuel Storage Costs:**

Black Start Units that store liquefied or compressed natural gas, propane, or oil on site shall calculate Fuel Storage Costs in accordance with the following formula:

$$\{ \text{MTSL} + [(\# \text{ Run Hours}) * (\text{Fuel Burn Rate})] \} *$$

(12 Month Forward Strip + Basis) \* (Bond Rate)

Where:

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 April 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 April 1.

“MTSL” is the “minimum tank suction level” and shall apply to oil fired Black Start Units’ storage tanks that have an unusable volume of oil. In the case where a Black Start Unit shares a common fuel tank, the Black Start Unit will be eligible for recovery of the Black Start Energy Tank Ratio of the MTSL in its fuel storage calculation.

Black Start Energy Tank Ratio = {(Fuel Burn Rate \* Minimum Run Hours) / (Tank Capacity – MTSL)}

The MTSL fuel storage calculation shall be as follows:

{(Black Start Energy Tank Ratio \* MTSL) + [(#Run Hours) \* (Fuel Burn Rate)]} \* (12 Month Forward Strip + Basis) \* (Bond Rate)

For units qualifying as Black Start Units on the basis of a demonstrated ability to operate at reduced levels when automatically disconnected from the grid, there are no associated fuel storage costs and the value for FSC shall be zero.

## **Z**

Z shall be an incentive factor solely for Black Start Units with a commitment established under section 5 above and shall be ten percent for non-fuel assured Black Start Units and twenty percent for Fuel Assured Black Start Units. For those Black Start Units that elect to recover new or additional Black Start or Fuel Assurance Capital Costs under section 6 above, the incentive factor, Z, shall be equal to zero.

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.

19. Transmission Provider or its agent shall have the right to independently audit the accounts and records of each Black Start Unit that is receiving payments for providing Black Start Service.

20. PJM shall notify its Members when a Black Start Unit seeks to recover new or additional Black Start NERC-CIP Capital Costs under section 18 of this Schedule 6A no later than thirty (30) days prior to the effective date of the recovery. At the written request of a PJM Member, made simultaneously to the Market Monitoring Unit and PJM, with notice to the Black Start Unit owner, the Market Monitoring Unit shall make available to the affected PJM Member for inspection at the offices of the Market Monitoring Unit, all data supporting the requested new or additional NERC-CIP specific Capital Costs. The Black Start Unit owner may elect to attend this review. In all cases, the supporting data is to be held confidential and may not be distributed.

21. The Market Monitoring Unit shall include a Black Start Service summary in its annual State of the Market report which will set forth a descriptive summary of the new or additional Black Start NERC-CIP Capital Costs requested by Black Start Units, and include a list of the types of capital costs requested and the overall cost of such capital improvements on an aggregate basis such that no data is attributable to an individual Black Start Unit.

### **Credits**

22. For existing Black Start Units, monthly credits are provided to Black Start Unit owners that submit to the Transmission Provider their annual revenue requirements established pursuant to section 17A of this Schedule 6A. The generator's monthly credit is equal to 1/12 of its annual Black Start Service revenue requirement for eligible critical Black Start Units. For new Black Start Unit owners, monthly credits will be held by the Office of the Interconnection in a non-interest bearing account until the Office of the Interconnection, or the Commission as applicable, accepts the owner's annual revenue requirement pursuant to section 17B of this Schedule 6A. New Black Start Unit owners will begin to receive monthly credits, including any monthly credits held by the Office of the Interconnection back to the date the unit enters Black Start Service and any required estimated annual revenue requirement true up after the Office of the Interconnection, or the Commission as applicable, accepts the new Black Start Unit owner's annual revenue requirement.

22A. For Fuel Assured Black Start Units that are recovering Fuel Assurance Capital Costs, pursuant to section 17B of this Schedule 6A, shall have its monthly credits reduced, but not less than zero, by the positive net value of the Day-ahead Energy Market and Real-time Energy Market revenues from being committed using the fuel assurance fuel as further described in the PJM manuals minus the cost of running on that fuel. The Black Start Unit's monthly credits shall not be increased. For Fuel Assured Black Start Units that are recovering Fuel Assurance Capital Cost and the Fuel Assurance Capital Costs increased the Installed Capacity Rating (ICAP) of the unit, monthly credits shall be reduced, but not less than zero, by the monthly capacity revenues for the increased ICAP. Monthly credits will only be reduced during the Fuel Assurance Capital Cost recovery period.

23. Revenue requirements for jointly owned Black Start Units will be allocated to the owners based on ownership percentage.

24. Transmission Provider shall not compensate generators for Black Start Service unless they meet the Transmission Provider criteria for Black Start Service and the criteria for Black Start Service in the Applicable Standards and provide Transmission Provider with all necessary data in accordance with this Schedule 6A and the PJM manuals.

### **Charges**

25. 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 for new Black Start Units from the date the units enter Black Start Service to last day of the month preceding the Office of the Interconnection's acceptance of the unit's annual revenue requirement. The estimated annual revenue requirement will be based on the Black Start Unit owner's best estimate at the time the unit enters Black Start Service. Any estimated annual revenue requirement true up will be included in the monthly bill after the Office of the Interconnection accepts the new Black Start unit's annual revenue requirement.

26. Revenue requirements for Black Start Units designated by the Transmission Provider as critical (regardless of zonal location) will be allocated to the receiving Transmission Owner's zone. Black Start Units that are shared and designated to serve multiple zones will have their annual revenues allocated by Transmission Owner designated critical load percentage.

27. Purchasers of Black Start Service shall be charged for such service in accordance with the following formulae.

Monthly Charge for a purchaser receiving Network Integration Transmission Service or Point-to-Point Transmission Service to serve Non-Zone Load = Allocation Factor \* Total Generation Owner Monthly Black Start Service Revenue Requirement

Monthly Charge for a purchaser receiving Network Integration Transmission Service or Point-to-Point Transmission Service to serve Zone Load = Allocation Factor \* Zonal Generation Owner Monthly Black Start Service Revenue Requirement \* Adjustment Factor

Where:

Purchaser serving Non-Zone Load is a Network Customer serving Non-Zone Network Load or a Transmission Customer where the Point of Delivery is at the boundary of the PJM Region.

Zonal Generation Owner Monthly Black Start Service Revenue Requirement is the sum of the monthly share of Black Start Service revenue requirements for each generator nominated by the Transmission Owners in that zone.

Total Generation Owner Monthly Black Start Service Revenue Requirement is the sum of the Zonal Generation Owner Monthly Black Start Service Revenue Requirements for all Zones in the PJM Region.

Allocation Factor is the monthly transmission use of each Network Customer or Transmission Customer per Zone or Non-Zone, as applicable, on a megawatt basis divided by the total transmission use in the Zone or in the PJM Region, as applicable, on a megawatt basis.

For Network Customers, monthly transmission use on a megawatt basis is the sum of a Network Customer's daily values of DCPZ or DCPNZ (as those terms are defined in Tariff, Part I, section 34.1) as applicable, for all days of the month.

For Transmission Customers, monthly transmission use on a megawatt basis is the sum of the Transmission Customer's hourly amounts of Reserved Capacity for each day of the month (not curtailed by PJM) divided by the number of hours in the day.

Adjustment Factor is determined as the sum of the total monthly transmission use in the PJM Region on a megawatt basis, exclusive of such use by Network Customers and Transmission Customers serving Non-Zone Load, divided by the total monthly transmission use in the PJM Region on a megawatt basis.

In the event that a single customer is serving load in more than one Zone, or serving Non-Zone Load as well as load in one or more Zones, or is both a Network Customer and a Transmission Customer, the Monthly Charge for such a customer shall be the sum of the Monthly Charges determined by applying the appropriate formulae set forth in this Schedule 6A.

# Attachment B

Revisions to the  
PJM Open Access Transmission Tariff

(Clean Format)

## **SCHEDULE 6A Black Start Service**

References to section numbers in this Schedule 6A refer to sections of this Schedule 6A, unless otherwise specified.

To ensure the reliable restoration following a shut down of the PJM transmission system, Black Start Service is necessary to facilitate the goal of complete system restoration. Black Start Service enables the Transmission Provider to designate specific generators called Black Start Units whose location and capabilities are required to re-energize the transmission system following a system-wide blackout. The Transmission Provider shall administer the provision of Black Start Service. PJMSettlement shall be the Counterparty to the purchases and sales of Black Start Service.

### **TRANSMISSION CUSTOMERS**

1. All Transmission Customers and Network Customers must obtain Black Start Service through the Transmission Provider, with PJMSettlement as the Counterparty, pursuant to this Schedule 6A.

### **PROVISION OF BLACK START SERVICE**

2. A Black Start Unit is a generating unit that has equipment enabling it to start without an outside electrical supply or a generating unit with a high operating factor (subject to Transmission Provider concurrence) with the demonstrated ability to automatically remain operating, at reduced levels, when disconnected from the grid. A Black Start Unit shall be considered capable of providing Black Start Service only when it meets the criteria set forth in the PJM manuals. The expected life of the Black Start Unit shall take into consideration expectations regarding both the enabling equipment and the generation unit itself.

A Fuel Assured Black Start Unit is a Black Start Unit that is capable of starting without an outside electrical supply and running 16 hours or more at full load and either stores at least 16 hours of fuel on site, can operate independently on 2 or more interstate pipelines, is directly connected to a natural gas gathering system or is an intermittent or hybrid resource that has been evaluated by the Transmission Provider to be capable of providing 16 hours of full load operation with 90% confidence and meets any other requirements specified in the PJM manuals. Unless otherwise specified as only applicable to Fuel Assured Black Start Units, all terms and conditions set forth in this Tariff, Schedule 6A applicable to Black Start Units shall be deemed to include Fuel Assured Black Start Units.

3. A Black Start Plant is a generating plant that includes one or more Black Start Units. A generating plant with Black Start Units electrically separated at different voltage levels will be considered multiple Black Start Plants.

4. The Transmission Provider is responsible for developing a coordinated and efficient system restoration plan that identifies all of the locations where Black Start Units are needed. The PJM Manuals shall set forth the criteria and process for selecting or identifying the Black

Start Units necessary to commit to providing Black Start Service at the identified locations. No Black Start Unit shall be eligible to recover the costs of providing Black Start Service in the PJM Region unless it agrees to provide such service for a term of commitment established under section 5, 6, or 6A below.

5. Owners of Black Start Units selected to provide Black Start Service in accordance with Schedule 6A, section 4 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. Black Start Units that are selected to provide Black Start Service after June 6, 2021, pursuant to Schedule 6A, section 6 that subsequently transition from the Capital Cost Recovery Rate to the Base Formula Rate shall have a lifetime commitment and can only terminate for the reason specified in Schedule 6A, section 6(ii).

6. (i) Owners of Black Start Units selected to provide Black Start Service prior to June 6, 2021, 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 Table 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 Table 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.

(ii) Owners of Black Start Units selected to provide Black Start Service after June 6, 2021, in accordance with Schedule 6A, section 4 and electing to recover new or additional Black Start Capital Costs shall commit to provide Black Start Service from such Black Start Units for an initial capital recovery period based upon the age of the Black Start Unit plus the remaining life of the Black Start equipment. 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 initial capital recovery period based upon the age of the Black Start Unit plus the remaining life of the Black Start equipment.

(iii) Black Start Units selected to be Fuel Assured Black Start Units in accordance with Schedule 6A, section 4 and electing to recover new or additional Fuel Assurance Capital Costs or new and additional Fuel Assurance Costs and Black Start Capital Costs shall commit to provide Black Start Service from such Black Start Units for an initial capital recovery period based upon the age of the Black Start Unit plus the remaining life of the Black Start equipment. For those Fuel Assured 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 initial capital recovery period based upon the age of the Black Start Unit plus the remaining life of the Black Start equipment. For those Fuel Assured Black Start Units that elect to recover new or additional Fuel Assurance Capital Costs, the applicable capital recovery period shall be the fuel assurance capital recovery period based upon the age of the Fuel Assured Black Start Unit .

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 including any amount of unrecovered Fuel Assurance Capital 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), provided the Black Start Unit's owner demonstrates to the satisfaction of the Transmission Provider at least one of the following reasons for such termination apply:

- a. Black Start Unit retirement or deactivation with at least one year's notice;
- b. Expiration of a state, federal, or other governmental agency permit(s) required for Black Start Service with at least one year's notice; or
- c. Additional capital is required by the Black Start Unit owner to maintain Black Start Service capability (in which case, the Black Start Unit will apply for Black Start Service selection in accordance with the procedures set forth in Manual 12 and only continue to provide Black Start Service if selected for Black Start Service by the Transmission Provider).

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 and/or Fuel Assurance 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 Schedule 6A, section 18 during the same period.

6A. Black Start Units which are owned or contracted for by a Transmission Owner to provide Black Start Service as a result of the black start reliability backstop process defined in the PJM Manuals, shall be subject to cost recovery through such Transmission Owner's annual revenue requirement under such Transmission Owner's Tariff, Attachment H, as filed with, and accepted by, FERC under Section 205 of the Federal Power Act and in accordance with Tariff, Part I, section 9, or through such other cost recovery mechanism, provided that such cost recovery mechanism is filed with and accepted by FERC. The relevant Transmission Owner shall commit to provide, or effectuate the provision of, Black Start Service from such a Black Start Unit for the FERC-approved cost recovery period. The Transmission Provider may terminate the commitment with one year advance notice of its intention to the Transmission Owner. Provision of Black Start Service from a Black Start Unit obtained through the black start reliability backstop process defined in the PJM Manuals shall be subject to sections 7 through 13 of this Schedule 6A. The Revenue Requirements, Credits, and Charges provisions contained in sections 16 through 27 of this Schedule 6A, shall not apply to Black Start Units obtained as a result of the black start reliability backstop process defined in the PJM Manuals.

6B. In the event that a Black Start Unit fails to fulfill its commitment established under section 5 to provide Black Start Service, receipt of any Black Start Service revenues associated with the non-performing Black Start Unit shall cease and, for the period of the unit's non-performance, the Black Start Unit owner shall forfeit the Black Start Service revenues associated with the non-performing Black Start Unit that it received or would have received had the Black Start Unit performed, not to exceed revenues for a maximum of one year.

In the event that a Black Start Unit fails to fulfill its commitment established under section 6 above, such 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, but such unit remains eligible to establish a new commitment under section 5 or 6 of this Schedule 6A. Provided, however, Black Start Units that are selected to provide Black Start Service after June 6, 2021, pursuant to Schedule 6A, section 6 that subsequently transition from the Capital Cost Recovery Rate to the Base Formula Rate shall have a lifetime commitment and can only terminate for a reason specified in Schedule 6A, section 6(ii).

### **Performance Standards and Outage Restrictions**

7. In addition to the performance capabilities set forth in the PJM Manuals, Black Start Units must have the capabilities listed below. These capabilities must be demonstrated in accordance with the criteria set forth in the PJM manuals and will remain in effect for the duration of the commitment to provide Black Start Service.

- a. A Black Start Unit must be able to close its output circuit breaker to a dead (de-energized) bus within the time specified in the PJM Manuals.

- b. A Black Start Unit must be capable of maintaining frequency and voltage under varying load.
  - c. A Black Start Unit must be able to maintain rated output for a period of time identified by each Transmission Owner's system restoration requirements, in conjunction with the Transmission Provider.
  - d. A Fuel Assured Black Start Unit must meet the fuel assurance requirements as specified in the PJM Manuals.
8. Each owner of Black Start Units or Black Start Plants must maintain procedures for the start-up of the Black Start Units.
9. If a Black Start Unit is a generating unit with a high operating factor (subject to Transmission Provider concurrence) with the ability to automatically remain operating at reduced levels when disconnected from the grid, this ability must be demonstrated in accordance with the criteria set forth in the PJM manuals.
10. No more than one Black Start Unit at a Black Start Plant may be subject to a Generator Planned Outage or Generator Maintenance Outage at any one time without written approval of the Transmission Provider and the Transmission Owner in the Zone receiving Black Start Service from the Black Start Plant. This restriction excludes outages on common plant equipment that may make all units unavailable. A Black Start Unit not selected for providing Black Start Service in accordance with this Schedule 6A, section 4 and the PJM Manuals may be substituted for a Black Start Unit that is subject to a Generator Planned Outage to permit a concurrent planned outage of another critical Black Start Unit at the same Black Start Plant. The Black Start Unit used as a substitute shall not receive compensation for additional capital expenditures to qualify for Black Start Service, will not increase the current Black Start Unit capital recovery commitment period, must be connected at the same voltage level and cranking path, must be similar age as the current Black Start Unit, must provide equivalent Black Start Unit Capacity, and must have had a valid annual test within the previous 13 months. Black Start Unit substitutions may be permitted for reasons other than Generator Planned Outages if requested by the Black Start Unit owner and if approved by the Transmission Provider; provided, however, all requests for Black Start Unit substitutions must be supported by documentation and information demonstrating operational or technical reasons for the substitution satisfactory to the Transmission Provider and may only occur once within a 12-month period.
11. Concurrent planned outages at multiple Black Start Plants within a zone may be restricted based on Transmission Owner requirements for Black Start Service availability. Such restrictions must be predefined and approved by Transmission Provider in accordance with the PJM manuals.

### **Testing**

12. To verify that they can be started and operated without being connected to the Transmission System, Black Start Units shall be tested annually in accordance with the Tariff

and the PJM Manuals. Fuel Assured Black Start Units that are dual fuel must conduct an annual test on both fuels. The Black Start Unit owner shall determine the time of the annual test.

13. Compensation under this Schedule 6A for energy output delivered to the Transmission System during the annual test shall be provided for the Black Start Unit's minimum run time at the higher of the unit's cost-capped offer or real-time Locational Marginal Price plus start-up and no-load costs for up to two start attempts, if necessary. For Black Start Units that are generating units with a high operating factor (subject to Transmission Provider's concurrence) with the ability to automatically remain operating at reduced levels when disconnected from the grid, an opportunity cost will be provided to compensate the unit for lost revenues during testing.

14. All Black Start Units must have a successful annual test on record with the Transmission Provider within the preceding 13 months. A Black Start Unit receiving revenues under Section 5 or Section 6 above that does not have a successful annual test on record with the Transmission Provider within the preceding 13 months will not qualify to receive Black Start Service revenues. A Fuel Assured Black Start Unit that stores fuel on-site and fails in any month to store the fuel and non-fuel consumables needed to meet its fuel assurance run hour requirements except for allowable conditions specified in the PJM Manuals, and except when the Fuel Assured Black Start Unit can also operate independently on 2 or more interstate pipelines, does not qualify to receive Black Start revenues in that month.

15. If a Black Start Unit fails the annual test, the unit may be re-tested within a ten-day period without financial penalty. If the Black Start Unit does not successfully re-test within that ten-day period, monthly Black Start Service revenues under this Schedule 6A will be forfeited by that unit from the time of the first unsuccessful test until such time as the unit passes an annual test. If the Black Start Unit owner does not make the necessary repairs to enable the Black Start Unit to pass the annual test within 90 days of the due date for the annual test pursuant to section 14 above, the Black Start Unit will immediately cease to qualify as a Black Start Unit and, if applicable, will have failed to fulfill its commitment pursuant to section 5 or section 6 above, whichever is applicable, of this Schedule 6A and will be subject to the additional forfeiture of revenues set forth in section 6B of this Schedule 6A. The 90 day period may be extended up to 1 year by the Transmission Provider in accordance with the PJM Manuals. If the 90 day period is extended, the Black Start Unit owner will continue to forfeit all revenues starting in the month of the first failed test until the Black Start Unit has demonstrated to the Transmission Provider that a successful test has been completed.

### **Revenue Requirements**

16. A Black Start Unit Owner's annual Black Start Service revenue requirement shall be the sum of the annual Black Start Service revenue requirements for each generator that is designated as providing Black Start Service and has provided the Transmission Provider with a calculation of its annual Black Start Service revenue requirements. A separate line item shall appear on the participants' Transmission Provider bill for Black Start Service charges and credits.

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 for the entire duration of the commitment term set forth in either section 5 or 6 of this Schedule 6A, as applicable, or (ii) the formula rates set forth in section 18 of this Schedule 6A for the commitment term set forth in section 5 or 6 of this Schedule 6A as applicable. Each generator's Black Start Service revenue requirements shall be an annual calculation.

#### **17A. Annual Review for all Black Start Units**

Requests for Black Start Service revenue requirements and for changes to the Black Start Service revenue requirements must be submitted to the Market Monitoring Unit for review and analysis, with supporting data and documentation, pursuant to Tariff, Attachment M–Appendix, section III and the PJM Manuals, with a copy to the Office of the Interconnection, by no later than May 3 of each year. The Market Monitoring Unit and the Black Start Unit owner shall attempt to come to agreement on the level of each component included in the Black Start Service revenue requirements by no later than May 14 of each year. By no later than May 21 of each year, the Black Start Unit owner shall notify the Office of the Interconnection and the Market Monitoring Unit in writing whether it agrees or disagrees with the Market Monitoring Unit's determination of the level of each component included in the Black Start Service revenue requirements. The Black Start Unit owner may also submit Black Start Service revenue requirements that it chooses to the Office of the Interconnection by no later than May 21 of each year, provided that (i) it has participated in good faith with the process described in this section and in Tariff, Attachment M-Appendix, section III (ii) the Black Start Service revenue requirements are no higher than the level defined in any agreement reached by the Black Start Unit owner and the Market Monitoring Unit that resulted from the foregoing process, and (iii) the Black Start Service revenue requirements are accepted by the Office of the Interconnection subject to the criteria set forth in the Tariff and PJM Manuals.

The Office of the Interconnection shall determine whether to accept the values submitted by the Black Start Unit owner subject to the requirements of the Tariff and the PJM Manuals by no later than May 27. If the Office of the Interconnection does not accept the values submitted by the Black Start Unit owner in such case, the Black Start Unit owner may file its proposed values with the Commission for approval. Pursuant to Tariff, Attachment M-Appendix, section III, if the Office of the Interconnection accepts the Black Start Service revenue requirements submitted by the Black Start Unit owner in such case, 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 the Office of the Interconnection or such other values as determined by the Commission. The annual calculation of Black Start Service revenue requirements shall become effective on June 1 of each year, except that no change to a Black Start Service revenue requirement shall become effective until the existing revenue requirement has been effective for at least twelve months. Notwithstanding the foregoing, the deadlines set forth in this section 17 shall not apply to a Black Start Unit owner's election to select a new method of recovery for its Fixed BSSC.

#### **17B. Initial Review for New Black Start Units or existing Black Starts Units that require Fuel Assured Capital Cost**

Requests for new Black Start Service revenue requirements and/or Fuel Assured Capital Costs must be submitted to the Market Monitoring Unit for review and analysis, with supporting data and documentation, pursuant to Tariff, Attachment M–Appendix, section III and the PJM Manuals, with a copy to the Office of the Interconnection, by no later than 90 days after entering Black Start Service or qualifying to be a Fuel Assured Black Start Unit. The Market Monitoring Unit and the Black Start Unit owner shall attempt to come to agreement on the level of each component included in the Black Start Service revenue requirements by no later than 90 days after the Black Start Unit owner’s submittal of final black start capital costs (if applicable), variable black start costs, and fuel storage cost documentation. By no later than 90 days of the Black Start Unit owner’s submittal of final black start cost documentation, the Market Monitoring Unit shall calculate the new Black Start Unit’s annual revenue requirement and submit it to the Office of the Interconnection and the Black Start Unit owner. If more than three Black Start Unit owners submit documentation within a 90-day period, the Market Monitoring Unit shall complete the review of the first three submittals within 90 days and the next set of three within the following three months and so on until all are complete. The Black Start Unit owner shall notify the Office of the Interconnection and the Market Monitoring Unit in writing if it disagrees with the Market Monitoring Unit’s determination of the level of any component included in the Black Start Service revenue requirements within 7 days after the Market Monitoring Unit’s submittal of the annual revenue requirement to the Office of the Interconnection. The Black Start Unit owner shall also submit Black Start Service revenue requirements that it proposes to the Office of the Interconnection provided that (i) it has participated in good faith with the process described in this section and in Tariff, Attachment M–Appendix, section III; (ii) the Black Start Service revenue requirements are no higher than the level defined in any agreement reached by the Black Start Unit owner and the Market Monitoring Unit that resulted from the foregoing process; and (iii) the Black Start Service revenue requirements are accepted by the Office of the Interconnection subject to the criteria set forth in the Tariff and PJM Manuals.

The Office of the Interconnection shall determine whether to accept the values submitted by the Black Start Unit owner subject to the requirements of the Tariff and the PJM Manuals by no later than 30 days after its receipt of the Black Start Unit owner’s written notice of a disagreement. If the Office of the Interconnection does not accept the values submitted by the Black Start Unit owner in such case, the Black Start Unit owner may file its proposed values with the Commission for approval. Pursuant to Tariff, Attachment M–Appendix, section III, if the Office of the Interconnection accepts the Black Start Service revenue requirements submitted by the Black Start Unit owner in such case, 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 the Office of the Interconnection or such other values as determined by the Commission. The annual calculation of Black Start Service revenue requirements shall become effective the day the unit enters Black Start Service or becomes fuel assured.

18. The formula for calculating a generator’s annual Black Start Service revenue requirement is:

$$\{(\text{Fixed BSSC}) + (\text{Variable BSSC}) + (\text{Training Costs}) + (\text{Fuel Storage Costs})\} * (1 + Z)$$

For units that have the demonstrated ability to operate at reduced levels when automatically disconnected from the grid, the formula is revised to:

$$(\text{Training Costs}) * (1+ Z)$$

Where:

### **Fixed BSSC**

Black Start Units with a commitment established under section 5 of this Schedule 6A shall calculate Fixed BSSC or “Fixed Black Start Service Costs” in accordance with the following Base Formula Rate:

#### **Base Formula Rate:**

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

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.

“Black Start Unit Capacity” is either: (i) the Black Start Unit’s installed capacity, expressed in MW, for those Black Start Units which are not Fuel Assured Black Start Units that are Generation Capacity Resources; (ii) the awarded MWs in the Transmission Provider’s request for proposal process under the PJM Manuals, for those Black Start Units, which are not Fuel Assured Black Start Units, that are Energy Resources; (iii) the Fuel Assured Black Start Unit’s installed capacity for fuel assured non-intermittent Capacity Resources; or (iv) the monthly 90% confidence MW value calculated by the Transmission Provider for fuel assured intermittent or hybrid Capacity Resources. 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%.

“X” is 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 non-fuel assured Black Start Units with a commitment established under section 5 of this Schedule 6A, X shall be .01 for Hydro units, .02 for CT units. For fuel assured Black Start Units with a

commitment established under section 5 of this Schedule 6A, X shall be .02 for all units.

Black Start Units with a commitment established under section 6 above shall calculate Fixed BSSC or “Fixed Black Start Service Costs” in accordance with one of the following formulas, as applicable:

**Capital Cost Recovery Rate – NERC-CIP Specific Recovery**

$(\text{Net Cone} * \text{Black Start NERC-CIP Unit Capacity} * X) + (\text{Incremental Black Start NERC-CIP Capital Costs} * \text{CRF}) + (\text{Fuel Assurance Capital Costs} * \text{CRF})$

Where:

“Net Cone” is the then current installed capacity (“ICAP”) net Cost of New Entry (expressed in \$/MW year) for the CONE are 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 purposes of this calculation, capped at 100 MW for Hydro units, or 50 MW for CT units.

“Incremental Black Start NERC-CIP Capital Cost” are those capital costs 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).

“Fuel Assurance Capital Costs” are the new or additional capital costs documented by the owner for the installation of equipment necessary for the unit to meet the fuel assurance criteria specified in the PJM manuals.

“CRF” or “Capital Recovery Factor” is equal to the levelized CRF as set forth in the applicable CRF table posted on the PJM website in accordance with Tariff, Schedule 6A, section 18 and Manual 15.

A Black Start Unit may elect to terminate forward cost recovery under this Capital Cost Recovery Rate – NERC-CIP Specific Recovery at any time and seek cost recovery under the Capital Cost Recovery Rate, pursuant to the terms and conditions set forth below.

**Capital Cost Recovery Rate**

$(\text{FERC-approved rate}) + (\text{Incremental Black Start Capital Costs} * \text{CRF}) + (\text{Fuel Assurance Capital Costs} * \text{CRF})$

Where:

“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, that cost recovery will be included as a formulaic component for calculating the Black Start Unit’s annual revenue requirement pursuant to this section 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 the new or additional capital costs 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 Unit 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.

“Fuel Assurance Capital Costs” are the new or additional capital costs documented by the owner for the installation of equipment necessary for the unit to meet the fuel assurance criteria specified in the PJM manuals. However, Fuel Assurance Capital Costs shall not include any capital costs that the Fuel Assured Black Start Unit owner is recovering for that unit pursuant to a FERC-approved recovery rate.

The Capital Recovery Factor (“CRF”) is equal to the Levelized CRF based on the age of the Black Start Unit, which is modified to provide Black Start Service.

Effective January 1, 2024, the CRF applicable to Black Start Capital Costs of Black Start Units selected for Black Start Service prior to June 6, 2021, shall continue to be determined in accordance with the following table:

Age of Black Start Unit	Term of Black Start Commitment	Levelized CRF
1 to 5	20	0.1180
6 to 10	15	0.1348
11 to 15	10	0.1767
16+	5	0.3097

The CRF applicable to Black Start Capital Costs and/or for Fuel Assurance Capital Costs, of Black Start Units selected for Black Start Service after June 6, 2021, shall be updated annually on March 1 for (i) federal income tax rates as utilized by the U.S. Internal Revenue Service in effect at the time of the annual CRF update; (ii) average state tax rate; and (iii) debt interest rates and shall be posted on the PJM website by March 31 each year

as shown in the table below. Interested parties shall have until April 15 of each year to contest PJM’s calculation of the annual CRF value before it becomes effective on June 1 of each year.

PJM determines annual CRF inputs	March 1
PJM posts annual CRF	March 31
Deadline for contesting annual CRF	April 15
Annual revenue requirement calculation	May 3 through May 27
Annual revenue requirement with CRF in effect	June 1

The CRF values shall be calculated for a recovery period based on the age of the Black Start Unit using the equation below:

$$CRF = \frac{r(1+r)^N \left[ 1 - \frac{sB}{\sqrt{1+r}} - s(1-B)\sqrt{1+r} \sum_{j=1}^L \frac{m_j}{(1+r)^j} \right]}{(1-s)\sqrt{1+r}[(1+r)^N - 1]} \dots$$

Where:

Formula Symbol	Description
<i>r</i>	After Tax Weighted Average Cost of Capital (ATWACC), which equals (equity percentage)(cost of equity) + (debt percentage)(debt interest rate)(1 – effective tax rate)
<i>s</i>	Effective Tax Rate, which equals (1 – state tax rate)(federal tax rate) + state tax rate
<i>B</i>	Bonus depreciation percent in effect at the Black Start Unit in-service date
<i>N</i>	Cost recovery period based on the age of the unit in years, as established in the Age of Unit/Applicable Recovery Period table below
<i>L</i>	The lesser of N or 16 years
<i>M<sub>j</sub></i>	Modified Accelerated Cost Recovery System (MACRS) depreciation

The following assumptions are used in the calculation:

The current federal tax and depreciation rates are as established by U.S. Internal Revenue Service;

The state tax rate is an average of the income tax rates for all the states in the PJM Region;

The capital investment necessary to make a unit qualify for Black Start Service is made up of 50 percent equity;

The capital investment necessary to make a unit qualify for Black Start Service is made up of 50 percent debt;

The debt interest rate is based on the most recent Net CONE quadrennial review after-tax weighted average cost of capital (ATWACC) and shall be updated as follows:

The debt interest rate will be updated during the Net CONE quadrennial review; and  
If the 2-year change in the Moody Utility Index for bonds rated Baa1 is more than 200 basis points, this change will be added to the interest rate used in the most recent Net CONE quadrennial review and will be used as the current year's debt interest rate.

The debt term is equal to the applicable recovery period specified in the Age of Unit/Applicable Recovery Period table below; and

The cost of equity shall be equal to an after tax internal rate of return on equity of 12%.

Any changes to the debt and equity percentages and after tax internal rate of return on equity components stated above shall be included in revisions to this section 18.

Age of the Unit (years)	Incremental Black Start Capital Costs Applicable Recovery Period (years)	Fuel Assurance Capital Costs Recovery Period (years)
1-5	20	20
6-10	15	15
11-15	10	10
16+	5	10

In those circumstances where a Black Start Unit owner has elected to recover Incremental Black Start Capital Costs and/or Fuel assurance 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 set forth in the Age of Unit/Applicable Recovery Period table above.

After a Black Start Unit has recovered its allowable Incremental Black Start Capital Costs, Incremental Black Start NERC-CIP Capital Costs, and/or Fuel assurance Capital Costs as provided by the applicable Capital Cost Recovery Rate, and has satisfied its applicable commitment period required under section 6 of this Schedule 6A, the Black Start Unit shall be

committed to providing black start in accordance with section 5 of this Schedule 6A and calculate its Fixed BSSC in accordance with the Base Formula Rate.

### **Variable BSSC**

All Black Start Units shall calculate Variable BSSC or “Variable Black Start Service Costs” in accordance with the following formula:

$$\text{Black Start Unit O\&M} * Y$$

Where:

“Black Start Unit O&M” are the operations and maintenance costs 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 the Black Start Unit solely on the basis of the provision of Black Start Service by unit.

“Y” is 0.01, unless a higher or lower value is supported by the 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 units qualifying as Black Start Units on the basis of a demonstrated ability to operate at reduced levels when automatically disconnected from the grid, there are no variable costs associated with providing Black Start Service and the value for Variable BSSC shall be zero.

Black Start Units with the demonstrated ability to automatically remain operating, at reduced levels, when disconnected from the grid may receive NERC compliance costs associated with providing Black Start Service in addition to the formula above, if approved in accordance with the procedures in section 17 of this Schedule 6A.

### **Training Costs:**

All Black Start Units shall calculate Training Costs in accordance with the following formula:

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

### **Fuel Storage Costs:**

Black Start Units that store liquefied or compressed natural gas, propane, or oil on site shall calculate Fuel Storage Costs in accordance with the following formula:

$$\{ \text{MTSL} + [(\# \text{ Run Hours}) * (\text{Fuel Burn Rate})] \} *$$

(12 Month Forward Strip + Basis) \* (Bond Rate)

Where:

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 April 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 April 1.

“MTSL” is the “minimum tank suction level” and shall apply to oil fired Black Start Units’ storage tanks that have an unusable volume of oil. In the case where a Black Start Unit shares a common fuel tank, the Black Start Unit will be eligible for recovery of the Black Start Energy Tank Ratio of the MTSL in its fuel storage calculation.

Black Start Energy Tank Ratio = {(Fuel Burn Rate \* Minimum Run Hours) / (Tank Capacity – MTSL)}

The MTSL fuel storage calculation shall be as follows:

{(Black Start Energy Tank Ratio \* MTSL) + [(#Run Hours) \* (Fuel Burn Rate)]} \* (12 Month Forward Strip + Basis) \* (Bond Rate)

For units qualifying as Black Start Units on the basis of a demonstrated ability to operate at reduced levels when automatically disconnected from the grid, there are no associated fuel storage costs and the value for FSC shall be zero.

## **Z**

Z shall be an incentive factor solely for Black Start Units with a commitment established under section 5 above and shall be ten percent for non-fuel assured Black Start Units and twenty percent for Fuel Assured Black Start Units. For those Black Start Units that elect to recover new or additional Black Start or Fuel Assurance Capital Costs under section 6 above, the incentive factor, Z, shall be equal to zero.

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.

19. Transmission Provider or its agent shall have the right to independently audit the accounts and records of each Black Start Unit that is receiving payments for providing Black Start Service.

20. PJM shall notify its Members when a Black Start Unit seeks to recover new or additional Black Start NERC-CIP Capital Costs under section 18 of this Schedule 6A no later than thirty (30) days prior to the effective date of the recovery. At the written request of a PJM Member, made simultaneously to the Market Monitoring Unit and PJM, with notice to the Black Start Unit owner, the Market Monitoring Unit shall make available to the affected PJM Member for inspection at the offices of the Market Monitoring Unit, all data supporting the requested new or additional NERC-CIP specific Capital Costs. The Black Start Unit owner may elect to attend this review. In all cases, the supporting data is to be held confidential and may not be distributed.

21. The Market Monitoring Unit shall include a Black Start Service summary in its annual State of the Market report which will set forth a descriptive summary of the new or additional Black Start NERC-CIP Capital Costs requested by Black Start Units, and include a list of the types of capital costs requested and the overall cost of such capital improvements on an aggregate basis such that no data is attributable to an individual Black Start Unit.

### **Credits**

22. For existing Black Start Units, monthly credits are provided to Black Start Unit owners that submit to the Transmission Provider their annual revenue requirements established pursuant to section 17A of this Schedule 6A. The generator's monthly credit is equal to 1/12 of its annual Black Start Service revenue requirement for eligible critical Black Start Units. For new Black Start Unit owners, monthly credits will be held by the Office of the Interconnection in a non-interest bearing account until the Office of the Interconnection, or the Commission as applicable, accepts the owner's annual revenue requirement pursuant to section 17B of this Schedule 6A. New Black Start Unit owners will begin to receive monthly credits, including any monthly credits held by the Office of the Interconnection back to the date the unit enters Black Start Service and any required estimated annual revenue requirement true up after the Office of the Interconnection, or the Commission as applicable, accepts the new Black Start Unit owner's annual revenue requirement.

22A. For Fuel Assured Black Start Units that are recovering Fuel Assurance Capital Costs, pursuant to section 17B of this Schedule 6A, shall have its monthly credits reduced, but not less than zero, by the positive net value of the Day-ahead Energy Market and Real-time Energy Market revenues from being committed using the fuel assurance fuel as further described in the PJM manuals minus the cost of running on that fuel. The Black Start Unit's monthly credits shall not be increased. For Fuel Assured Black Start Units that are recovering Fuel Assurance Capital Cost and the Fuel Assurance Capital Costs increased the Installed Capacity Rating (ICAP) of the unit, monthly credits shall be reduced, but not less than zero, by the monthly capacity revenues for the increased ICAP. Monthly credits will only be reduced during the Fuel Assurance Capital Cost recovery period.

23. Revenue requirements for jointly owned Black Start Units will be allocated to the owners based on ownership percentage.

24. Transmission Provider shall not compensate generators for Black Start Service unless they meet the Transmission Provider criteria for Black Start Service and the criteria for Black Start Service in the Applicable Standards and provide Transmission Provider with all necessary data in accordance with this Schedule 6A and the PJM manuals.

### **Charges**

25. 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 for new Black Start Units from the date the units enter Black Start Service to last day of the month preceding the Office of the Interconnection's acceptance of the unit's annual revenue requirement. The estimated annual revenue requirement will be based on the Black Start Unit owner's best estimate at the time the unit enters Black Start Service. Any estimated annual revenue requirement true up will be included in the monthly bill after the Office of the Interconnection accepts the new Black Start unit's annual revenue requirement.

26. Revenue requirements for Black Start Units designated by the Transmission Provider as critical (regardless of zonal location) will be allocated to the receiving Transmission Owner's zone. Black Start Units that are shared and designated to serve multiple zones will have their annual revenues allocated by Transmission Owner designated critical load percentage.

27. Purchasers of Black Start Service shall be charged for such service in accordance with the following formulae.

Monthly Charge for a purchaser receiving Network Integration Transmission Service or Point-to-Point Transmission Service to serve Non-Zone Load = Allocation Factor \* Total Generation Owner Monthly Black Start Service Revenue Requirement

Monthly Charge for a purchaser receiving Network Integration Transmission Service or Point-to-Point Transmission Service to serve Zone Load = Allocation Factor \* Zonal Generation Owner Monthly Black Start Service Revenue Requirement \* Adjustment Factor

Where:

Purchaser serving Non-Zone Load is a Network Customer serving Non-Zone Network Load or a Transmission Customer where the Point of Delivery is at the boundary of the PJM Region.

Zonal Generation Owner Monthly Black Start Service Revenue Requirement is the sum of the monthly share of Black Start Service revenue requirements for each generator nominated by the Transmission Owners in that zone.

Total Generation Owner Monthly Black Start Service Revenue Requirement is the sum of the Zonal Generation Owner Monthly Black Start Service Revenue Requirements for all Zones in the PJM Region.

Allocation Factor is the monthly transmission use of each Network Customer or Transmission Customer per Zone or Non-Zone, as applicable, on a megawatt basis divided by the total transmission use in the Zone or in the PJM Region, as applicable, on a megawatt basis.

For Network Customers, monthly transmission use on a megawatt basis is the sum of a Network Customer's daily values of DCPZ or DCPNZ (as those terms are defined in Tariff, Part I, section 34.1) as applicable, for all days of the month.

For Transmission Customers, monthly transmission use on a megawatt basis is the sum of the Transmission Customer's hourly amounts of Reserved Capacity for each day of the month (not curtailed by PJM) divided by the number of hours in the day.

Adjustment Factor is determined as the sum of the total monthly transmission use in the PJM Region on a megawatt basis, exclusive of such use by Network Customers and Transmission Customers serving Non-Zone Load, divided by the total monthly transmission use in the PJM Region on a megawatt basis.

In the event that a single customer is serving load in more than one Zone, or serving Non-Zone Load as well as load in one or more Zones, or is both a Network Customer and a Transmission Customer, the Monthly Charge for such a customer shall be the sum of the Monthly Charges determined by applying the appropriate formulae set forth in this Schedule 6A.