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May 14, 2012

Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E. Room 1A
Washington, D.C. 20426

Re: *PJM Interconnection, L.L.C.*, Docket No. ER12- 1784-000

Dear Secretary Bose:

Pursuant to section 205 of the Federal Power Act (“FPA”)¹ and the Federal Energy Regulatory Commission’s (the “Commission’s” or “FERC’s”) regulations,² PJM Interconnection, L.L.C. (“PJM”) hereby submits this filing to the Commission to revise certain obsolete references and correct typographical errors in the PJM Open Access Transmission Tariff (“Tariff”), the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. (“Operating Agreement”), and the Reliability Assurance Agreement among Load Serving Entities in the PJM Region (“RAA”) (collectively, the “PJM Agreements”). PJM requests an effective date of July 18, 2012 for the proposed revisions to the Tariff, Operating Agreement, and RAA.

I. Background

Currently, the PJM Agreements contain obsolete references to the defined term Applicable Regional Reliability Council and the names of specific regional reliability

¹ 16 U.S.C. § 824d (2006).

² 18 C.F.R. Part 35.

councils (e.g., East Central Area Reliability Council (“ECAR”)).³ Prior to the implementation of the Energy Policy Act of 2005 (“EPAct 2005”)⁴ and FERC’s regulations to effectuate the EPAct 2005,⁵ the North American Electric Reliability Corporation (“NERC”) developed voluntary reliability standards with the regional reliability councils such as ECAR, Mid-Atlantic Area Council (“MAAC”), Mid American Interconnected Network (“MAIN”), and Virginia Carolinas Area Reliability Council (“VACAR”).⁶ Pursuant to the EPAct 2005⁷ and Order No. 672,⁸ regional reliability councils were superseded by regional entities and, therefore, NERC now delegates its authority to propose and enforce reliability standards to regional entities, such as ReliabilityFirst Corporation (“ReliabilityFirst”)⁹ and SERC Reliability Corporation (“SERC”).¹⁰ However, in certain instances, the PJM Agreements continue to

³ The chart attached hereto as Attachment A contains a chart that identifies the obsolete references and describes the proposed revisions to the Tariff, Operating Agreement, and RAA.

⁴ Pub. L. No. 109-58, 119 Stat. 594 (2005).

⁵ See 18 C.F.R. Part 39.

⁶ See *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, ¶ 142 (2006) (Order No. 672).

⁷ See 16 U.S.C. § 824o(e)(4) (2006).

⁸ See Order No. 672 at ¶ 142.

⁹ See *Amended and Restated Delegation Agreement between North American Electric Reliability Corporation and ReliabilityFirst Corporation*, January 1, 2011, http://www.nerc.com/files/RFC_RDA_Effective_20111007.pdf.

¹⁰ See *Amended and Restated Delegation Agreement between North American Electric Reliability Corporation and SERC Reliability Corporation*, January 1, 2011, http://www.nerc.com/files/SERC_RDA_Effective_20111007.pdf.

reference the regional reliability councils instead of correctly referencing the regional entities.¹¹

In addition to improperly referencing the regional reliability councils, the PJM Agreements contain references to PJM sub-regional agreements and specific PJM sub-regions that were rendered obsolete by various PJM filings and subsequent FERC orders approving such filings. Specifically, the East RAA, West RAA, and South RAA were replaced by a consolidated RAA.¹² Moreover, the East Transmission Owners Agreement and West Transmission Owners Agreement were terminated and superseded by the Consolidated Transmission Owners Agreement.¹³ Finally, for the various reasons described in the chart in Attachment A of this filing, the PJM Agreements contain references to the PJM West Region and PJM South Region that are no longer necessary.

PJM submits this filing to remedy the obsolete references discussed above and typographical errors as well. Specifically, PJM submits the following proposed revisions to the Tariff, Operating Agreement, and RAA:

1. the replacement of the defined term Applicable Regional Reliability Council with the defined term Applicable Regional Entity;
2. the removal of the references to ECAR, MAAC, MAIN, and VACAR;¹⁴

¹¹ See Attachment A.

¹² See *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,331 (2006) (order approving the consolidated RAA).

¹³ See *PJM Interconnection, L.L.C., et al.*, FERC Docket No. ER06-487-001, (September 6, 2006) (unpublished letter order approving the Consolidated Transmission Owners Agreement).

¹⁴ VACAR is no longer a regional reliability council; however, VACAR continues to exist as a sub-region of SERC. Therefore, although the majority of references to VACAR will be removed from Tariff in the revisions proposed herein, one reference to VACAR will remain in Schedule 6 to the Operating Agreement, section 1.2(c.02).

3. the correction of typographical errors in the references to Reliability *First*;
4. the removal or replacement of the references to the East Transmission Owners Agreement and West Transmission Owners Agreement;
5. the removal or replacement of the references to the East RAA, West RAA, and South RAA;¹⁵ and
6. the removal or replacement of the of the references to the PJM West Region and PJM South Region in the Tariff.¹⁶

II. Description of the Tariff, Operating Agreement, and RAA Revisions

The chart in Attachment A of this filing describes and provides the rationale for each revision to the Tariff, Operating Agreement, and RAA proposed herein.

III. PJM Stakeholder Review and Support

The Markets and Reliability Committee endorsed and approved the proposed revisions to the Tariff, Operating Agreement, and RAA by acclamation of the members present at its meeting on December 21, 2011. The Members Committee endorsed and approved the same proposed revisions with no objections or abstentions at its meeting on January 26, 2012.¹⁷

¹⁵ The RAA established the Markets and Reliability Committee to replace the Reliability Committee under the regional RAAs. Therefore, as part of these revisions, PJM is replacing each reference to the Reliability Committee with a reference to the Markets and Reliability Committee. See Attachment A for the specific revisions.

¹⁶ Although PJM is deleting references to the PJM West Region and PJM South Region in the Tariff, such regions continue to be required in the OA for the following reasons: (1) the PJM Regional Transmission Expansion Planning process requires separately identified enhancements and expansions for three PJM sub-regions (i.e., the PJM Mid-Atlantic Region, the PJM West Region, and the PJM South Region) (*see* §1.5.6 of Schedule 6 to Operating Agreement); and (2) a PJM EDC's underfrequency relay obligations are dependent on the PJM sub-region to which it belongs (*see* §§1.2 (a), (b), and (c) of Schedule 7 to the Operating Agreement).

¹⁷ See <http://pjm.com/~media/committees-groups/committees/mc/20120223/20120223-draft-minutes-mc-20120126.ashx>.

IV. Effective Date

PJM requests an effective date of July 18, 2012 for the attached Tariff, Operating Agreement, and RAA sections, which is at least sixty days after the date of this filing.

V. Documents Enclosed

PJM encloses with this transmittal letter, each of the following:

- 1) Attachment A: a chart containing each revision to the Tariff, Operating Agreement, and RAA proposed herein and the reason for the proposed revision;
- 2) Attachment B: a PDF version and an electronic version of the redline sections of the Tariff, Operating Agreement, and RAA sections with the revisions proposed herein; and
- 3) Attachment C: a PDF version and an electronic version of the clean sections of the Tariff, Operating Agreement, and RAA sections with the revisions proposed herein.

VI. Correspondence and Communications

Correspondence and communications with respect to this filing should be sent to the following persons:

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VII. Service

PJM has served a copy of this filing on all PJM Members and on all state utility regulatory commissions in the PJM Region by posting this filing electronically. In accordance with the Commission's regulations,¹⁸ PJM will post a copy of this filing to the FERC filings section of its internet site, located at the following link: <http://www.pjm.com/documents/ferc-manuals/ferc-filings.aspx> with a specific link to the newly-filed document, and will send an e-mail on the same date as this filing to all PJM Members and all state utility regulatory commissions in the PJM Region¹⁹ alerting them that this filing has been made by PJM and is available by following such link. If the document is not immediately available by using the referenced link, the document will be available through the referenced link within twenty-four hours of the filing. Also, a copy of this filing will be available on the Commission's eLibrary website located at the following link: <http://www.ferc.gov/docs-filing/elibrary.asp> in accordance with the Commission's regulations and Order No. 714.

Respectfully submitted,



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¹⁸ See 18C.F.R §§ 35.2(e) and 385.2010(f)(3).

¹⁹ PJM already maintains, updates, and regularly uses e-mail lists for all PJM Members and affected state commissions.

Attachment A



Substantive Revisions, Non-Substantive Corrections, and Ministerial Corrections to the PJM Open Access Transmission Tariff ("OATT"), Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. ("OA"), and Reliability Assurance Agreement among Load Serving Entities in the PJM Region ("RAA")

No.	PJM Section Title	Reason for Proposed Revision	Proposed Revision
Revision of References to Applicable Regional Reliability Council			
1.	OATT: Part I (<i>Common Service Provisions</i>): §1.2A (<i>Definitions: Applicable Regional Reliability Council</i>)	Replaced "Applicable Regional Reliability Council" with "Applicable Regional Entity" because, pursuant to the Energy Policy Act of 2005, NERC delegates its authority to propose and enforce reliability standards to a Regional Entity (see modification nos. 2 and 23 below for the definition of Regional Entity), such as ReliabilityFirst Corporation, not a regional reliability council. Moreover, the regional reliability councils (e.g., MAAC) no longer exist.	1.2A Applicable Regional Reliability Council Entity: The reliability council Regional Entity for the region in which a Network Customer, Transmission Customer, Interconnection Customer, or Transmission Owner operates.
2.	OATT: Part I (<i>Common Service Provisions</i>): §1.37A.01 (<i>Definitions: Applicable Standards</i>)	See modification no. 1 above.	<u>1.37A.01 Regional Entity</u> <u>Shall have the meaning specified in the Operating Agreement.</u>
3.	OATT: Part I (<i>Common Service Provisions</i>): §1.2B (<i>Definitions: Applicable Standards</i>)	See modification no. 1 above.	1.2B Applicable Standards: The requirements and guidelines of NERC, the Applicable Regional Reliability Council Applicable <u>Regional Entity</u> , and the Control Area in which the Customer Facility is electrically located, the PJM Manuals, and Applicable Technical Requirements and Standards.
4.	OATT: Part II (<i>Point-to-Point Transmission Service</i>): §17.2(iv) (<i>Procedures for Arranging Firm Point-to-point Transmission Service: Completed Application</i>)	See modification no. 1 above.	17.2 Completed Application: A Completed Application shall provide all of the information included in 18 C.F.R. § 2.20 including but not limited to the following: ...(iv) The location of the generating facility(ies) supplying the capacity and energy and the location of the load ultimately served by the capacity and energy transmitted. The Transmission Provider will treat this information as confidential except to the extent that disclosure of this information is required by this Tariff, by regulatory or judicial order, for reliability purposes pursuant to Good Utility Practice or pursuant to Applicable Regional Reliability Council Applicable <u>Regional Entity</u> transmission information sharing agreements. The Transmission Provider shall treat this information consistent with the standards of conduct contained in Part 37 of the Commission's regulations.



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No.	PJM Section Title	Reason for Proposed Revision	Proposed Revision
5.	OATT: Part II (<i>Point-to-Point Transmission Service</i>):§18.2 (<i>Procedures for Arranging Non-firm Point-to-point Transmission Service: Completed Application</i>)	See modification no. 1 above.	18.2 Completed Application: The Transmission Provider will treat this information in (vi) and (vii) as confidential at the request of the Transmission Customer except to the extent that disclosure of this information is required by this Tariff, by regulatory or judicial order, for reliability purposes pursuant to Good Utility Practice, or pursuant to Applicable Regional Reliability Council <u>Applicable Regional Entity</u> transmission information sharing agreements. The Transmission Provider shall treat this information consistent with the standards of conduct contained in Part 37 of the Commission's regulations.
6.	OATT: Part IV (<i>Interconnections with the Transmission System</i>): Subpart A (<i>Interconnection Procedures</i>): §36.1.1 (<i>Interconnection Requests: Interconnection Services for Generation</i>)	Removed "Applicable Regional Reliability Council" for the reasons set forth in modification no. 1 above. Replaced "various contingency criteria established by the Applicable Regional Reliability Council in which the generator is located" with "the contingency criteria in the Applicable Standards" for the reasons set forth in modification no. 1 and for brevity.	36.1.1 Interconnection Services for Generation: Generation Interconnection Customers may request either of two forms of Interconnection Service, i.e., interconnection as a Capacity Resource or as an Energy Resource. Energy Resource status allows the generator to participate in the PJM Interchange Energy Market pursuant to the PJM Operating Agreement. Capacity Resource status allows the generator to participate in the PJM Interchange Energy Market to be utilized by load-serving entities in the PJM Region to meet capacity obligations imposed under the Reliability Assurance Agreement and/or to be designated as a Network Resource under Part III. Capacity Resources also may participate in Reliability Pricing Model Auctions and in Ancillary Services markets pursuant to the PJM Tariff or the Operating Agreement. Capacity Resource status is based on providing sufficient transmission capability to ensure deliverability of generator output to the aggregate PJM Network Load and to satisfy various-the contingency criteria established by in the Applicable StandardsApplicable Regional Reliability Council in which the generator is located. Specific tests performed during the Generation Interconnection Feasibility Study and later System Impact Study will identify those upgrades required to satisfy the contingency criteria applicable at the generator's location.
7.	OATT: Attachment D (<i>Methodology for Completing a System Impact Study</i>)	Replaced "Principles and Standards for Planning the Bulk Electric Systems of Applicable Regional Reliability Councils" with "Applicable Standards" because "Applicable Standards" include any necessary principles and standards for planning. Moreover, "Applicable Standards" is succinct. Replaced "Applicable Regional Reliability Council" with "Applicable Regional Entity" for the reasons set forth in modification no. 1 above.	The Transmission Provider plans and evaluates the PJM Region Transmission System in strict compliance with the following: 1. North American Electric Reliability Council ("NERC") Reliability Principles and Guides 2. Principles and Standards for Planning the Bulk Electric Systems of Applicable Regional Reliability Councils <u>Applicable Standards</u> 3. Transmission planning criteria, methods and procedures described in the "FERC Form No. 715 - Annual Transmission Planning and Evaluation Report" for each Applicable Regional Reliability Council <u>Applicable Regional Entity</u> .



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No.	PJM Section Title	Reason for Proposed Revision	Proposed Revision
8.	OATT: Attachment K – Appendix: Part 1 (<i>Market Operations</i>): §1.6.2(vii) (<i>Office of the Interconnection: Scope of Services</i>)	See modification no. 1 above.	(vii) Coordinate the curtailment or shedding of load, or other measures appropriate to alleviate an Emergency, in order to preserve reliability in accordance with NERC, or Applicable Regional Reliability Council <u>Applicable Regional Entity</u> principles, guidelines and standards, and to ensure the operation of the PJM Region in accordance with Good Utility Practice and this Agreement...
9.	OATT: Attachment K – Appendix: Part 1 (<i>Market Operations</i>): §1.7.4(a)(iii) (<i>General: General Obligations of the Market Participants</i>)	See modification no. 1 above.	1.7.4 General Obligations of the Market Participants. (a) In performing its obligations to the Office of the Interconnection hereunder, each Market Participant shall at all times (i) follow Good Utility Practice, (ii) comply with all applicable laws and regulations, (iii) comply with the applicable principles, guidelines, standards and requirements of FERC, NERC and Applicable Regional Reliability Council <u>each Applicable Regional Entity</u> , (iv) comply with the procedures established for operation of the PJM Interchange Energy Market and PJM Region and (v) cooperate with the Office of the Interconnection as necessary for the operation of the PJM Region in a safe, reliable manner consistent with Good Utility Practice.
10.	OATT: Attachment K – Appendix: Part 1 (<i>Market Operations</i>): §1.7.11(a) (<i>General: Emergencies</i>)	See modification no. 1 above.	1.7.11 Emergencies. (a) The Office of the Interconnection, with the assistance of the Members’ dispatchers as it may request, shall be responsible for monitoring the operation of the PJM Region, for declaring the existence of an Emergency, and for directing the operations of Market Participants as necessary to manage, alleviate or end an Emergency. The standards, policies and procedures of the Office of the Interconnection for declaring the existence of an Emergency, including but not limited to a Minimum Generation Emergency, and for managing, alleviating or ending an Emergency, shall apply to all Members on a non-discriminatory basis. Actions by the Office of the Interconnection and the Market Participants shall be carried out in accordance with this Agreement, the NERC Operating Policies, Applicable Regional Reliability Council <u>Applicable Regional Entity</u> reliability principles and standards, Good Utility Practice, and the PJM Manuals. A declaration that an Emergency exists or is likely to exist by the Office of the Interconnection shall be binding on all Market Participants until the Office of the Interconnection announces that the actual or threatened Emergency no longer exists. Consistent with existing contracts, all Market Participants shall comply with all directions from the Office of the Interconnection for the purpose of managing, alleviating or ending an Emergency. The Market Participants shall authorize the Office of the Interconnection and PJM Settlement to purchase or sell energy on their behalf to meet an Emergency, and otherwise to implement agreements with other Control Areas interconnected with the PJM Region for the mutual provision of service to meet an Emergency, in accordance with this Agreement.
11.	OATT: Attachment K – Appendix: Part 1 (<i>Market Operations</i>): §1.7.14	See modification no. 1 above.	1.7.14 PJM Manuals. The Office of the Interconnection shall be responsible for maintaining, updating, and promulgating the PJM Manuals as they relate to the operation of the PJM Interchange Energy Market. The PJM



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No.	PJM Section Title	Reason for Proposed Revision	Proposed Revision
	(General: PJM Manuals)		Manuals, as they relate to the operation of the PJM Interchange Energy Market, shall conform and comply with this Agreement, NERC operating policies, and Applicable Regional Reliability Council <u>Applicable Regional Entity</u> reliability principles, guidelines and standards, and shall be designed to facilitate administration of an efficient energy market within industry reliability standards and the physical capabilities of the PJM Region.
12.	OATT: Attachment N-1 (<i>Form of System Impact Study Agreement</i>) : §6(e) (<i>Purpose of the System Impact Study</i>)	<p>Replaced “Applicable Regional Reliability Council” with “Applicable Regional Entity” for the reason set forth in modification no. 1 above.</p> <p>Added NERC to ensure that the former Regional Reliability Councils’ contingency analysis criteria for which NERC is now responsible is included in this section.</p>	<p>The System Impact Study conducted hereunder will provide more comprehensive estimates of the cost and length of time required to accommodate the New Service Customer’s New Service Request than those developed through the Feasibility Study or Initial Study, if applicable, performed for the New Service Customer. These estimates shall represent a good faith attempt to determine the cost of necessary facilities and upgrades to accommodate the New Service Customer’s New Service Request, and the New Service Customer’s cost responsibility for them, but shall not be deemed final or binding. The scope of the System Impact Study {include for Merchant Transmission Facilities: may depend in part on the interconnection rights elected by the New Service Customer under Section 36.1.03 of the PJM Tariff and} may include (a) an assessment of sub-area import deliverability, (b) an assessment of sub-area export deliverability, (c) an assessment of project related system stability issues, (d) an assessment of project related short circuit duty issues, (e) a contingency analysis consistent with the Applicable Regional Reliability Council <u>NERC’s and each Applicable Regional Entity</u>’s reliability criteria, (f) an assessment of regional transmission upgrades that most effectively meet identified needs, and (g) an analysis to determine cost allocation responsibility for required facilities and upgrades. Final estimates will be developed only upon execution of a Facilities Study Agreement in accordance with Part VI of the PJM Tariff. The System Impact Study necessarily will employ various assumptions regarding the New Service Request, other pending requests, and PJM’s Regional Transmission Expansion Plan at the time of the study. IN NO EVENT SHALL THE SYSTEM IMPACT STUDY IN ANY WAY BE DEEMED TO OBLIGATE THE TRANSMISSION PROVIDER OR THE TRANSMISSION OWNERS THAT MAY INTERCONNECT WITH THE NEW SERVICE CUSTOMER TO CONSTRUCT ANY FACILITIES OR UPGRADES.</p>
13.	OATT: Attachment O (<i>Form of Interconnection Service Agreement</i>): Appendix 2 (<i>Standard Terms and Conditions for Interconnections</i>): §4.8 (<i>Operations: Under- and Over-Frequency Conditions</i>)	See modification no. 12 above.	<p>4.8 Under- and Over-Frequency Conditions:</p> <p>The Transmission System is designed to automatically activate a load-shed program as required by the Applicable Regional Reliability Council <u>NERC and each Applicable Regional Entity</u> in the event of an under-frequency system disturbance. A Generation Interconnection Customer shall implement under-frequency and over-frequency relay set points for the Customer Facility as required by the Applicable Regional Reliability Council <u>NERC and each Applicable Regional Entity</u> to ensure “ride through” capability of the Transmission System. The response of a Generation Interconnection Customer’s Customer Facility to frequency deviations of predetermined magnitudes, both under-frequency and over-frequency deviations shall be studied and coordinated</p>



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			with the Transmission Provider in accordance with Good Utility Practice. The term "ride through" as used herein shall mean the ability of a Generation Interconnection Customer's Customer Facility to stay connected to and synchronized with the Transmission System during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice.
14.	OATT: Attachment O (<i>Form of Interconnection Service Agreement</i>): Appendix 2 (<i>Standard Terms and Conditions for Interconnections</i>): §6.1 (<i>Emergency Operations: Obligations. Under- and Over-Frequency Conditions</i>)	See modification no. 1 above.	6.1 Obligations: Subject to Applicable Laws and Regulations, each Interconnection Party shall comply with the Emergency Condition procedures of NERC, the Applicable Regional Reliability Council <u>Applicable Regional Entity</u> , Transmission Provider, the Interconnected Transmission Owner and Interconnection Customer.
15.	OATT: Attachment U (<i>Independent Transmission Companies</i>): §9.5 (<i>Operations: Operations</i>)	See modification no. 1 above.	9.5 Operations. The ITC shall have the authority and responsibility, in accordance with its agreements with the owners of the ITC Transmission Facilities, the terms of the Consolidated Transmission Owners Agreement, NERC and Applicable Regional Reliability Council <u>Applicable Regional Entity</u> standards and guidelines, and the PJM Operating Manuals, as such manuals may be revised pursuant to section 16 of this Attachment U, to operate those facilities in a safe, economical, and reliable manner. PJM shall have the authority and responsibility to issue operating instructions to the ITC as they relate to the ITC Transmission Facilities in accordance with the PJM Manuals, as they may be revised pursuant to Section 16 of this Attachment U, provided that nothing herein shall be construed to require a change in the physical control of the ITC Transmission Facilities using the ITC's control center facilities and equipment. The ITC and PJM shall seek agreement (where time limitations allow) on real-time operational decisions affecting the ITC Transmission Facilities not otherwise specified in the PJM Operating Manuals. In the absence of such agreement, or if time limitations do not permit reaching agreement, PJM shall exercise its authority to direct operations, subject to any actions the ITC may take in accordance with section 2.2 of this Attachment U.
16.	OATT: Attachment U (<i>Independent Transmission Companies</i>): §10.1 (<i>Planning</i>)	See modification no. 1 above.	10. PLANNING 10.1 PJM has the ultimate authority for developing a Regional Transmission Expansion Plan for its entire region, including the ITC Transmission Facilities, and may direct expansions as required in accordance with Schedule 6 to the PJM Operating Agreement, or successor provisions, as they may be amended. In the event of disputes between PJM and ITC concerning the contents of such Regional Transmission Expansion Plan, the position of PJM, as the ultimate authority for planning in the region, shall prevail. Pursuant to the joint planning protocol developed under Section 10.3



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No.	PJM Section Title	Reason for Proposed Revision	Proposed Revision
			below, PJM shall be responsible for setting appropriate planning criteria and the ITC shall be responsible for studying the need for modifications, enhancements, or additions to the ITC Transmission Facilities and for proposing a plan of modifications, enhancements, or additions to the ITC Transmission Facilities. Each component of a timely plan proposed by the ITC shall be incorporated without PJM approval in the Regional Transmission Expansion Plan if PJM determines that such component does not materially adversely affect the Transmission System other than the ITC Transmission Facilities. The ITC also may suggest, in accordance with any established stakeholder procedures under Schedule 6 of the PJM Operating Agreement, potential modifications, enhancements, or additions to transmission facilities in the PJM region other than the ITC Transmission Facilities. Subject to any necessary FERC approval, the ITC may adopt any procedures it deems necessary with respect to the ITC’s development of a plan of enhancements or expansions, so long as such procedures do not adversely affect PJM’s ability to prepare the Regional Transmission Expansion Plan in a timely and efficient manner. Nothing in this Attachment U impairs the rights of affected parties to participate in the PJM planning process in accordance with Commission-approved procedures. During the planning process the ITC shall adhere to all Applicable Regional Reliability Council <u>Applicable Regional Entity</u> , NERC and PJM Planning criteria. The ITC shall participate with PJM in the development of the system needs analysis, any system impact studies and the transmission expansion plans as necessary to promote fully coordinated and efficient solutions.
17.	OATT: Attachment V (<i>Form of ITC Agreement</i>): §8.0	See modification no. 1 above.	8.0 This Agreement shall remain in effect until the effective date of ITC’s withdrawal from this Agreement. ITC may withdraw from this Agreement upon ninety (90) days advance written notice to PJM, provided that such withdrawal shall not be effective until ITC with respect to the ITC Transmission Facilities has (1) satisfied all applicable NERC and Applicable Regional Reliability Council <u>Applicable Regional Entity</u> requirements for operating a control area or being included within an existing control area; (2) put in place alternative arrangements for satisfaction of FERC’s requirements with respect to comparable transmission services and, if required, participation in an RTO or Independent Transmission Provider; (3) transferred all of its functions and obligations as an ITC to one or more other entities to the satisfaction of FERC, and (4) received FERC approval or acceptance without suspension or hearing.
18.	OATT: Attachment GG (<i>Form of Upgrade Construction Service Agreement</i>): Appendix II (<i>Definitions</i>): §1.3 (<i>Applicable Regional Reliability Council</i>)	See modification no. 1 above.	1.3 “ Applicable Regional Reliability Council <u>Applicable Regional Entity</u> ” Applicable Regional Reliability Council <u>Applicable Regional Entity</u> shall mean the reliability council <u>Regional Entity</u> for the region in which the Transmission Owner or New Service Customer operates.



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19.	OATT: Attachment GG (<i>Form of Upgrade Construction Service Agreement</i>): Appendix II (<i>Definitions</i>): §1.4 (<i>Applicable Standards</i>)	See modification no. 1 above.	1.4 "Applicable Standards" Applicable Standards shall mean the requirements and guidelines of NERC, the Applicable Regional Reliability Council <u>Applicable Regional Entity</u> and the Control Area in which the Direct Assignment Facilities or Customer-Funded Upgrades are electrically located, the PJM Manuals and applicable technical requirements and standards.
20.	OATT: Attachment DD (<i>Reliability Pricing Model</i>): §5.10(a)(ii)(A)(<i>Auction Clearing Rights: Variable Resource Requirement Curve</i>)	See modification no. 1 above.	ii) For any Delivery Year, the Office of the Interconnection shall establish a separate Variable Resource Requirement Curve for each LDA for which: A. the Capacity Emergency Transfer Limit is less than 1.15 times the Capacity Emergency Transfer Objective, as determined by the Office of the Interconnection in accordance with NERC and Applicable Regional Reliability Council <u>Applicable Regional Entity</u> guidelines; or...
21.	OA: §1.5A (<i>Definitions: Applicable Regional Reliability Entity</i>)	See modification no. 1 above.	1.5A Applicable Regional Reliability Council <u>Entity</u> . "Applicable Regional Reliability Council <u>Entity</u> " shall mean the reliability council <u>Regional Entity</u> for the region in which a Member operates.
22.	OA: §1.10 (<i>Definitions: Control Area</i>)	See modification no. 1 above.	1.10 Control Area. "Control Area" shall mean an electric power system or combination of electric power systems bounded by interconnection metering and telemetry to which a common automatic generation control scheme is applied in order to: (a) match the power output of the generators within the electric power system(s) and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s); (b) maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice; (c) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice and the criteria of NERC and the applicable regional reliability council of NERC <u>each Applicable Regional Entity</u> ; (d) maintain power flows on transmission facilities within appropriate limits to preserve reliability; and (e) provide sufficient generating capacity to maintain operating reserves in accordance with Good Utility Practice.
23.	OA: §1.38.001 (<i>Definitions: Regional Entity</i>)	See modification no. 1 above.	<u>1.38.001 Regional Entity.</u> <u>"Regional Entity" shall mean an organization that NERC has delegated the authority to propose and enforce reliability standards pursuant to the Federal Power Act.</u>



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No.	PJM Section Title	Reason for Proposed Revision	Proposed Revision
24.	OA: §10.4(iv) (<i>Office of the Interconnection: Duties and Responsibilities</i>)	See modification no. 1 above.	<p>10.4 Duties and Responsibilities.</p> <p>The Office of the Interconnection, under the direction of the President as supervised and overseen by the PJM Board, shall carry out the following duties and responsibilities, in accordance with the provisions of this Agreement:</p> <p>i) Administer and implement this Agreement;</p> <p>ii) Perform such functions in furtherance of this Agreement as the PJM Board, acting within the scope of its duties and responsibilities under this Agreement, may direct;</p> <p>iii) Prepare, maintain, update and disseminate the PJM Manuals;</p> <p>iv) Comply with NERC, and Applicable Regional Reliability Council<u>Applicable Regional Entity</u> operation and planning standards, principles and guidelines;</p>
25.	OA: §11.3.2 (<i>Members: Member Responsibilities: Facilities Planning and Operation</i>)	See modification no. 1 above.	<p>11.3.2 Facilities Planning and Operation.</p> <p>Consistent with and subject to the requirements of this Agreement, the PJM Tariff, the governing agreements of the Applicable Regional Reliability Council<u>each Applicable Regional Entity</u>, the Reliability Assurance Agreement, the Consolidated Transmission Owners Agreement, and the PJM Manuals, each Member shall cooperate with the other Members in the coordinated planning and operation of the facilities of its System within the PJM Region so as to obtain the greatest practicable degree of reliability, compatible economy and other advantages from such coordinated planning and operation. In furtherance of such cooperation each Member shall, as applicable:...</p>
26.	OA: §11.3.2(d) (<i>Members: Member Responsibilities: Facilities Planning and Operation</i>)	See modification no. 1 above.	<p>(d) Cooperate with the members of the Applicable Regional Reliability Council<u>each Applicable Regional Entity</u> to augment the reliability of the bulk power supply facilities of the region and comply with Applicable Regional Reliability Councils<u>Applicable Regional Entities</u> and NERC operating and planning standards, principles and guidelines and the PJM Manuals implementing such standards, principles and guidelines</p>
27.	OA: §11.3.2(h) (<i>Members: Member Responsibilities: Facilities Planning and Operation</i>)	See modification no. 1 above.	<p>(h) Adopt and apply standards adopted pursuant to this Agreement and conforming to NERC, and Applicable Regional Reliability Council<u>Applicable Regional Entity</u> standards, principles and guidelines and the PJM Manuals, for system design, equipment ratings, operating practices and maintenance practices.</p>
28.	OA: §18.17.1 (<i>Confidentiality: Party Access</i>)	<p>Replaced "North American Electric Reliability Council" with "NERC" because North American Electric Reliability Council is defined as NERC in the OA (see OA §1.19A).</p> <p>Replaced "Applicable Regional Reliability Councils" with "Applicable Regional Entity" for the reasons set forth in modification no. 1</p>	<p>18.17.1 Party Access.</p> <p>(b) Except as may be provided in this Agreement or in the PJM Open Access Transmission Tariff, the Office of the Interconnection shall not disclose to its Members or to third parties, any documents, data, or other information of a Member or entity applying for Membership, to the extent such documents, data, or other information has been designated confidential pursuant to the procedures adopted by the Office of the Interconnection and/or the PJM Market Monitor or by such Member or entity applying for membership; provided that nothing contained herein shall prohibit the Office of the Interconnection from providing any such confidential information to its</p>



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		above. Replaced neighboring reliability councils with neighboring Regional Entities (see modification no.1 above).	agents, representatives, or contractors to the extent that such person or entity is bound by an obligation to maintain such confidentiality; provided further that nothing contained herein shall prohibit the Office of the Interconnection from providing Member confidential information to the North American Electric Reliability Council NERC, or any of its regional reliability councils <u>Applicable Regional Entity</u> , or to any reliability coordinator, to the extent that (i) the Office of the Interconnection determines in its reasonable discretion that the exchange of such information is required to enhance and/or maintain reliability within the Members' <u>Applicable Regional Reliability Councils</u> <u>Applicable Regional Entities</u> and their neighboring reliability councils <u>Regional Entities</u> , or within the region of any reliability coordinator, (ii) such entity is bound by a written agreement to maintain such confidentiality, and (iii) the Office of the Interconnection has notified the affected party of its intention to release such information no less than five business days prior to the release. The Office of the Interconnection and/or the PJM Market Monitor shall collect and use confidential information only in connection with its authority under this Agreement and the Open Access Transmission Tariff and the retention of such information shall be in accordance with PJM's data retention policies.
29.	OA: Schedule 1 (<i>PJM Interchange Energy Market</i>): §1.6.2(vii) (<i>Market Operations: Office of the Interconnection</i>)	See modification no. 1 above.	1.6.2 Scope of Services. The Office of the Interconnection shall perform the services pertaining to the PJM Interchange Energy Market specified in this Agreement, including but not limited to the following:... vii) Coordinate the curtailment or shedding of load, or other measures appropriate to alleviate an Emergency, in order to preserve reliability in accordance with NERC, or <u>Applicable Regional Reliability Council</u> <u>Applicable Regional Entity</u> principles, guidelines and standards, and to ensure the operation of the PJM Region in accordance with Good Utility Practice and this Agreement;
30.	OA: Schedule 1 (<i>PJM Interchange Energy Market</i>): §1.7.4(a) (<i>General: General Obligations of the Market Participants</i>)	See modification no. 1 above.	1.7.4 General Obligations of the Market Participants. (a) In performing its obligations to the Office of the Interconnection hereunder, each Market Participant shall at all times (i) follow Good Utility Practice, (ii) comply with all applicable laws and regulations, (iii) comply with the applicable principles, guidelines, standards and requirements of FERC, NERC and <u>Applicable Regional Reliability Council</u> <u>each Applicable Regional Entity</u> , (iv) comply with the procedures established for operation of the PJM Interchange Energy Market and PJM Region and (v) cooperate with the Office of the Interconnection as necessary for the operation of the PJM Region in a safe, reliable manner consistent with Good Utility Practice.
31.	OA: Schedule 1 (<i>PJM Interchange Energy Market</i>): §1.7.11(a) (<i>General: Emergencies</i>)	See modification no. 1 above.	1.7.11 Emergencies. (a) The Office of the Interconnection, with the assistance of the Members' dispatchers as it may request, shall be responsible for monitoring the operation of the PJM Region, for declaring the existence of an Emergency, and for directing the operations of Market Participants as necessary to manage, alleviate or end an Emergency. The standards, policies and procedures of the Office of the Interconnection for declaring the existence of an Emergency, including but not limited to a



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			Minimum Generation Emergency, and for managing, alleviating or ending an Emergency, shall apply to all Members on a non-discriminatory basis. Actions by the Office of the Interconnection and the Market Participants shall be carried out in accordance with this Agreement, the NERC Operating Policies, Applicable Regional Reliability Council <u>Applicable Regional Entity</u> reliability principles and standards, Good Utility Practice, and the PJM Manuals. A declaration that an Emergency exists or is likely to exist by the Office of the Interconnection shall be binding on all Market Participants until the Office of the Interconnection announces that the actual or threatened Emergency no longer exists. Consistent with existing contracts, all Market Participants shall comply with all directions from the Office of the Interconnection for the purpose of managing, alleviating or ending an Emergency. The Market Participants shall authorize the Office of the Interconnection and PJM Settlement to purchase or sell energy on their behalf to meet an Emergency, and otherwise to implement agreements with other Control Areas interconnected with the PJM Region for the mutual provision of service to meet an Emergency, in accordance with this Agreement.
32.	OA: Schedule 1 (<i>PJM Interchange Energy Market</i>): §1.7.14 (<i>General: PJM Manuals</i>)	See modification no. 1 above.	1.7.14 PJM Manuals. The Office of the Interconnection shall be responsible for maintaining, updating, and promulgating the PJM Manuals as they relate to the operation of the PJM Interchange Energy Market. The PJM Manuals, as they relate to the operation of the PJM Interchange Energy Market, shall conform and comply with this Agreement, NERC operating policies, and Applicable Regional Reliability Council <u>Applicable Regional Entity</u> reliability principles, guidelines and standards, and shall be designed to facilitate administration of an efficient energy market within industry reliability standards and the physical capabilities of the PJM Region.
33.	OA: Schedule 5 (<i>PJM Dispute Resolution Procedures</i>): §2.2 (<i>Purposes and Objectives: Interpretation</i>)	See modification no. 1 above.	2.2 Interpretation. To the extent permitted by applicable law, the PJM Dispute Resolution Procedures are to be interpreted to effectuate the objectives set forth in Section 2.1. To the extent permitted by these PJM Dispute Resolution Procedures, the Alternate Dispute Resolution Coordinator shall coordinate with the established dispute resolution committee of an Applicable Regional Reliability Council <u>Applicable Regional Entity</u> , where appropriate, in order to conserve administrative resources and to avoid duplication of dispute resolution staffing.
34.	OA: Schedule 5 (<i>PJM Dispute Resolution Procedures</i>): §3.2 (<i>Negotiation and Mediation: Procedures: Selection of Mediator</i>)	See modification no. 1 above.	3.2.2 Selection of Mediator. The Alternate Dispute Resolution Coordinator shall distribute to the parties by facsimile or other electronic means a list containing the names of seven mediators with mediation experience, or with technical or business experience in the electric power industry, or both, as it shall deem appropriate to the dispute. The Alternate Dispute Resolution Coordinator may draw from the lists of mediators maintained by the established dispute resolution committee of an Applicable Regional Reliability Council <u>Applicable Regional Entity</u> , as the Alternate Dispute Resolution



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			Coordinator shall deem appropriate. In the event the Office of the Interconnection is one of the parties to the dispute, the Alternate Dispute Resolution Coordinator shall distribute the names of all qualified mediators on the Alternate Dispute Resolution Coordinator’s list. The persons on the proposed list of mediators shall have no official, financial, or personal conflict of interest with respect to the issues in controversy, unless the interest is fully disclosed in writing to all participants in the mediation process and all such participants waive in writing any objection to the interest. The parties shall then alternate in striking names from the list with the last name on the list becoming the mediator. The determination of which party shall have the first strike off the list shall be determined by lot. The parties shall have ten calendar days to complete the mediator selection process, unless the time is extended by mutual agreement.
35.	OA: Schedule 5 (<i>PJM Dispute Resolution Procedures</i>): §4.4 (<i>Arbitration: Selection of Arbitrator</i>)	See modification no. 1 above.	<p>4.4 Selection of Arbitrator(s).</p> <p>The parties to a dispute for which arbitration has been demanded may agree on any person to serve as a single arbitrator, or shall endeavor in good faith to agree on a single arbitrator from a list of arbitrators prepared for the dispute by the Alternate Dispute Resolution Coordinator and delivered to the parties by facsimile or other electronic means promptly after receipt by the Alternate Dispute Resolution Coordinator of a demand for arbitration. The Alternate Dispute Resolution Coordinator may draw from the lists of arbitrators maintained by the established dispute resolution committee of an Applicable Regional Reliability Council<u>Applicable Regional Entity</u>, as the Alternate Dispute Resolution Coordinator deems appropriate. In the event the Office of the Interconnection is one of the parties to the dispute, the Alternate Dispute Resolution Coordinator shall distribute the names of all qualified arbitrators on the Alternate Dispute Resolution Coordinator’s list. If the parties are unable to agree on a single arbitrator by the fourteenth day following delivery of the foregoing list of arbitrators or such other date as agreed to by the parties, then not later than the end of the seventh business day thereafter the party or parties demanding arbitration on the one hand, and the party or parties responding to the demand for arbitration on the other, shall each designate an arbitrator from a list for the dispute prepared by the Alternate Dispute Resolution Coordinator. The arbitrators so chosen shall then choose a third arbitrator.</p>
36.	OA: Schedule 6 (<i>Regional Transmission Expansion Planning Protocol</i>): §1.2(d) (<i>Conformity with NERC and Other Applicable Reliability Criteria</i>)	See modification no. 1 above.	<p>1.2 Conformity with NERC and Other Applicable Reliability Criteria.</p> <p>(d) The Regional Transmission Expansion Plan shall conform to the applicable reliability principles, guidelines and standards of NERC, Reliability-First Corporation, SERC, and other Applicable Regional Reliability Councils<u>Applicable Regional Entities</u> in accordance with the operating criteria and other procedures detailed in the PJM Manuals.</p>



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No.	PJM Section Title	Reason for Proposed Revision	Proposed Revision
37.	RAA: Article 1 (<i>Definitions</i>): §1.2 (<i>Applicable Regional Reliability Council</i>)	See modification no. 1 above.	1.2 Applicable Regional Reliability Council <u>Applicable Regional Entity</u> Applicable Regional Reliability Council <u>Applicable Regional Entity</u> shall have the same meaning as in the PJM Tariff.
38.	RAA: Article 1 (<i>Definitions</i>): §1.75 (<i>Reliability Principles and Standards</i>)	See modification no. 1 above.	1.75 Reliability Principles and Standards Reliability Principles and Standards shall mean the principles and standards established by NERC or an Applicable Regional Reliability Council <u>Applicable Regional Entity</u> to define, among other things, an acceptable probability of loss of load due to inadequate generation or transmission capability, as amended from time to time.
39.	RAA: Article 9 (<i>Coordinated Planning and Operations</i>): §9.1(a) (<i>Overall Coordination</i>)	See modification no. 1 above.	9.1 Overall Coordination. Each Party shall cooperate with the other Parties in the coordinated planning and operation of their owned or contracted for Capacity Resources to obtain a degree of reliability consistent with the Reliability Principles and Standards. In furtherance of such cooperation each Party shall:... (a) cooperate with the members and associate members of such Party's Applicable Regional Reliability Council <u>Applicable Regional Entity</u> to ensure the reliability of the region;
40.	RAA: Schedule 14: (<i>Delegation to the Office of the Interconnection</i>): §2(m) (<i>Implementation of Reliability Assurance Agreement</i>)	See modification no. 1 above.	2. Implementation of Reliability Assurance Agreement. With regard to the implementation of the provisions of this Agreement:... (m) Coordinate the curtailment or shedding of load, or other measures appropriate to alleviate an Emergency, to preserve reliability in accordance with FERC, NERC or Applicable Regional Reliability Council <u>Applicable Regional Entity</u> principles, guidelines, standards and requirements, and to ensure the operation of the PJM Region in accordance with Good Utility Practice.
Revision of References to ECAR, MAAC, MAIN, and VACAR			
41.	OATT: Part I (<i>Common Service Provisions</i>): §1.10A (<i>Definitions: ECAR</i>)	Removed the definition for ECAR because ECAR was replaced by ReliabilityFirst Corporation and is no longer a regional reliability council. Moreover, the proposed modifications below remove all the references to ECAR.	1.10A ECAR: [RESERVED] East Central Area Reliability Council Agreement, a regional reliability council of NERC, or its successor.
42.	OATT: Part I (<i>Common Service Provisions</i>): §1.18A (<i>Definitions: MAAC</i>)	Removed the definition for MAAC because MAAC was replaced by ReliabilityFirst Corporation and is no longer a regional reliability council. Moreover, the proposed modifications below remove all the references to MAAC.	1.18A MAAC: [RESERVED] The Mid Atlantic Area Council, a reliability council under section 202 of the Federal Power Act, established pursuant to the MAAC Agreement dated 1 August 1994, or any successor thereto.
43.	OATT: Part I (<i>Common Service Provisions</i>): §1.18A.01	Removed the definition for MAAC Control Zone because MAAC no longer exists (see	1.18A.01 MAAC Control Zone: [RESERVED] The aggregate of the zones of Atlantic City Electric Company, Baltimore Gas and Electric



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	(Definitions: MAAC Control Zone)	modification no. 42 above). Moreover, the proposed modifications below remove all the references to the MAAC Control Zone.	Company, Delmarva Power and Light Company, Jersey Central Power and Light Company, Metropolitan Edison Company, PECO Energy Company, Pennsylvania Electric Company, Pennsylvania Power & Light Group, Potomac Electric Power Company, Public Service Electric and Gas Company and Rockland Electric Company.
44.	OATT: Part I (Common Service Provisions):§1.32E (Definitions: PJM Region)	Removed the reference to the PJM West Region (see modification no. 75 below), VACAR Control Zone (see modification no. 46 below), and MAAC Control Zone (see modification no. 43 above) in OATT and, therefore, it was necessary to modify the definition of PJM Region (see modification no. 61 for definition of PJM Region in the OA) to preclude PJM West Region, VACAR Control Zone, and MAAC Control Zone.	1.32E PJM Region: Shall have the meaning specified in the Operating Agreement. Shall mean the aggregate of the PJM West Region, the VACAR Control Zone, and the MAAC Control Zone.
45.	OATT: Part I (Common Service Provisions):§1.49B (Definitions: VACAR)	Removed the definition of VACAR because the proposed modifications in this filing remove or replace the references to VACAR in the OATT.	1.49B VACAR. [RESERVED] The group of five companies, consisting of Duke Energy, Carolina Power and Light, South Carolina Public Service Authority, South Carolina Electric and Gas, and Virginia Electric and Power Company.
46.	OATT: Part I (Common Service Provisions):§1.49C (Definitions: VACAR Control Zone)	Removed the definition of VACAR Control Zone because the proposed modifications below remove or replace the references to the VACAR Control Zone in the OATT.	1.49C VACAR Control Zone. [RESERVED] The Transmission Facilities of Virginia Electric and Power Company.
47.	OATT: Part I (Common Service Provisions):§3C (Mid-Atlantic Area Council Charge)	MAAC no longer exists and, therefore, there is no need for PJM to recover the costs of MAAC from Transmission Customers. Moreover, Schedule 10 to the OATT contains no such charge.	3C Mid-Atlantic Area Council Charge [RESERVED] The Transmission Provider shall recover the costs of MAAC from Transmission Customers delivering energy to load in the MAAC Control Zone under Schedule 10, "Mid-Atlantic Area Council Charge," which is attached to and made part of this Tariff.
48.	OATT: Attachment DD (Reliability Pricing Model): §5.10(a)(ii)(C) (Auction Clearing Rights: Variable Resource Requirement Curve)	In order to remove the reference to the MAAC, which no longer exists as a regional reliability council, the EMAAC, SWMAAC, and MAAC Locational Deliverability Area ("LDAs") were replaced with EMAR, SWMAR, and MAR LDAs, respectively.	ii) For any Delivery Year, the Office of the Interconnection shall establish a separate Variable Resource Requirement Curve for each LDA for which:.. (C) such LDA is determined in a preliminary analysis by the Office of the Interconnection to be likely to have a Locational Price Adder, based on historic offer price levels; provided however that for the Base Residual Auction conducted for the Delivery Year commencing on June 1, 2012, the EMAAC Eastern Mid-Atlantic Region ("EMAR"), SWMAAC Southwest Mid-Atlantic Region



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			("SWMAR") and MAAC-Mid-Atlantic Region ("MAR") LDAs shall employ separate Variable Resource Requirement Curves regardless of the outcome of the above three tests; and provided further that the Office of the Interconnection may establish a separate Variable Resource Requirement Curve for an LDA not otherwise qualifying under the above three tests if it finds that such is required to achieve an acceptable level of reliability consistent with the Reliability Principles and Standards, in which case the Office of the Interconnection shall post such finding, such LDA, and such Variable Resource Requirement Curve on its internet site no later than the March 31 last preceding the Base Residual Auction for such Delivery Year.
49.	OATT: Attachment DD (<i>Reliability Pricing Model</i>): §17.3 (<i>Transition: Transition Period Locational Deliverability Areas</i>)	See modification no. 48 above.	17.3 Transition Period Locational Deliverability Areas The Office of the Interconnection shall establish Locational Deliverability Areas during the Transition Period in accordance with the following: 2007/2008, 2008/2009, and 2009/2010 Delivery Years - MAAC-Region MAR and APS (the zones listed below for Eastern MAAC EMAR , Southwestern MAAC SWMAR and Western MAAC Mid-Atlantic Region ("WMAR") , plus APS) - Eastern MAAC EMAR (PSE&G, JCP&L, PECO, AE, DPL & RECO) - Southwestern MAAC SWMAR (PEPCO & BG&E) 2010/2011 and subsequent Delivery Years - MAAC-Region MAR - Eastern MAAC EMAR - Southwestern MAAC SWMAR - Western MAAC WMAR (Penelec, MetEd, PPL)...
50.	OATT: Attachment GG (<i>Form of Upgrade Construction Service Agreement</i>): Appendix II (<i>Definitions</i>): §1.28 (MAAC)	See modification no. 42 above.	1.28 "MAAC" MAAC shall mean the Mid-Atlantic Area Council, a reliability council under section 202 of the Federal Power Act, established pursuant to the MAAC Agreement dated 1 August 1994, or any successor thereto.
51.	OATT: Attachment GG (<i>Form of Upgrade Construction Service Agreement</i>): Appendix II (<i>Definitions</i>): §1.29 (MAAC Control Zone)	See modification no. 43 above.	MAAC Control Zone shall mean the Control Zones comprised of the Transmission Facilities of one or more of the Transmission Owners in the Geographic area designated in the PJM Manuals as the MAAC Control Zone.
52.	OATT: Attachment GG (<i>Form of Upgrade Construction Service Agreement</i>): Appendix II (<i>Definitions</i>): §1.41 (PJM Region)	Revised the definition of PJM Region to remove the references to the MAAC Control Zone (see modification no. 43 above) and VACAR Control Zone (see modification no. 46 above).	1.41-39 "PJM Region" Shall have the meaning specified in the Operating Agreement. PJM Region shall mean the aggregate of the PJM West Region, the VACAR Control Zone, and the MAAC Control Zone.



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		Replaced "the aggregate of the PJM West Region, VACAR Control Zone, and the MAAC Control Zone" with "the aggregate of the Zones within PJM" because "the aggregate of the PJM West Region, VACAR Control Zone, and the MAAC Control Zone" is "the aggregate Zones within PJM."	
53.	OATT: Attachment GG (<i>Form of Upgrade Construction Service Agreement</i>): Appendix II (<i>Definitions</i>): §1.55 (VACAR)	See modification no. 45 above.	1.55 "VACAR" VACAR shall mean the group of five companies, consisting of Duke Energy, Carolina Power and Light, South Carolina Public Service Authority, South Carolina Electric and Gas, and Virginia Electric and Power Company.
54.	OA: §1.7.01 (<i>Definitions: Control Zone</i>)	Removed ECAR Control Zone, MAAC Control Zone, MAIN Control Zone, and VACAR Control Zone for the reasons set for in modification nos. 56, 58, 60, and 64, respectively.	1.7.01 Control Zone. "Control Zone" shall mean any of the ECAR Control Zone(s), MAAC Control Zone, or MAIN Control Zone(s), or the VACAR Control Zone <u>one Zone or multiple contiguous Zones, as designated in the PJM Manuals.</u>
55.	OA: §1.7C (<i>Definitions: ECAR</i>)	See modification no. 41 above.	1.7C ECAR. [Reserved] "ECAR" shall mean the reliability council under section 202 of the Federal Power Act, established pursuant to the ECAR Coordination Agreement dated June 1, 1968, or any successor thereto
56.	OA: §1.7D (<i>Definitions: ECAR Control Zone</i>)	Removed the definition of the ECAR Control Zone because ECAR no longer exists. Moreover, the proposed modifications below remove all the references to the ECAR Control Zone in the OA.	1.7D ECAR Control Zone. [Reserved] "ECAR Control Zone" shall mean any one of the one or more Control Zones comprised of the Transmission Facilities of one or more of the Transmission Owners for which ECAR is the Applicable Regional Reliability Council, as designated in the PJM Manuals.
57.	OA: §1.20 (<i>Definitions: MAAC</i>)	See modification no. 42 above.	1.20 MAAC. [Reserved] "MAAC" shall mean the Mid-Atlantic Area Council, a reliability council under § 202 of the Federal Power Act established pursuant to the MAAC Agreement dated August 1, 1994 or any successor thereto.
58.	OA: §1.20A (<i>Definitions: MAAC Control Zone</i>)	Replaced MAAC Control Zone with PJM Mid-Atlantic Region because MAAC is no longer a regional reliability council (i.e., MAAC no longer exists). However, a Mid-Atlantic Region or Control Zone (region and control zone are synonymous) is still required because, under	1.20A MAAC Control Zone <u>PJM Mid-Atlantic Region.</u> "MAAC Control Zone <u>PJM Mid-Atlantic Region"</u> shall mean the aggregate of the Transmission Facilities of Atlantic City Electric Company, Baltimore Gas and Electric Company, Delmarva Power and Light Company, Jersey Central Power and Light Company, Metropolitan Edison Company, PECO Energy Company, Pennsylvania Electric Company, PPL Electric Utilities Corporation, Potomac Electric Power Company, Public Service Electric and Gas Company, and Rockland



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		Schedule 7 (<i>Underfrequency Relay Obligations and Charges</i>) section 1.2 (<i>Obligations</i>), the MAAC Control Zone, PJM West Region, and PJM South Control Zone each have different obligations pertaining to underfrequency relays. Added PJM in front of Mid-Atlantic Region to be consistent with the PJM West Region and PJM South Region.	Electric Company.
59.	OA: §1.20B (<i>Definitions: MAIN</i>)	Removed the definition of MAIN because MAIN was replaced by ReliabilityFirst Corporation and is no longer a regional reliability council.	1.20B MAIN. <u>[Reserved]</u> “MAIN” shall mean the Mid-America Interconnected Network, a reliability council under § 202 of the Federal Power Act established pursuant to the Amended and Restated Bylaws of MAIN, dated January 8, 1998, or any successor thereof.
60.	OA: §1.20C (<i>Definitions: MAIN Control Zone</i>)	Removed the definition of the MAIN Control Zone because MAIN no longer exists (see modification no. 59 above). Moreover, the proposed modifications below remove each reference to the MAIN Control Zone in the OA.	1.20C MAIN Control Zone. <u>[Reserved]</u> “MAIN Control Zone” shall mean any one of the one or more Control Zones comprised of the Transmission Facilities of one or more of the Transmission Owners for which MAIN is the Applicable Regional Reliability Council, as designated in the PJM Manuals.
61.	OA: §1.35A (<i>Definitions: PJM Region</i>)	See modification no. 44 above.	“PJM Region” shall mean the aggregate of the MAAC Control Zone, the PJM West Region, and VACAR Control Zone <u>Zones within PJM as set forth in Attachment J to the PJM Tariff.</u>
62.	OA: §1.35B (<i>Definitions: PJM South Region</i>)	Removed the reference to VACAR Control Zone for the reasons set forth in modification no. 64 below. Despite deleting references to “PJM South Region” in the OATT, PJM South Region continues to be a required definition in the OA for the following reasons: (1) the PJM RTEP process requires separately identified enhancements and expansions for the three PJM subregions (<i>i.e.</i> , the PJM Mid-Atlantic Region, the PJM West Region, and the PJM South Region) (see §1.5.6 of Schedule 6 to OA); and (2) a PJM EDC’s underfrequency relay obligations are dependent on the PJM subregion to which it belongs (See §§1.2 (a),	“PJM South Region” shall mean the VACAR Control Zone <u>Transmission Facilities of Virginia Electric and Power Company.</u>



Substantive Revisions, Non-Substantive Corrections, and Ministerial Corrections to the PJM Open Access Transmission Tariff (“OATT”), Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. (“OA”), and Reliability Assurance Agreement among Load Serving Entities in the PJM Region (“RAA”)

No.	PJM Section Title	Reason for Proposed Revision	Proposed Revision
		(b), and (c) of Schedule 7 to the OA).	
63.	OA: §1.36B (<i>Definitions: PJM West Region</i>)	<p>Removed the references to the ECAR Control Zone and MAIN Control Zone because these entities no longer exist (see modification nos. 56 and 60 above).</p> <p>Despite deleting references to “PJM West Region” in the OATT, PJM West Region continues to be a required definition in the OA for the following reasons: (1) the PJM RTEP process requires separately identified enhancements and expansions for the three PJM subregions (i.e., the PJM Mid-Atlantic Region, the PJM West Region, and the PJM South Region) (see §1.5.6 of Schedule 6 to OA); and (2) a PJM EDC’s underfrequency relay obligations are dependent on the PJM subregion to which it belongs (see §§1.2 (a), (b), and (c) of Schedule 7 to the OA).</p>	<p>“PJM West Region” shall mean the aggregate of the ECAR Control Zone(s) and MAIN Control Zone(s) shall mean the Zones of Allegheny Power; Commonwealth Edison Company (including Commonwealth Edison Co. of Indiana); AEP East Operating Companies; The Dayton Power and Light Company; the Duquesne Light Company; American Transmission Systems, Incorporated; Duke Energy Ohio, Inc. and Duke Energy Kentucky, Inc.</p>
64.	OA: §1.47B (<i>Definitions: VACAR Control Zone</i>)	VACAR Control Zone is referenced in the definitions section of the OA only, which definitions are being replaced or modified as part of this filing to preclude the VACAR Control Zone.	<p>“VACAR Control Zone” shall mean the Transmission Facilities of Virginia Electric and Power Company.</p>
65.	OA: §11.6(h) (<i>Members: Membership Requirements</i>)	Removed §11.6(h) of the OA because MAAC no longer exists. Therefore, a PJM member cannot be a member of MAAC.	<p>(h) In accordance with the MAAC Agreement, a Member serving load in the MAAC Control Zone shall be a member of MAAC and any other Member may be a member of MAAC.</p>
66.	OA: Schedule 6 (<i>Regional Transmission Expansion Planning Protocol</i>): §1.2(b) (<i>Conformity with NERC and Other Applicable Reliability Criteria</i>)	<p>Modified ReliabilityFirst to be one word.</p> <p>Removed the references to MAAC, ECAR, and MAIN because these entities no longer exist.</p> <p>Inserted the reference to the applicable agreement (currently, the delegation agreements between NERC and the Regional Entities) because the agreements contain the</p>	<p>1.2 Conformity with NERC and Other Applicable Reliability Criteria.</p> <p>(b) ReliabilityFirstReliabilityFirst Corporation is responsible for ensuring the adequacy, reliability and security of the bulk electric supply systems in the region encompassing the former MAAC, ECAR and MAIN regionsgeographic region described in the applicable agreements between NERC and ReliabilityFirst Corporation, as approved by the FERC, - through coordinated operations and planning of generation and transmission facilities. Toward that end, it has adopted the NERC Planning Principles and Guides and has established detailed Reliability Principles and Standards for Planning the Bulk Electric Supply System of the ReliabilityFirstReliabilityFirst Corporation.</p>



Substantive Revisions, Non-Substantive Corrections, and Ministerial Corrections to the PJM Open Access Transmission Tariff (“OATT”), Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. (“OA”), and Reliability Assurance Agreement among Load Serving Entities in the PJM Region (“RAA”)

No.	PJM Section Title	Reason for Proposed Revision	Proposed Revision
		geographic region over which the ReliabilityFirst Corporation has jurisdiction.	
67.	OA: Schedule 7 (Underfrequency Relay Obligations and Charges) §1.2 (a) (Underfrequency Obligations: Obligations)	Removed the references to MAAC because MAAC is no longer a regional reliability council and no longer exists. It is necessary to maintain the PJM Mid-Atlantic Region in this section because the underfrequency relay obligation of a PJM member that is an EDC is dependent on the PJM subregion (i.e., the PJM Mid-Atlantic Region, PJM West Region, and PJM South Region) to which the EDC belongs.	(a) Each Electric Distributor in the MAAC Control Zone PJM Mid-Atlantic Region shall install or contractually arrange for underfrequency relays to interrupt at least 30 percent of its peak load with 10 percent of the load interrupted at each of three frequency levels: 59.3 Hz, 58.9 Hz and 58.5 Hz. Upon the request of the Members Committee, each Electric Distributor in the MAAC Control Zone PJM Mid-Atlantic Region shall document that it has complied with the requirement for underfrequency load shedding relays.
68.	RAA: Schedule 10.1: (Locational Deliverability Areas and Requirements): §A	See modification no. 48 above.	A. Following the Transition Period, as such term is defined in Attachment DD to the Tariff, the Locational Deliverability Areas for the purposes of determining locational capacity obligations hereunder, but not necessarily for the purposes of the Regional Transmission Expansion Planning Protocol, shall consist of the following Zones (as defined in Schedule 15), combinations of such Zones, and portions of such Zones:... -Mid-Atlantic Area Council (MAAC) Region Mid-Atlantic Region (MAR) (consisting of all the zones listed below for Eastern MAACMAR (EMAR) , Western MAACMAR (WMAR) , and Southwestern MAACMAR (SWMAR)) -ComEd, AEP, Dayton, APS, Duquesne, and ATSI -Eastern MAACEMAR (PSE&G, JCP&L, PECO, AE, DPL & RE) -Southwestern MAACSWMAR (PEPCO & BG&E) -Western MAACWMAR (Penelec, MetEd, PPL)
Addition of Applicable Standards			
69.	OATT: Part IV (Interconnections with the Transmission System): Subpart G (Small Generation Interconnection Procedure): §110.2 (Permanent Capacity Resource Additions of 20 MW or Less: Feasibility Study)	Replaced “Applicable Regional Reliability Council contingency criteria” with “the contingency criteria in the Applicable Standards” to ensure that the former Regional Reliability Councils’ contingency analysis criteria for which NERC is now responsible is included in this section.	110.2 Feasibility Study Feasibility Study analyses can generally be expedited by examining a limited contingency set that focuses on the impact of the small capacity addition on contingency limits in the vicinity of the Generation Capacity Resource. Linear analysis tools are used to evaluate the impact of a small capacity addition with respect to compliance with Applicable Regional Reliability Council the contingency criteria <u>in the Applicable Standards</u> . Generally, small capacity additions will have very limited and isolated impacts on system facilities. If criteria violations are observed, further AC testing is required.



Substantive Revisions, Non-Substantive Corrections, and Ministerial Corrections to the PJM Open Access Transmission Tariff (“OATT”), Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. (“OA”), and Reliability Assurance Agreement among Load Serving Entities in the PJM Region (“RAA”)

No.	PJM Section Title	Reason for Proposed Revision	Proposed Revision
70.	OATT: Part IV (<i>Interconnections with the Transmission System</i>): Subpart G (<i>Small Generation Interconnection Procedure</i>): §111.2 (<i>Permanent Energy Resource Additions of 20 MW or Less: Feasibility Study</i>)	See modification no. 69 above.	111.2 Feasibility Study Feasibility Study analyses can generally be expedited by examining a limited contingency set that focuses on the impact of the small Energy Resource addition on contingency limits in the vicinity of the resource. Linear analysis tools are used to evaluate the impact of a small Energy Resource addition with respect to compliance with Applicable Regional Reliability Council the contingency criteria <u>in the Applicable Standards</u> . Generally, small resource additions will have very limited and isolated impacts on system facilities. If criteria violations are observed, further AC testing is required.
71.	OATT: Part VI (<i>Administration and Study of New Service Requests; Rights Associated with Customer-Funded Upgrades</i>): Subpart C (<i>Rights Related to Customer Funded Upgrades</i>): §230.3.3 (<i>Loss of Capacity Interconnection Rights: Replacement of Generation</i>)	Replaced current language with Applicable Standards, which includes SERC and VACAR reliability standards, requirements, and guidelines.	230.3.3 Replacement of Generation: In the event of the Deactivation of a Generation Capacity Resource (in accordance with Part V and applicable VACAR or other requirements <u>any Applicable Standards</u>), any Capacity Interconnection Rights associated with such facility shall terminate one year from the Deactivation Date unless the holder of such rights (including any holder that acquired the rights after Deactivation) has submitted a new Generation Interconnection Request within one year after the Deactivation Date which contemplates use of the same Capacity Interconnection Rights at the Point of Interconnection associated with such rights. Such new Generation Interconnection Request may include a request to increase Capacity Interconnection Rights in addition to the replacement of the previously deactivated amount as a single request. Transmission Provider may perform studies, as necessary, due to any changes in the electrical characteristics of any newly proposed equipment.
72.	OATT: Schedule 6A (<i>Black Start Service</i>): §24 (<i>Credits</i>)	Modified to ensure that the former Regional Reliability Councils’ contingency analysis criteria for which NERC is now responsible is included in this section.	24. Transmission Provider shall not compensate generators for Black Start Service unless they meet the Transmission Provider <u>criteria for Black Start Service</u> and Applicable Regional Reliability Council the criteria for Black Start Service <u>in the Applicable Standards</u> and provide Transmission Provider with all necessary data in accordance with this Schedule 6A and the PJM manuals.
73.	OATT: Attachment K – Appendix: Part 1 (<i>Market Operations</i>): §1.3.1D.02 (<i>Definitions: Day-ahead Scheduling Reserves Requirement</i>)	Added Applicable Standards to succinctly capture all applicable standards.	1.3.1D.02 Day-ahead Scheduling Reserves Requirement. “Day-ahead Scheduling Reserves Requirement” shall mean the thirty-minute reserve requirement for the PJM Region established consistent with Reliability First Corporation and SERC reliability standards, or those of any additional and/or successor regional reliability organization(s) that are responsible for establishing reliability requirements for the PJM Region <u>the Applicable Standards</u> , plus any additional thirty-minute reserves scheduled in response to an RTO-wide Hot or Cold Weather Alert or other reasons for conservative operations.
Revision of References to the PJM Regions			
74.	OATT: Part I (<i>Common Service Provisions</i>): §1.32F (<i>Definitions: PJM South</i>)	Deleted the PJM South Region definition because PJM South Region is not referenced in the OATT.	1.32F PJM South Region : <u>[RESERVED]</u> The VACAR Control Zone.



Substantive Revisions, Non-Substantive Corrections, and Ministerial Corrections to the PJM Open Access Transmission Tariff ("OATT"), Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. ("OA"), and Reliability Assurance Agreement among Load Serving Entities in the PJM Region ("RAA")

No.	PJM Section Title	Reason for Proposed Revision	Proposed Revision
	<i>Region)</i>		
75.	OATT: Part I (<i>Common Service Provisions</i>):§1.32G (<i>Definitions: PJM West Region</i>)	<p>Subsequent to this filing, the PJM West Region will not be referenced in the OATT.</p> <p>The PJM West Region definition was used in Schedule 3 pertaining to the separate regulation markets in the separate control zones. However, these references to control zones in Schedule 3 are in the process of being removed because PJM implemented a single regulation market for the entire PJM Region.</p> <p>PJM West Region was also used in Schedule 8. However, the Transitional Neutrality Charge, which is a charge that is no longer applicable, is being removed with this filing (see modification no. 76 below).</p>	<p>1.32G PJM West Region;<u>[RESERVED]</u></p> <p>The PJM West Region shall include the Zones: Allegheny Power; Commonwealth Edison Company (including Commonwealth Edison Co. of Indiana); AEP East Operating Companies; The Dayton Power and Light Company; and the Duquesne Light Company.</p>
76.	OATT: Schedule 8 (<i>Non-firm Point-to-point Transmission Service</i>): §7 (<i>Transitional Revenue Neutrality Charge</i>)	Removed the Transitional Revenue Neutrality Charge, which contains a reference to the PJM West Region, because PJM has collected the required charges and, therefore, triggered the termination of the charge.	<p>7) Transitional Revenue Neutrality Charge: In addition to the rates set forth in Section (1) of this Schedule and any other applicable charges, the Transmission Customer shall also pay for Reserved Capacity for delivery at the border of the area comprised of the PJM Control Area and PJM West region a non-discountable charge of \$0.241/kw/mo., \$0.0556/kw/week, \$0.0079/kw/day (both on-peak and off-peak), or \$0.33/Mw/hour (both on-peak and off-peak). PJM shall distribute all revenues from the Transitional Revenue Neutrality Charge to Allegheny Power. The charge provided for under this section (7) shall terminate effective as of the day on which the sum total of the revenues collected by this charge, the Transitional Revenue Neutrality Charge under Schedule 7, and the Transitional Market Expansion Charge under Schedule 11 equal \$84,993,360.</p>
77.	OATT: Attachment GG (<i>Form of Upgrade Construction Service Agreement</i>): Appendix II (<i>Definitions</i>): §1.42 (<i>PJM West Region</i>)	See modification no. 75 above.	<p>1.42 "PJM West Region"</p> <p>PJM West Region shall include the Zones of Allegheny Power; Commonwealth Edison Company (including Commonwealth Edison Co. of Indiana); AEP East Operating Companies; The Dayton Power and Light Company; and Duquesne Light Company.</p>
Revision of References to ReliabilityFirst			
78.	OA: Schedule 1 (<i>PJM Interchange Energy Market</i>):	Modified ReliabilityFirst to be one word.	1.3.1D.01 Day-ahead Scheduling Reserves. "Day-ahead Scheduling Reserves" shall mean thirty-minute reserves as defined by the Reliability-First Corporation and SERC.



Substantive Revisions, Non-Substantive Corrections, and Ministerial Corrections to the PJM Open Access Transmission Tariff (“OATT”), Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. (“OA”), and Reliability Assurance Agreement among Load Serving Entities in the PJM Region (“RAA”)

No.	PJM Section Title	Reason for Proposed Revision	Proposed Revision
	§1.3.1D.01 (<i>Definitions: Day-ahead Scheduling Reserves</i>)		
79.	OA: Schedule 1 (<i>PJM Interchange Energy Market</i>): §1.3.1D.02 (<i>Definitions: Day-ahead Scheduling Reserves Requirement</i>)	See modification no. 73 above.	1.3.1D.02 Day-ahead Scheduling Reserves Requirement. “Day-ahead Scheduling Reserves Requirement” shall mean the thirty-minute reserve requirement for the PJM Region established consistent with Reliability-First Corporation and SERC reliability standards, or those of any additional and/or successor regional reliability organization(s) that are responsible for establishing reliability requirements for the PJM Region <u>the Applicable Standards</u> , plus any additional thirty-minute reserves scheduled in response to an RTO-wide Hot or Cold Weather Alert or other reasons for conservative operations.
80.	OA: Schedule 1 (<i>PJM Interchange Energy Market</i>): §3.2.3A.01 (<i>Accounting and Billing: Market Buyers: Day-ahead Scheduling Reserves</i>)	See modification no. 78 above.	3.2.3A.01 Day-ahead Scheduling Reserves. (a) The Office of the Interconnection shall satisfy the Day-ahead Scheduling Reserves Requirement by procuring Day-ahead Scheduling Reserves in the Day-ahead Scheduling Reserves Market from Day-ahead Scheduling Reserves Resources, provided that Demand Resources shall be limited to providing the lesser of any limit established by the Reliability-First Corporation or SERC...
81.	OATT: Schedule 10-RFC (<i>ReliabilityFirst Corporation Charge</i>): §a	Modified ReliabilityFirst to be one word. Moreover, replaced Regional Reliability Organizations with Regional Entities to reflect ReliabilityFirst’s status as a Regional Entity.	SCHEDULE 10-RFC ReliabilityFirst Corporation Charge a) Reliability-First Corporation (RFC) is one of the Regional Reliability Organizations (RRO) <u>Regional Entities</u> of NERC. Its purpose is to ensure the reliability of the interconnected bulk power system. This schedule will recover RFC’s statutory costs of operations as set forth below.
82.	OATT: Attachment K – Appendix: Part 1 (<i>Market Operations</i>): §1.3.1D.01 (<i>Definitions: Day-ahead Scheduling Reserves</i>)	See modification no. 78 above.	1.3.1D.01 Day-ahead Scheduling Reserves. “Day-ahead Scheduling Reserves” shall mean thirty-minute reserves as defined by the Reliability-First Corporation and SERC.
Revision of References to the PJM Regional Agreements and Governing Documents			
83.	OA: §10.4(xviii) (<i>Office of the Interconnection: Duties and Responsibilities</i>)	Removed references to the East Transmission Owners Agreement, West Transmission Owners Agreement, and South Transmission Owners Agreement because these agreements no longer exist. These separate agreements were replaced by the Consolidated Transmission Owners Agreement as accepted by FERC in Docket No. ER06-487.	10.4 Duties and Responsibilities. The Office of the Interconnection, under the direction of the President as supervised and overseen by the PJM Board, shall carry out the following duties and responsibilities, in accordance with the provisions of this Agreement: ... xviii) Perform those functions and undertake those responsibilities transferred to it under the Consolidated Transmission Owners Agreement including (A) directing the operation of the transmission facilities of the parties to the <u>East Consolidated</u> Transmission Owners Agreement (B) direct the operation of the transmission facilities of the Parties to the West Transmission Owners



Substantive Revisions, Non-Substantive Corrections, and Ministerial Corrections to the PJM Open Access Transmission Tariff ("OATT"), Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. ("OA"), and Reliability Assurance Agreement among Load Serving Entities in the PJM Region ("RAA")

No.	PJM Section Title	Reason for Proposed Revision	Proposed Revision
			Agreement, (C) direct the operation of the transmission facilities of the Parties to the South Transmission Owner Agreement, (D)(B) administering the PJM Tariff, and (E)(C) administering the Regional Transmission Expansion Planning Protocol set forth as Schedule 6 to this Agreement;...
84.	OA: Schedule 7 (Underfrequency Relay Obligations and Charges) §1.2 (b) (Underfrequency Obligations: Obligations)	<p>Removed MAIN Control Zone for the reason set forth in modification no. 60 above.</p> <p>Replaced Main Control Zone with Commonwealth Edison Company Zone because the Commonwealth Edison Company Zone is the only PJM Zone in the former MAIN Control Zone.</p> <p>Replaced the references to the regional Reliability Assurance Agreements ("RAAs"), including the RAA West, with a reference to the consolidated RAA because the RAA West, RAA East, and RAA South were superseded by the RAA. See the FERC order in Docket Nos. EL05-148 and ER05-1410 approving the RAA, which contains a provision (section 3.2) terminating the RAA West, RAA East, and RAA South effective May 31, 2007.</p> <p>Replaced "Reliability Committee" with "Markets and Reliability Committee" because the RAA, which replaced the regional RAAs, established the Markets and Reliability Committee and terminated the Reliability Committee.</p>	(b) Each Electric Distributor in the PJM West Region shall install or contractually arrange for underfrequency relays to interrupt at least 25 percent of its peak load with 5 percent of the load interrupted at each of five frequency levels: 59.5 Hz, 59.3 Hz, 59.1 Hz, 58.9 Hz, and 58.7 Hz; provided, however, that each Electric Distributor in the MAIN Control Zone <u>Commonwealth Edison Company Zone</u> shall install or contractually arrange for underfrequency relays to interrupt at least 30 percent of its peak load with 10 percent of the load interrupted at each of three frequency levels: 59.3 Hz, 59.0 Hz, and 58.7 Hz. Upon the request of the <u>Markets and</u> Reliability Committee established by the Reliability Assurance Agreement- West , each Electric Distributor in the PJM West Region shall document that it has complied with the requirement for underfrequency load shedding relays.
85.	OA: Schedule 7 (Underfrequency Relay Obligations and Charges) §1.2 (c) (Underfrequency Obligations: Obligations)	<p>Replaced the Reliability Committee with the Markets and Reliability Committee for the reason set forth in modification no. 84 above.</p> <p>Replaced the reference to the RAA South with RAA for the reasons set forth in modification no. 84 above.</p>	(c) Each Electric Distributor in the PJM South Region shall install or contractually arrange for underfrequency relays to interrupt at least 30 percent of its peak load with 10 percent of the load interrupted at each of 3 frequency levels: 59.3 Hz, 59.0 Hz, 58.5 Hz. Upon the request of the <u>Markets and</u> Reliability Committee established by the Reliability Assurance Agreement- South , each Electric Distributor in the PJM South Region shall document that it has complied with the requirement for underfrequency load shedding relays.



Substantive Revisions, Non-Substantive Corrections, and Ministerial Corrections to the PJM Open Access Transmission Tariff ("OATT"), Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. ("OA"), and Reliability Assurance Agreement among Load Serving Entities in the PJM Region ("RAA")

No.	PJM Section Title	Reason for Proposed Revision	Proposed Revision
86.	RAA: Recitals	Removed the reference to the East RAA, West RAA, and South RAA for the reason set for in modification no. 84 above.	WHEREAS, the Parties previously have entered into similar commitments related to sub-regions of the PJM Region through the East RAA, the West RAA, or the South RAA;
87.	RAA: Recitals	Removed the reference to the East RAA, West RAA, and South RAA for the reason set for in modification no. 84 above.	WHEREAS, the Parties desire, on a phased basis, to replace the East RAA, West RAA, and South RAA with a single reliability assurance agreement among all Load Serving Entities in the PJM Region; and
88.	RAA: Article 1 (Definitions): §1.16 (East RAA)	Removed the reference to the East RAA for the reason set for in modification no. 84 above.	1.16 East RAA <u>[Reserved for Future Use]</u> East RAA shall mean that certain Reliability Assurance Agreement among Load Serving Entities in the PJM Region, PJM Rate Schedule FERC No. 27.
89.	RAA: Article 1 (Definitions): §1.79 (South RAA)	Removed the reference to South RAA for the reason set for in modification no. 84 above.	1.79 South RAA <u>[Reserved for Future Use]</u> South RAA shall mean that certain Reliability Assurance Agreement among Load Serving Entities in the PJM South Region, on file with FERC as PJM Rate Schedule FERC No. 40.
90.	RAA: Article 1 (Definitions): §1.87 (West RAA)	Removed the reference to the West RAA for the reason set for in modification no. 84 above.	1.87 West RAA <u>[Reserved for Future Use]</u> West RAA shall mean the "PJM West Reliability Assurance Agreement among the Load Serving Entities in the PJM West Region," on file with FERC as PJM Rate Schedule FERC No. 32.
91.	RAA: Article 3 (Term and Termination of the Agreement): §3.2 (Transition Provisions)	Removed the reference to the East RAA, West RAA, and South RAA for the reason set for in modification no. 84 above.	3.2 Transition Provisions <u>[Reserved for Future Use]</u> The East RAA, West RAA, and South RAA shall govern, in accordance with their terms now in effect or as hereafter validly amended, capacity requirements for each Planning Period through the end of the Planning Period ending May 31, 2007. Subject to the termination provisions in each such agreement, the East RAA, West RAA, and South RAA shall terminate effective 11:59:59 p.m. on May 31, 2007.

Attachment B

**Sections of the
PJM Open Access Transmission Tariff,
PJM Operating Agreement and
PJM Reliability Assurance Agreement**

(Redline Version)

**Section(s) of the
PJM Open Access Transmission Tariff
(Redline Version)**

Definitions – A - B

1.01 Abnormal Condition:

Any condition on the Interconnection Facilities which, determined in accordance with Good Utility Practice, is: (i) outside normal operating parameters such that facilities are operating outside their normal ratings or that reasonable operating limits have been exceeded; and (ii) could reasonably be expected to materially and adversely affect the safe and reliable operation of the Interconnection Facilities; but which, in any case, could reasonably be expected to result in an Emergency Condition. Any condition or situation that results from lack of sufficient generating capacity to meet load requirements or that results solely from economic conditions shall not, standing alone, constitute an Abnormal Condition.

1.0A Affected System:

An electric system other than the Transmission Provider's Transmission System that may be affected by a proposed interconnection or on which a proposed interconnection or addition of facilities or upgrades may require modifications or upgrades to the Transmission System.

1.0A.01 Affiliate:

With respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

1.0B Affected System Operator:

An entity that operates an Affected System or, if the Affected System is under the operational control of an independent system operator or a regional transmission organization, such independent entity.

1.1 Ancillary Services:

Those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

1.2 Annual Transmission Costs:

The total annual cost of the Transmission System for purposes of Network Integration Transmission Service shall be the amount specified in Attachment H for each Zone until amended by the applicable Transmission Owner or modified by the Commission.

1.2.01 Applicable Laws and Regulations:

All duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority having jurisdiction over the relevant parties, their respective facilities, and/or the respective services they provide.

1.2A Applicable Regional ~~Reliability Council~~Entity:

The ~~reliability council~~Regional Entity for the region in which a Network Customer, Transmission Customer, Interconnection Customer, or Transmission Owner operates.

1.2B Applicable Standards:

The requirements and guidelines of NERC, the ~~Applicable Regional Reliability Council~~Applicable Regional Entity, and the Control Area in which the Customer Facility is electrically located;~~;~~ the PJM Manuals;~~;~~ and Applicable Technical Requirements and Standards.

1.2C Applicable Technical Requirements and Standards:

Those certain technical requirements and standards applicable to interconnections of generation and/or transmission facilities with the facilities of an Interconnected Transmission Owner or, as the case may be and to the extent applicable, of an Electric Distributor (as defined in Section 1.8 of the Operating Agreement), as published by Transmission Provider in a PJM Manual provided, however, that, with respect to any generation facilities with maximum generating capacity of 2 MW or less for which the Interconnection Customer executes a Construction Service Agreement or Interconnection Service Agreement on or after March 19, 2005, “Applicable Technical Requirements and Standards” shall refer to the “PJM Small Generator Interconnection Applicable Technical Requirements and Standards.” All Applicable Technical Requirements and Standards shall be publicly available through postings on Transmission Provider’s internet website.

1.3 Application:

A request by an Eligible Customer for transmission service pursuant to the provisions of the Tariff.

1.3A Attachment Facilities:

The facilities necessary to physically connect a Customer Facility to the Transmission System or interconnected distribution facilities.

1.3AA Attachment H

Attachment H shall refer collectively to the Attachments to the PJM Tariff with the prefix “H-“ that set forth, among other things, the Annual Transmission Rates for Network Integration Transmission Service in the PJM Zones.

1.3B Behind The Meter Generation:

Behind The Meter Generation refers to a generation unit that delivers energy to load without using the Transmission System or any distribution facilities (unless the entity that owns or leases the distribution facilities has consented to such use of the distribution facilities and such consent has been demonstrated to the satisfaction of the Office of the Interconnection); provided, however, that Behind The Meter Generation does not include (i) at any time, any portion of such generating unit's capacity that is designated as a Generation Capacity Resource; or (ii) in an hour, any portion of the output of such generating unit[s] that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market.

1.3BB Black Start Service:

Black Start Service is the capability of generating units to start without an outside electrical supply or the demonstrated ability of a generating unit with a high operating factor (subject to Transmission Provider concurrence) to automatically remain operating at reduced levels when disconnected from the grid.

1.3BB.01 Breach:

The failure of a party to perform or observe any material term or condition of Part IV or Part VI of the Tariff, or any agreement entered into thereunder as described in the relevant provisions of such agreement.

1.3BB.02 Breaching Party:

A party that is in Breach of Part IV or Part VI and/or an agreement entered into thereunder.

Definitions – E - F

1.10A ~~ECAR:~~[RESERVED]

~~East Central Area Reliability Council Agreement, a regional reliability council of NERC, or its successor.~~

1.10B Economic Minimum:

The lowest incremental MW output level a unit can achieve while following economic dispatch.

1.11 Eligible Customer:

(i) Any electric utility (including any Transmission Owner and any power marketer), Federal power marketing agency, or any person generating electric energy for sale for resale is an Eligible Customer under the Tariff. Electric energy sold or produced by such entity may be electric energy produced in the United States, Canada or Mexico. However, with respect to transmission service that the Commission is prohibited from ordering by Section 212(h) of the Federal Power Act, such entity is eligible only if the service is provided pursuant to a state requirement that the Transmission Provider or Transmission Owner offer the unbundled transmission service, or pursuant to a voluntary offer of such service by a Transmission Owner.

(ii) Any retail customer taking unbundled transmission service pursuant to a state requirement that the Transmission Provider or a Transmission Owner offer the transmission service, or pursuant to a voluntary offer of such service by a Transmission Owner, is an Eligible Customer under the Tariff. As used in Part VI, Eligible Customer shall mean only those Eligible Customers that have submitted a Completed Application.

1.11.01 Emergency Condition:

A condition or situation (i) that in the judgment of any Interconnection Party is imminently likely to endanger life or property; or (ii) that in the judgment of the Interconnected Transmission Owner or Transmission Provider is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Transmission System, the Interconnection Facilities, or the transmission systems or distribution systems to which the Transmission System is directly or indirectly connected; or (iii) that in the judgment of Interconnection Customer is imminently likely (as determined in a non-discriminatory manner) to cause damage to the Customer Facility or to the Customer Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions, provided that a Generation Interconnection Customer is not obligated by an Interconnection Service Agreement to possess black start capability. Any condition or situation that results from lack of sufficient generating capacity to meet load requirements or that results solely from economic conditions shall not constitute an Emergency Condition, unless one or more of the enumerated conditions or situations identified in this definition also exists.

1.11A Energy Resource:

A generating facility that is not a Capacity Resource.

1.11A.01 Energy Settlement Area:

The bus or distribution of busses that represents the physical location of Network Load and by which the obligations of the Network Customer to PJM are settled.

1.11B Energy Transmission Injection Rights:

The rights to schedule energy deliveries at a specified point on the Transmission System. Energy Transmission Injection Rights may be awarded only to a Merchant D.C. Transmission Facility that connects the Transmission System to another control area. Deliveries scheduled using Energy Transmission Injection Rights have rights similar to those under Non-Firm Point-to-Point Transmission Service.

1.11C Environmental Laws:

Applicable Laws or Regulations relating to pollution or protection of the environment, natural resources or human health and safety.

1.12 Facilities Study:

An engineering study conducted by the Transmission Provider (in coordination with the affected Transmission Owner(s)) to determine the required modifications to the Transmission Provider's Transmission System, including the cost and scheduled completion date for such modifications, that will be required to provide the requested transmission service or to accommodate an Interconnection Request or Upgrade Request. As used in the Interconnection Service Agreement or Construction Service Agreement, Facilities Study shall mean that certain Facilities Study conducted by Transmission Provider (or at its direction) to determine the design and specification of the Interconnection Facilities necessary to accommodate the New Service Customer's New Service Request in accordance with Section 207 of Part VI of the Tariff.

1.12A Federal Power Act:

The Federal Power Act, as amended, 16 U.S.C. §§ 791a, et seq.

1.12B FERC:

The Federal Energy Regulatory Commission or its successor.

1.13 Firm Point-To-Point Transmission Service:

Transmission Service under this Tariff that is reserved and/or scheduled between specified Points of Receipt and Delivery pursuant to Part II of this Tariff.

1.13A Firm Transmission Withdrawal Rights:

The rights to schedule energy and capacity withdrawals from a Point of Interconnection (as defined in Section 1.33A) of a Merchant Transmission Facility with the Transmission System. Firm Transmission Withdrawal Rights may be awarded only to a Merchant D.C. Transmission Facility that connects the Transmission System with another control area. Withdrawals scheduled using Firm Transmission Withdrawal Rights have rights similar to those under Firm Point-to-Point Transmission Service.

1.13A.01 Force Majeure:

Any cause beyond the control of the affected Interconnection Party or Construction Party, including but not restricted to, acts of God, flood, drought, earthquake, storm, fire, lightning, epidemic, war, riot, civil disturbance or disobedience, labor dispute, labor or material shortage, sabotage, acts of public enemy, explosions, orders, regulations or restrictions imposed by governmental, military, or lawfully established civilian authorities, which, in any of the foregoing cases, by exercise of due diligence such party could not reasonably have been expected to avoid, and which, by the exercise of due diligence, it has been unable to overcome. Force Majeure does not include (i) a failure of performance that is due to an affected party's own negligence or intentional wrongdoing; (ii) any removable or remediable causes (other than settlement of a strike or labor dispute) which an affected party fails to remove or remedy within a reasonable time; or (iii) economic hardship of an affected party.

Definitions – L – M - N

1.15A List of Approved Contractors:

A list developed by each Transmission Owner and published in a PJM Manual of (a) contractors that the Transmission Owner considers to be qualified to install or construct new facilities and/or upgrades or modifications to existing facilities on the Transmission Owner's system, provided that such contractors may include, but need not be limited to, contractors that, in addition to providing construction services, also provide design and/or other construction-related services, and (b) manufacturers or vendors of major transmission-related equipment (e.g., high-voltage transformers, transmission line, circuit breakers) whose products the Transmission Owner considers acceptable for installation and use on its system.

1.16 Load Ratio Share:

Ratio of a Transmission Customer's Network Load to the Transmission Provider's total load.

1.17 Load Shedding:

The systematic reduction of system demand by temporarily decreasing load in response to transmission system or area capacity shortages, system instability, or voltage control considerations under Part II or Part III of the Tariff.

1.17A Local Upgrades:

Modifications or additions of facilities to abate any local thermal loading, voltage, short circuit, stability or similar engineering problem caused by the interconnection and delivery of generation to the Transmission System. Local Upgrades shall include:

(i) Direct Connection Local Upgrades which are Local Upgrades that only serve the Customer Interconnection Facility and have no impact or potential impact on the Transmission System until the final tie-in is complete; and

(ii) Non-Direct Connection Local Upgrades which are parallel flow Local Upgrades that are not Direct Connection Local Upgrades.

1.18 Long-Term Firm Point-To-Point Transmission Service:

Firm Point-To-Point Transmission Service under Part II of the Tariff with a term of one year or more.

1.18A ~~MAAC:[RESERVED]~~

~~The Mid Atlantic Area Council, a reliability council under section 202 of the Federal Power Act, established pursuant to the MAAC Agreement dated 1 August 1994, or any successor thereto.~~

1.18A.01 ~~MAAC Control Zone:~~[\[RESERVED\]](#)

~~The aggregate of the zones of Atlantic City Electric Company, Baltimore Gas and Electric Company, Delmarva Power and Light Company, Jersey Central Power and Light Company, Metropolitan Edison Company, PECO Energy Company, Pennsylvania Electric Company, Pennsylvania Power & Light Group, Potomac Electric Power Company, Public Service Electric and Gas Company and Rockland Electric Company.~~

1.18A.02 Material Modification:

Any modification to an Interconnection Request that has a material adverse effect on the cost or timing of Interconnection Studies related to, or any Network Upgrades or Local Upgrades needed to accommodate, any Interconnection Request with a later Queue Position.

1.18A.03 Maximum Facility Output:

The maximum (not nominal) net electrical power output in megawatts, specified in the Interconnection Service Agreement, after supply of any parasitic or host facility loads, that a Generation Interconnection Customer's Customer Facility is expected to produce, provided that the specified Maximum Facility Output shall not exceed the output of the proposed Customer Facility that Transmission Provider utilized in the System Impact Study.

1.18B Merchant A.C. Transmission Facilities:

Merchant Transmission Facilities that are alternating current (A.C.) transmission facilities, other than those that are Controllable A.C. Merchant Transmission Facilities.

1.18C Merchant D.C. Transmission Facilities:

Direct current (D.C.) transmission facilities that are interconnected with the Transmission System pursuant to Part IV and Part VI of the Tariff.

1.18D Merchant Network Upgrades:

Merchant A.C. Transmission Facilities that are additions to, or modifications or replacements of, physical facilities of the Interconnected Transmission Owner that, on the date of the pertinent Transmission Interconnection Customer's Interconnection Request, are part of the Transmission System or are included in the Regional Transmission Expansion Plan.

1.18E Merchant Transmission Facilities:

A.C. or D.C. transmission facilities that are interconnected with or added to the Transmission System pursuant to Part IV and Part VI of the Tariff and that are so identified on Attachment T to the Tariff, provided, however, that Merchant Transmission Facilities shall not include (i) any Customer Interconnection Facilities, (ii) any physical facilities of the Transmission System that were in existence on or before March 20, 2003 ; (iii) any expansions or enhancements of the

Transmission System that are not identified as Merchant Transmission Facilities in the Regional Transmission Expansion Plan and Attachment T to the Tariff, or (iv) any transmission facilities that are included in the rate base of a public utility and on which a regulated return is earned.

1.18F Merchant Transmission Provider:

An Interconnection Customer that (1) owns, controls, or controls the rights to use the transmission capability of, Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities that connect the Transmission System with another control area, (2) has elected to receive Transmission Injection Rights and Transmission Withdrawal Rights associated with such facility pursuant to Section 36 of the Tariff, and (3) makes (or will make) the transmission capability of such facilities available for use by third parties under terms and conditions approved by the Commission and stated in the Tariff, consistent with Section 38 below.

1.18G Metering Equipment:

All metering equipment installed at the metering points designated in the appropriate appendix to an Interconnection Service Agreement.

1.19 Native Load Customers:

The wholesale and retail power customers of a Transmission Owner on whose behalf the Transmission Owner, by statute, franchise, regulatory requirement, or contract, has undertaken an obligation to construct and operate the Transmission Owner's system to meet the reliable electric needs of such customers.

1.19A NERC:

The North American Electric Reliability Council or any successor thereto.

1.19B Neutral Party

Shall have the meaning provided in Section 9.3(v).

1.20 Network Customer:

An entity receiving transmission service pursuant to the terms of the Transmission Provider's Network Integration Transmission Service under Part III of the Tariff.

1.21 Network Integration Transmission Service:

The transmission service provided under Part III of the Tariff.

1.22 Network Load:

The load that a Network Customer designates for Network Integration Transmission Service under Part III of the Tariff. The Network Customer's Network Load shall include all load (including losses) served by the output of any Network Resources designated by the Network Customer. A Network Customer may elect to designate less than its total load as Network Load but may not designate only part of the load at a discrete Point of Delivery. Where an Eligible Customer has elected not to designate a particular load at discrete points of delivery as Network Load, the Eligible Customer is responsible for making separate arrangements under Part II of the Tariff for any Point-To-Point Transmission Service that may be necessary for such non-designated load.

1.23 Network Operating Agreement:

An executed agreement that contains the terms and conditions under which the Network Customer shall operate its facilities and the technical and operational matters associated with the implementation of Network Integration Transmission Service under Part III of the Tariff.

1.24 Network Operating Committee:

A group made up of representatives from the Network Customer(s) and the Transmission Provider established to coordinate operating criteria and other technical considerations required for implementation of Network Integration Transmission Service under Part III of this Tariff.

1.25 Network Resource:

Any designated generating resource owned, purchased, or leased by a Network Customer under the Network Integration Transmission Service Tariff. Network Resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis, except for purposes of fulfilling obligations under a reserve sharing program.

1.26 Network Upgrades:

Modifications or additions to transmission-related facilities that are integrated with and support the Transmission Provider's overall Transmission System for the general benefit of all users of such Transmission System. Network Upgrades shall include:

(i) **Direct Connection Network Upgrades** which are Network Upgrades that only serve the Customer Interconnection Facility and have no impact or potential impact on the Transmission System until the final tie-in is complete; and

(ii) **Non-Direct Connection Network Upgrades** which are parallel flow Network Upgrades that are not Direct Connection Network Upgrades.

1.26A New PJM Zone(s):

The Zone included in this Tariff, along with applicable Schedules and Attachments, for Commonwealth Edison Company, The Dayton Power and Light Company and the AEP East Operating Companies (Appalachian Power Company, Columbus Southern Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company and Wheeling Power Company).

1.26B New Service Customers:

All customers that submit an Interconnection Request, a Completed Application, or an Upgrade Request that is pending in the New Services Queue.

1.26C New Service Request:

An Interconnection Request, a Completed Application, or an Upgrade Request.

1.26D New Services Queue:

All Interconnection Requests, Completed Applications, and Upgrade Requests that are received within each three-month period ending on January 31, April 30, July 31, and October 31 of each year shall collectively comprise a New Services Queue.

1.26E New Services Queue Closing Date:

Each January 31, April 30, July 31, and October 31 shall be the Queue Closing Date for the New Services Queue comprised of Interconnection Requests, Completed Applications, and Upgrade Requests received during the three-month period ending on such date.

1.26F Nominal Rated Capability:

The nominal maximum rated capability in megawatts of a Transmission Interconnection Customer's Customer Facility or the nominal increase in transmission capability in megawatts of the Transmission System resulting from the interconnection or addition of a Transmission Interconnection Customer's Customer Facility, as determined in accordance with pertinent Applicable Standards and specified in the Interconnection Service Agreement.

1.27 Non-Firm Point-To-Point Transmission Service:

Point-To-Point Transmission Service under the Tariff that is reserved and scheduled on an as-available basis and is subject to Curtailment or Interruption as set forth in Section 14.7 under Part II of this Tariff. Non-Firm Point-To-Point Transmission Service is available on a stand-alone basis for periods ranging from one hour to one month.

1.27.01 Non-Firm Sale:

An energy sale for which receipt or delivery may be interrupted for any reason or no reason, without liability on the part of either the buyer or seller.

1.27A Non-Firm Transmission Withdrawal Rights:

The rights to schedule energy withdrawals from a specified point on the Transmission System. Non-Firm Transmission Withdrawal Rights may be awarded only to a Merchant D.C. Transmission Facility that connects the Transmission System to another control area. Withdrawals scheduled using Non-Firm Transmission Withdrawal Rights have rights similar to those under Non-Firm Point-to-Point Transmission Service.

1.27AA Non-Retail Behind The Meter Generation:

Behind the Meter Generation that is used by municipal electric systems, electric cooperatives, or electric distribution companies to serve load.

1.27B Non-Zone Network Load:

Network Load that is located outside of the PJM Region.

Definitions – O – P - Q

1.27C Office of the Interconnection:

Office of the Interconnection shall have the meaning set forth in the Operating Agreement.

1.28 Open Access Same-Time Information System (OASIS):

The information system and standards of conduct contained in Part 37 and Part 38 of the Commission's regulations and all additional requirements implemented by subsequent Commission orders dealing with OASIS.

1.28A Operating Agreement of the PJM Interconnection, L.L.C. or Operating Agreement:

That agreement dated as of April 1, 1997 and as amended and restated as of June 2, 1997 and as amended from time to time thereafter, among the members of the PJM Interconnection, L.L.C.

1.28A.01 Option to Build:

The option of the New Service Customer to build certain Customer-Funded Upgrades, as set forth in, and subject to the terms of, the Construction Service Agreement.

1.28B Optional Interconnection Study:

A sensitivity analysis of an Interconnection Request based on assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement.

1.28C Optional Interconnection Study Agreement:

The form of agreement for preparation of an Optional Interconnection Study, as set forth in Attachment N-3 of the Tariff.

1.29 Part I:

Tariff Definitions and Common Service Provisions contained in Sections 2 through 12.

1.30 Part II:

Tariff Sections 13 through 27 pertaining to Point-To-Point Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.31 Part III:

Tariff Sections 28 through 35 pertaining to Network Integration Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.31A Part IV:

Tariff Sections 36 through 112 pertaining to generation or merchant transmission interconnection to the Transmission System in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.31B Part V:

Tariff Sections 113 through 122 pertaining to the deactivation of generating units in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.31C Part VI:

Tariff Sections 200 through 237 pertaining to the queuing, study, and agreements relating to New Service Requests, and the rights associated with Customer-Funded Upgrades in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.32 Parties:

The Transmission Provider, as administrator of the Tariff, and the Transmission Customer receiving service under the Tariff. PJMSettlement shall be the Counterparty to Transmission Customers.

1.32.01 PJM:

PJM Interconnection, L.L.C.

1.32A PJM Administrative Service:

The services provided by PJM pursuant to Schedule 9 of this Tariff.

1.32B PJM Control Area:

The Control Area that is recognized by NERC as the PJM Control Area.

1.32C PJM Interchange Energy Market:

The regional competitive market administered by the Transmission Provider for the purchase and sale of spot electric energy at wholesale interstate commerce and related services, as more fully set forth in Attachment K – Appendix to the Tariff and Schedule 1 to the Operating Agreement.

1.32D PJM Manuals:

The instructions, rules, procedures and guidelines established by the Transmission Provider for the operation, planning, and accounting requirements of the PJM Region and the PJM Interchange Energy Market.

1.32E PJM Region:

Shall ~~have the meaning specified in the Operating Agreement, the aggregate of the PJM West Region, the VACAR Control Zone, and the MAAC Control Zone.~~

1.32F PJM South Region:[RESERVED]

~~The VACAR Control Zone.~~

1.32.F.01 PJM Settlement:

PJM Settlement, Inc. (or its successor).

1.32G PJM West Region:[RESERVED]

~~The PJM West Region shall include the Zones of Allegheny Power; Commonwealth Edison Company (including Commonwealth Edison Co. of Indiana); AEP East Operating Companies; The Dayton Power and Light Company; the Duquesne Light Company, American Transmission Systems, Incorporated, and Duke Energy Ohio, Inc. and Duke Energy Kentucky, Inc.~~

1.33 Point(s) of Delivery:

Point(s) on the Transmission Provider's Transmission System where capacity and energy transmitted by the Transmission Provider will be made available to the Receiving Party under Part II of the Tariff. The Point(s) of Delivery shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

1.33A Point of Interconnection:

The point or points, shown in the appropriate appendix to the Interconnection Service Agreement and the Interconnection Construction Service Agreement, where the Customer Interconnection Facilities interconnect with the Transmission Owner Interconnection Facilities or the Transmission System.

1.34 Point(s) of Receipt:

Point(s) of interconnection on the Transmission Provider's Transmission System where capacity and energy will be made available to the Transmission Provider by the Delivering Party under Part II of the Tariff. The Point(s) of Receipt shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

1.35 Point-To-Point Transmission Service:

The reservation and transmission of capacity and energy on either a firm or non-firm basis from the Point(s) of Receipt to the Point(s) of Delivery under Part II of the Tariff.

1.36 Power Purchaser:

The entity that is purchasing the capacity and energy to be transmitted under the Tariff.

1.36.01 PRD Curve

PRD Curve shall have the meaning provided in the Reliability Assurance Agreement.

1.36.02 PRD Provider

PRD Provider shall have the meaning provided in the Reliability Assurance Agreement.

1.36.03 PRD Reservation Price

PRD Reservation Price shall have the meaning provided in the Reliability Assurance Agreement.

1.36.04 PRD Substation:

PRD Substation shall have the meaning provided in the Reliability Assurance Agreement.

1.36.05 Pre-Confirmed Application:

An Application that commits the Eligible Customer to execute a Service Agreement upon receipt of notification that the Transmission Provider can provide the requested Transmission Service.

1.36A Pre-Expansion PJM Zones:

Zones included in this Tariff, along with applicable Schedules and Attachments, for certain Transmission Owners – Atlantic City Electric Company, Baltimore Gas and Electric Company, Delmarva Power and Light Company, Jersey Central Power and Light Company, Metropolitan Edison Company, PECO Energy Company, Pennsylvania Electric Company, Pennsylvania Power & Light Group, Potomac Electric Power Company, Public Service Electric and Gas Company, Allegheny Power, and Rockland Electric Company.

1.36A.01 Price Responsive Demand

Price Responsive Demand shall have the meaning provided in the Reliability Assurance Agreement.

1.36A.02 Project Financing:

Shall mean: (a) one or more loans, leases, equity and/or debt financings, together with all modifications, renewals, supplements, substitutions and replacements thereof, the proceeds of which are used to finance or refinance the costs of the Customer Facility, any alteration, expansion or improvement to the Customer Facility, the purchase and sale of the Customer Facility or the operation of the Customer Facility; (b) a power purchase agreement pursuant to which Interconnection Customer's obligations are secured by a mortgage or other lien on the Customer Facility; or (c) loans and/or debt issues secured by the Customer Facility.

1.36A.03 Project Finance Entity:

Shall mean: (a) a holder, trustee or agent for holders, of any component of Project Financing; or (b) any purchaser of capacity and/or energy produced by the Customer Facility to which Interconnection Customer has granted a mortgage or other lien as security for some or all of Interconnection Customer's obligations under the corresponding power purchase agreement.

1.36B Queue Position:

The priority assigned to an Interconnection Request, a Completed Application, or an Upgrade Request pursuant to applicable provisions of Part VI.

Definitions – R - S

1.36C Reasonable Efforts:

With respect to any action required to be made, attempted, or taken by an Interconnection Party or by a Construction Party under Part IV or Part VI of the Tariff, an Interconnection Service Agreement, or a Construction Service Agreement, such efforts as are timely and consistent with Good Utility Practice and with efforts that such party would undertake for the protection of its own interests.

1.37 Receiving Party:

The entity receiving the capacity and energy transmitted by the Transmission Provider to Point(s) of Delivery.

1.37A.01 Regional Entity

Shall have the same meaning specified in the Operating Agreement.

1.37A Regional Transmission Expansion Plan:

The plan prepared by the Office of the Interconnection pursuant to Schedule 6 of the Operating Agreement for the enhancement and expansion of the Transmission System in order to meet the demands for firm transmission service in the PJM Region.

1.38 —Regional Transmission Group (RTG):

A voluntary organization of transmission owners, transmission users and other entities approved by the Commission to efficiently coordinate transmission planning (and expansion), operation and use on a regional (and interregional) basis.

1.38.01 —Regulation Zone:

Any of those one or more geographic areas, each consisting of a combination of one or more Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, regulation service.

1.38.01A —Relevant Electric Retail Regulatory Authority:

An entity that has jurisdiction over and establishes prices and policies for competition for providers of retail electric service to end-customers, such as the city council for a municipal utility, the governing board of a cooperative utility, the state public utility commission or any other such entity.

1.38A Reliability Assurance Agreement:

The Reliability Assurance Agreement Among Load Serving Entities in the PJM Region, Rate Schedule No. 44, dated as of May 28, 2009, and as amended from time to time thereafter.

1.38B [RESERVED]

1.38C Required Transmission Enhancements:

Enhancements and expansions of the Transmission System that (1) a Regional Transmission Expansion Plan developed pursuant to Schedule 6 of the Operating Agreement or (2) the Coordinated System Plan periodically developed pursuant to the Joint Operating Agreement Between the Midwest Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. designates one or more of the Transmission Owner(s) or the transmission owners within the Midwest Independent System Operator to construct and own or finance.

1.39 Reserved Capacity:

The maximum amount of capacity and energy that the Transmission Provider agrees to transmit for the Transmission Customer over the Transmission Provider's Transmission System between the Point(s) of Receipt and the Point(s) of Delivery under Part II of the Tariff. Reserved Capacity shall be expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis.

1.39A Schedule of Work:

Shall mean that schedule attached to the Interconnection Construction Service Agreement setting forth the timing of work to be performed by the Constructing Entity pursuant to the Interconnection Construction Service Agreement, based upon the Facilities Study and subject to modification, as required, in accordance with Transmission Provider's scope change process for interconnection projects set forth in the PJM Manuals.

1.39B Scope of Work:

Shall mean that scope of the work attached as a schedule to the Interconnection Construction Service Agreement and to be performed by the Constructing Entity(ies) pursuant to the Interconnection Construction Service Agreement, provided that such Scope of Work may be modified, as required, in accordance with Transmission Provider's scope change process for interconnection projects set forth in the PJM Manuals.

1.39C Secondary Systems:

Control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers.

1.39D Security:

The security provided by the New Service Customer pursuant to Section 212.4 or Section 213.4 of the Tariff to secure the New Service Customer's responsibility for Costs under the Interconnection Service Agreement or Upgrade Construction Service Agreement and Section 217 of the Tariff.

1.40 Service Agreement:

The initial agreement and any amendments or supplements thereto entered into by the Transmission Customer and the Transmission Provider for service under the Tariff.

1.41 Service Commencement Date:

The date the Transmission Provider begins to provide service pursuant to the terms of an executed Service Agreement, or the date the Transmission Provider begins to provide service in accordance with Section 15.3 or Section 29.1 under the Tariff.

1.42 Short-Term Firm Point-To-Point Transmission Service:

Firm Point-To-Point Transmission Service under Part II of the Tariff with a term of less than one year.

1.42a Site:

All of the real property, including but not limited to any leased real property and easements, on which the Customer Facility is situated and/or on which the Customer Interconnection Facilities are to be located.

1.42.01 Small Inverter Facility:

An Energy Resource that is a certified small inverter-based facility no larger than 10 kW.

1.42.02 Small Inverter ISA:

An agreement among Transmission Provider, Interconnection Customer, and Interconnected Transmission Owner regarding interconnection of a Small Inverter Facility under section 112B of Part IV of the Tariff.

1.42A [RESERVED]

1.42B [RESERVED]

1.42C [RESERVED]

1.42D State:

The term "state" shall mean a state of the United States or the District of Columbia.

1.42D.01 Switching and Tagging Rules:

The switching and tagging procedures of Interconnected Transmission Owners and Interconnection Customer as they may be amended from time to time.

1.42E Synchronized Reserve Zone:

Any of those geographic areas consisting of a combination of one or more of the Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, Synchronized Reserve service.

1.42F System Condition:

A specified condition on the Transmission Provider's system or on a neighboring system, such as a constrained transmission element or flowgate, that may trigger Curtailment of Long-Term Firm Point-to-Point Transmission Service using the curtailment priority pursuant to Section 13.6. Such conditions must be identified in the Transmission Customer's Service Agreement.

1.43 System Impact Study:

An assessment by the Transmission Provider of (i) the adequacy of the Transmission System to accommodate a Completed Application, an Interconnection Request or an Upgrade Request, (ii) whether any additional costs may be incurred in order to provide such transmission service or to accommodate an Interconnection Request, and (iii) with respect to an Interconnection Request, an estimated date that an Interconnection Customer's Customer Facility can be interconnected with the Transmission System and an estimate of the Interconnection Customer's cost responsibility for the interconnection; and (iv) with respect to an Upgrade Request, the estimated cost of the requested system upgrades or expansion, or of the cost of the system upgrades or expansion, necessary to provide the requested incremental rights.

1.43.01 System Protection Facilities:

The equipment required to protect (i) the Transmission System, other delivery systems and/or other generating systems connected to the Transmission System from faults or other electrical disturbance occurring at or on the Customer Facility, and (ii) the Customer Facility from faults or other electrical system disturbance occurring on the Transmission System or on other delivery systems and/or other generating systems to which the Transmission System is directly or indirectly connected. System Protection Facilities shall include such protective and regulating devices as are identified in the Applicable Technical Requirements and Standards or that are required by Applicable Laws and Regulations or other Applicable Standards, or as are otherwise necessary to protect personnel and equipment and to minimize deleterious effects to the Transmission System arising from the Customer Facility.

Definitions – T – U - V

1.43A Tariff:

This document, the “PJM Open Access Transmission Tariff.”

1.44 Third-Party Sale:

Any sale for resale in interstate commerce to a Power Purchaser that is not designated as part of Network Load under the Network Integration Transmission Service but not including a sale of energy through the PJM Interchange Energy Market established under the PJM Operating Agreement.

1.45 Transmission Customer:

Any Eligible Customer (or its Designated Agent) that (i) executes a Service Agreement, or (ii) requests in writing that the Transmission Provider file with the Commission, a proposed unexecuted Service Agreement to receive transmission service under Part II of the Tariff. This term is used in the Part I Common Service Provisions and in Part VI to include customers receiving transmission service under Part II and Part III of this Tariff.

1.45A Transmission Injection Rights:

Capacity Transmission Injection Rights and Energy Transmission Injection Rights.

1.45B Transmission Interconnection Customer:

An entity that submits an Interconnection Request to interconnect or add Merchant Transmission Facilities to the Transmission System or to increase the capacity of Merchant Transmission Facilities interconnected with the Transmission System in the PJM Region.

1.45C Transmission Interconnection Facilities Study:

A Facilities Study related to a Transmission Interconnection Request.

1.45D Transmission Interconnection Feasibility Study:

A study conducted by the Transmission Provider in accordance with Section 36.2 of the Tariff.

1.45E Transmission Interconnection Request:

A request by a Transmission Interconnection Customer pursuant to Part IV of the Tariff to interconnect or add Merchant Transmission Facilities to the Transmission System or to increase the capacity of existing Merchant Transmission Facilities interconnected with the Transmission System in the PJM Region.

1.45F Transmission Owner:

Each entity that owns, leases or otherwise has a possessory interest in facilities used for the transmission of electric energy in interstate commerce under the Tariff. The Transmission Owners are listed in Attachment L.

1.45G Transmission Owner Attachment Facilities:

That portion of the Transmission Owner Interconnection Facilities comprised of all Attachment Facilities on the Interconnected Transmission Owner's side of the Point of Interconnection.

1.45H Transmission Owner Interconnection Facilities:

All Interconnection Facilities that are not Customer Interconnection Facilities and that, after the transfer under Section 5.5 of Appendix 2 to Attachment P of the PJM Tariff to the Interconnected Transmission Owner of title to any Transmission Owner Interconnection Facilities that the Interconnection Customer constructed, are owned, controlled, operated and maintained by the Interconnected Transmission Owner on the Interconnected Transmission Owner's side of the Point of Interconnection identified in appendices to the Interconnection Service Agreement and to the Interconnection Construction Service Agreement, including any modifications, additions or upgrades made to such facilities and equipment, that are necessary to physically and electrically interconnect the Customer Facility with the Transmission System or interconnected distribution facilities.

1.46 Transmission Provider:

The Transmission Provider shall be the Office of the Interconnection for all purposes, provided that the Transmission Owners will have the responsibility for the following specified activities:

- (a) The Office of the Interconnection shall direct the operation and coordinate the maintenance of the Transmission System, except that the Transmission Owners will continue to direct the operation and maintenance of those transmission facilities that are not listed in the PJM Designated Facilities List contained in the PJM Manual on Transmission Operations;
- (b) Each Transmission Owner shall physically operate and maintain all of the facilities that it owns; and
- (c) When studies conducted by the Office of the Interconnection indicate that enhancements or modifications to the Transmission System are necessary, the Transmission Owners shall have the responsibility, in accordance with the applicable terms of the Tariff, Operating Agreement and/or the Consolidated Transmission Owners Agreement to construct, own, and finance the needed facilities or enhancements or modifications to facilities.

1.47 Transmission Provider's Monthly Transmission System Peak:

The maximum firm usage of the Transmission Provider's Transmission System in a calendar month.

1.48 Transmission Service:

Point-To-Point Transmission Service provided under Part II of the Tariff on a firm and non-firm basis.

1.48A Transmission Service Request:

A request for Firm Point-To-Point Transmission Service or a request for Network Integration Transmission Service.

1.49 Transmission System:

The facilities controlled or operated by the Transmission Provider within the PJM Region that are used to provide transmission service under Part II and Part III of the Tariff.

1.49A Transmission Withdrawal Rights:

Firm Transmission Withdrawal Rights and Non-Firm Transmission Withdrawal Rights.

1.49A.01 Upgrade Construction Service Agreement:

That agreement entered into by a New Service Customer (other than an Interconnection Customer whose project includes generation capability or Merchant Transmission Facilities other than Merchant Network Upgrades), a Transmission Owner, and the Transmission Provider, pursuant to Subpart B of Part VI of the Tariff, and in the form set forth in Attachment GG of the Tariff.

1.49A.02 Upgrade Customer:

A customer that submits an Upgrade Request.

1.49A.03 Upgrade-Related Rights:

Incremental Auction Revenue Rights, Incremental Available Transfer Capability Revenue Rights, Incremental Deliverability Rights, and Incremental Capacity Transfer Rights (as defined in Section 2.35 of Attachment DD of the Tariff).

1.49A.04 Upgrade Request:

A request pursuant to Section 7.8 of Schedule 1 of the Operating Agreement, submitted in the form prescribed in Attachment EE of the Tariff, for evaluation by the Transmission Provider of the feasibility and estimated costs of, (a) a particular proposed Customer-Funded Upgrade or (b)

the Customer-Funded Upgrades that would be needed to provide the Incremented Auction Revenue Rights specified in the request.

1.49B ~~VACAR:~~[RESERVED]

~~The group of five companies, consisting of Duke Energy, Carolina Power and Light, South Carolina Public Service Authority, South Carolina Electric and Gas, and Virginia Electric and Power Company.~~

1.49C ~~VACAR Control Zone:~~[RESERVED]

~~The Transmission Facilities of Virginia Electric and Power Company.~~

1.49D [RESERVED]

1.49E [RESERVED]

1.49F [RESERVED]

3C ~~Mid-Atlantic Area Council Charge~~[RESERVED]

~~The Transmission Provider shall recover the costs of MAAC from Transmission Customers delivering energy to load in the MAAC Control Zone under Schedule 10, “Mid-Atlantic Area Council Charge,” which is attached to and made part of this Tariff.~~

17.2 Completed Application:

A Completed Application shall provide all of the information included in 18 C.F.R. § 2.20 including but not limited to the following:

- (i) The identity, address, telephone number and facsimile number of the entity requesting service;
- (ii) A statement that the entity requesting service is, or will be upon commencement of service, an Eligible Customer under the Tariff;
- (iii) The location of the Point(s) of Receipt and Point(s) of Delivery and the identities of the Delivering Parties and the Receiving Parties;
- (iv) The location of the generating facility(ies) supplying the capacity and energy and the location of the load ultimately served by the capacity and energy transmitted. The Transmission Provider will treat this information as confidential except to the extent that disclosure of this information is required by this Tariff, by regulatory or judicial order, for reliability purposes pursuant to Good Utility Practice or pursuant to ~~Applicable Regional Reliability Council~~ Applicable Regional Entity transmission information sharing agreements. The Transmission Provider shall treat this information consistent with the standards of conduct contained in Part 37 of the Commission's regulations;
- (v) A description of the supply characteristics of the capacity and energy to be delivered;
- (vi) An estimate of the capacity and energy expected to be delivered to the Receiving Party;
- (vii) The Service Commencement Date and the term of the requested Transmission Service;
- (viii) The transmission capacity requested for each Point of Receipt and each Point of Delivery on the Transmission Provider's Transmission System; customers may combine their requests for service in order to satisfy the minimum transmission capacity requirement;
- (ix) A statement indicating that, if the Eligible Customer submits a Pre-Confirmed Application, the Eligible Customer will execute a Service Agreement upon receipt of notification that Transmission Provider can provide the requested Transmission Service; and
- (x) Any additional information required by the Transmission Provider's planning process established in Schedule 6 of the Operating Agreement.

The Transmission Provider shall treat this information consistent with the standards of conduct contained in Part 37 of the Commission's regulations.

18.2 Completed Application:

A Completed Application shall provide all of the information included in 18 C.F.R. § 2.20 including but not limited to the following:

- (i) The identity, address, telephone number and facsimile number of the entity requesting service;
- (ii) A statement that the entity requesting service is, or will be upon commencement of service, an Eligible Customer under the Tariff;
- (iii) The Point(s) of Receipt and the Point(s) of Delivery;
- (iv) The maximum amount of capacity requested at each Point of Receipt and Point of Delivery; and
- (v) The proposed dates and hours for initiating and terminating transmission service hereunder.

In addition to the information specified above, when required to properly evaluate system conditions, the Transmission Provider also may ask the Transmission Customer to provide the following:

- (vi) The electrical location of the initial source of the power to be transmitted pursuant to the Transmission Customer's request for service; and
- (vii) The electrical location of the ultimate load.

The Transmission Provider will treat this information in (vi) and (vii) as confidential at the request of the Transmission Customer except to the extent that disclosure of this information is required by this Tariff, by regulatory or judicial order, for reliability purposes pursuant to Good Utility Practice, or pursuant to ~~Applicable Regional Reliability Council~~[Applicable Regional Entity](#) transmission information sharing agreements. The Transmission Provider shall treat this information consistent with the standards of conduct contained in Part 37 of the Commission's regulations.

- (viii) A statement indicating that, if the Eligible Customer submits a Pre-Confirmed Application, the Eligible Customer will execute a Service Agreement upon receipt of notification that the Transmission Provider can provide the requested Transmission Service.

36.1 General:

Generation Interconnection Requests and Transmission Interconnection Requests shall be governed by this Section 36.

36.1.01 Generation Interconnection Request:

Except as otherwise provided in this Subpart A with respect to Behind The Meter Generation, an Interconnection Customer that seeks to interconnect new generation in, or to increase the capacity of generation already interconnected in, the PJM Region shall submit to the Transmission Provider a Generation Interconnection Request. A Generation Interconnection Request shall include: (i) the location of the proposed generating unit site or existing generating unit; (ii) evidence of an ownership interest in, or right to acquire or control the generating unit site, such as a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider; (iii) the size of the proposed generating unit or the amount of increase in capacity of an existing generating unit; (iv) a description of the equipment configuration and if the generating unit is a wind generation facility, a set of preliminary electrical design specifications depicting the wind plant as a single equivalent generator; (v) the planned date the proposed generating unit or increase in capacity of an existing generating unit will be in service, such date to be no more than seven years from the date the request is received by the Transmission Provider unless the Generation Interconnection Customer demonstrates that engineering, permitting, and construction of the generating unit or increase in capacity will take more than seven years; and (vi) any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; (vii) an executed Generation Interconnection Feasibility Study Agreement, a form of which is contained in Attachment N, pursuant to which the Generation Interconnection Customer agrees to reimburse the Transmission Provider for the cost of the Generation Interconnection Feasibility Study; (viii) an initial deposit of \$100 for each MW requested if the Generation Interconnection Request is received in the first four calendar months of the current New Services Queue; an initial deposit in the amount of \$150 for each MW requested if the Generation Interconnection Request is received in the fifth calendar month of the current New Services Queue; or an initial deposit in the amount of \$200 for each MW requested, if the Generation Interconnection Request is received in the sixth calendar month of the current New Services Queue; provided, however, that the maximum initial deposit for a Generation Interconnection Request will be \$100,000 regardless of both the size and timing of such request; and (ix) a base non-refundable deposit of \$10,000, if the Generation Interconnection Request is received in the first four calendar months of the current New Services Queue; a base non-refundable deposit of \$20,000 if the Generation Interconnection Request is received in the fifth calendar month of the current New Services Queue; or a base non-refundable deposit of \$30,000, if the Generation Interconnection Request is received in the sixth calendar month of the current New Services Queue.

The base and initial deposit will be credited toward the amount of the Generation Interconnection Customer's cost responsibility for the Generation Interconnection Feasibility Study. Upon completion of the Feasibility Study, the Transmission Provider will return any unused refundable deposit monies to Interconnection Customer. Any remaining non-refundable deposit monies will be credited toward the Interconnection Customer's cost responsibility for any other studies

conducted for that Interconnection Request under Part VI of the Tariff, which will be applied prior to the deposit monies collected for that other study. If any non-refundable deposit monies remain after all studies are complete, such monies will be returned to a Generation Interconnection Customer upon Initial Operation, or to a Transmission Interconnection Customer upon energization of completed facilities as provided in Attachment GG, Appendix III, Section 20 of the Tariff. The Transmission Provider shall maintain on the Transmission Provider's website a list of all Generation Interconnection Requests that identifies (A) the proposed maximum summer and winter megawatt electrical output; (B) the location of the generation by county and state; (C) the station or transmission line or lines where the interconnection will be made; (D) the facility's projected date of Initial Operation; (E) the status of the Generation Interconnection Request, including its Queue Position; (F) the type of Generation Interconnection Service requested; (G) the availability of any studies related to the Interconnection Request; (H) the date of the Generation Interconnection Request; (I) the type of Generating Facility to be constructed (combined cycle, base load or combustion turbine and fuel type); and (J) for each Generation Interconnection Request that has not resulted in a completed interconnection, an explanation of why it was not completed. This list will not disclose the identity of the Generation Interconnection Customer, except as otherwise provided in Part IV of the Tariff. The list and the priority of Generation Interconnection Requests shall be included on the website as part of the New Services Queue.

36.1.02 Generation Interconnection Requests of 20 Megawatts or Less:

The Transmission Provider has developed streamlined processes for Generation Interconnection Requests involving new generation resources of 20 MW or less and increases in the capacity of a generating unit by 20 MW or less over any consecutive 24-month period. The processes for Generation Interconnection Requests involving increases in capacity by 20 MW or less are set forth in Subpart G of Part IV of the Tariff and the PJM Manuals.

36.1.03 Transmission Interconnection Request:

An Interconnection Customer that seeks to interconnect or add Merchant Transmission Facilities to the Transmission System, or to increase the capacity of existing Merchant Transmission Facilities interconnected with the Transmission System, or to advance the construction of any transmission enhancement or expansion other than Merchant Transmission Facilities that is included in the Regional Transmission Expansion Plan prepared pursuant to Schedule 6 of the Operating Agreement, shall submit to the Transmission Provider a Transmission Interconnection Request. A Transmission Interconnection Request shall include: (i) the location of the proposed Merchant Transmission

Facilities and of the substation(s) or other location(s) where the Transmission Interconnection Customer proposes to interconnect or add its Merchant Transmission Facilities to the Transmission System; (ii) a description of the proposed Merchant Transmission Facilities; (iii) the nominal capability or increase in capability (in megawatts) of the proposed Merchant Transmission Facilities or planned increase in the capability of the existing facilities on which any proposed Merchant Network Upgrades would be installed; (iv) the planned date the proposed Merchant Transmission Facilities will be in service, such date to be no more than seven

years from the date the request is received by the Transmission Provider, unless the Transmission Interconnection Customer demonstrates that engineering, permitting, and construction of the Merchant Transmission Facilities will take more than seven years; (v) if the request relates to proposed Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities that will interconnect with the Transmission System and with another control area outside the PJM Region, the Transmission Interconnection Customer's election to receive either (a) Transmission Injection Rights and/or Transmission Withdrawal Rights, or (b) Incremental Deliverability Rights, Incremental Auction Revenue Rights, Incremental Capacity Transfer Rights, and Incremental Available Transfer Capability Revenue Rights, associated with the capability of the proposed Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities; (vi) if the Transmission Interconnection Customer will be eligible to receive Incremental Deliverability Rights under Section 235 of the Tariff, identification of the point on the Transmission System where the Transmission Interconnection Customer wishes to receive Incremental Deliverability Rights created by the construction or installation of its proposed Merchant Transmission Facilities; (vii) any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; (viii) an executed Transmission Interconnection Feasibility Study Agreement, a form of which is contained in Attachment S, pursuant to which the Transmission Interconnection Customer agrees to reimburse the Transmission Provider for the cost of the Transmission Interconnection Feasibility Study; and (ix) an initial deposit in the amount of \$100 for each MW requested if the Transmission Interconnection Request is received in the first four calendar months of the current New Services Queue; an initial deposit in the amount of \$150 for each MW requested if the Transmission Interconnection Request is received within the fifth calendar month of the current New Services Queue; or an initial deposit in the amount of \$200 for each MW requested, if the Transmission Interconnection Request is received within the sixth calendar month of the current New Services Queue; provided, however, that the maximum initial deposit for a Transmission Interconnection Request will be \$100,000 regardless of both size and timing of such request; and (x) a base non-refundable deposit in the amount of \$10,000, if the Transmission Interconnection Request is received within the first four calendar months of the date of the beginning of the current New Services Queue; a base non-refundable deposit in the amount of \$20,000 if the Transmission Interconnection Request is received within the fifth calendar month of the current New Services Queue; or a base non-refundable deposit in the amount of \$30,000, if the Transmission Interconnection Request is received within the sixth calendar month of the current New Services Queue.

The base and initial deposit will be credited toward the amount of the Transmission Interconnection Customer's cost responsibility for the Transmission Interconnection Feasibility Study and other studies conducted under Part IV or Part VI of the Tariff. The Transmission Provider shall maintain on the Transmission Provider's OASIS a list of all Transmission Interconnection Requests that identifies (A) in megawatts the potential nominal capability or increase in capability; (B) the location of the Merchant Transmission Facilities by county and state; (C) the station or transmission line or lines where the interconnection will be made; (D) the facility's projected date of Initial Operation; (E) the status of the Transmission Interconnection Request, including its Queue Position; (F) the availability of any studies related to the Interconnection Request; (G) the date of the Transmission Interconnection Request; (H) the type of Merchant Transmission Facilities to be constructed; and (I) for each Transmission

Interconnection Request that has not resulted in a completed interconnection, an explanation of why it was not completed. This list will not disclose the identity of the Transmission Interconnection Customer, except as otherwise provided in Part IV or Part VI of the Tariff. The list and the priority of Transmission Interconnection Requests shall be included on the OASIS as a part of the New Services Queue.

Within 30 days of submitting its Interconnection Request, Transmission Interconnection Customer shall provide evidence that it has submitted a valid interconnection request with the adjacent Control Area(s) in which it is interconnecting, if applicable. Transmission Interconnection Customer shall maintain its queue position(s) with such adjacent Control Area(s) throughout the entire PJM interconnection process.

36.1.1 Interconnection Services for Generation:

Generation Interconnection Customers may request either of two forms of Interconnection Service, i.e., interconnection as a Capacity Resource or as an Energy Resource. Energy Resource status allows the generator to participate in the PJM Interchange Energy Market pursuant to the PJM Operating Agreement. Capacity Resource status allows the generator to participate in the PJM Interchange Energy Market to be utilized by load-serving entities in the PJM Region to meet capacity obligations imposed under the Reliability Assurance Agreement and/or to be designated as a Network Resource under Part III. Capacity Resources also may participate in Reliability Pricing Model Auctions and in Ancillary Services markets pursuant to the PJM Tariff or the Operating Agreement. Capacity Resource status is based on providing sufficient transmission capability to ensure deliverability of generator output to the aggregate PJM Network Load and to satisfy ~~various the~~ contingency criteria ~~established by~~ in the Applicable Regional Reliability Council Applicable Standards in which the generator is located. Specific tests performed during the Generation Interconnection Feasibility Study and later System Impact Study will identify those upgrades required to satisfy the contingency criteria applicable at the generator's location.

Consistent with Section 1.7.4(i) of Schedule 1 to the Operating Agreement, to the extent its generating facility is dispatchable, an Interconnection Customer shall submit an Economic Minimum in the real-time market that is no greater than the higher of its physical operating minimum or its Capacity Interconnection Rights.

36.1.2 No Applicability to Transmission Service:

Nothing in this Part IV shall constitute a request for transmission service, or confer upon an Interconnection Customer any right to receive transmission service, under Part II or Part III.

36.1.3 Acknowledgement of Interconnection Request:

The Transmission Provider shall acknowledge receipt of the Interconnection Request (electronically when available to all parties, otherwise written) within five (5) business days after receipt of the request and shall attach a copy of the received Interconnection Request to the acknowledgement.

36.1.4 Deficiencies in Interconnection Request:

An Interconnection Request will not be considered a valid request if Interconnection Customer has failed to pay any outstanding invoices related to prior Interconnection Requests by the Interconnection Customer and until all information required under Section 36.1 has been received by the Transmission Provider. If an Interconnection Request fails to meet the requirements set forth in Section 36.1, except as provided below regarding the deposit, or is in arrears as described above, the Transmission Provider shall so notify the Interconnection Customer (electronically when available to all parties, otherwise written) within five (5) business days of receipt of the initial Interconnection Request. Such notice shall explain that the Interconnection Request does not constitute a valid request and the reasons for such failure to meet the applicable requirements. Interconnection Customer shall provide the additional information that Transmission Provider's notice identifies as needed to constitute a valid request and shall make any payments on any outstanding invoices within ten (10) business days after receipt of such notice. Upon timely correction of the deficiency, the Interconnection Request shall be assigned a Queue Position under Section 201 as of the date that Transmission Provider first received the request. In the event the Interconnection Customer fails to provide the further information and make payments on any outstanding invoices required by Transmission Provider's deficiency notice under this Section 36.1.4, its Interconnection Request shall be deemed to be terminated and withdrawn. Notwithstanding the above, the Interconnection Customer must submit its deposit at the time it submits its Interconnection Request. Failure to do so will result in rejection of the Interconnection Request.

36.1.5 Scoping Meeting:

The following provision shall apply to Interconnection Requests submitted prior to May 1, 2012:

Transmission Provider shall provide each Interconnection Customer with an opportunity for a scoping meeting among the Transmission Provider, the prospective Interconnected Transmission Owner and the Interconnection Customer. The purpose of the scoping meeting will be to identify one alternative Point(s) of Interconnection and configurations to evaluate in the Interconnection Studies and to attempt to select the best alternatives in a reasonable fashion given resources and information available. The Interconnection Customer may select a maximum of two Point(s) of Interconnection to be studied during the Interconnection Feasibility Study, a primary and secondary Point of Interconnection may be selected by the Interconnection Customer. After receipt of a valid Interconnection Request, Transmission Provider shall offer to arrange, within seven business days, for the scoping meeting, and shall provide a minimum of three suggested meeting dates and times for the scoping meeting. The scoping meeting shall be held, or waived by mutual agreement of the parties within 45 days after receipt of a valid Interconnection Request, if the Interconnection Request is received in the first calendar month of the current New Services Queue; or within 30 days if the Interconnection Request is received within the second calendar month of the current New Services Queue; or in 20 days if the Interconnection Request is received in the third calendar month of the date of the beginning of the current New Services Queue. The Interconnection Customer may choose to divide the scoping meeting into two sessions, one between the Transmission Provider and Interconnection Customer and one among

Transmission Provider, the Interconnection Customer and the prospective Interconnected Transmission Owner. Such meetings may be held consecutively on the same day. Scoping meetings may be held in person or by telephone or video conference. In the event the Interconnection Customer fails to waive or complete the scoping meeting requirement, its Interconnection Request shall be deemed to be terminated and withdrawn.

The following provision shall apply to Interconnection Requests submitted on or after May 1, 2012:

Transmission Provider shall provide each Interconnection Customer with an opportunity for a scoping meeting among the Transmission Provider, the prospective Interconnected Transmission Owner and the Interconnection Customer. The purpose of the scoping meeting will be to identify one alternative Point(s) of Interconnection and configurations to evaluate in the Interconnection Studies and to attempt to select the best alternatives in a reasonable fashion given resources and information available. The Interconnection Customer may select a maximum of two Point(s) of Interconnection to be studied during the Interconnection Feasibility Study, a primary and secondary Point of Interconnection may be selected by the Interconnection Customer. After receipt of a valid Interconnection Request, Transmission Provider shall offer to arrange, within seven business days, for the scoping meeting, and shall provide a minimum of three suggested meeting dates and times for the scoping meeting. The scoping meeting shall be held, or waived by mutual agreement of the parties within 45 days after receipt of a valid Interconnection Request, if the Interconnection Request is received in the first four calendar months of the current New Services Queue; or within 30 days if the Interconnection Request is received within the fifth calendar month of the current New Services Queue; or in 20 days if the Interconnection Request is received in the sixth calendar month of the date of the beginning of the current New Services Queue. The Interconnection Customer may choose to divide the scoping meeting into two sessions, one between the Transmission Provider and Interconnection Customer and one among Transmission Provider, the Interconnection Customer and the prospective Interconnected Transmission Owner. Such meetings may be held consecutively on the same day. Scoping meetings may be held in person or by telephone or video conference. In the event the Interconnection Customer fails to waive or complete the scoping meeting requirement, its Interconnection Request shall be deemed to be terminated and withdrawn.

36.1.6 Coordination with Affected Systems:

The Transmission Provider will coordinate with Affected System Operators the conduct of any required studies in accordance with Section 202.

36.1.7 Base Case Data:

Transmission Provider shall provide Interconnection Customer with base power flow, short circuit and stability databases, including all underlying assumptions, and contingency list upon request and subject to the confidentiality provisions of Section 223 of the Tariff. Transmission Provider may require Interconnection Customer to sign a confidentiality agreement before the release of commercially sensitive information or Critical Energy Infrastructure Information in the Base Case data. Such databases and lists, hereinafter referred to as Base Cases, shall include

all (1) generation projects and (ii) transmission projects, including merchant transmission projects, that are included in the then-current, approved Regional Transmission Expansion Plan.

110.2 Feasibility Study

Feasibility Study analyses can generally be expedited by examining a limited contingency set that focuses on the impact of the small capacity addition on contingency limits in the vicinity of the Generation Capacity Resource. Linear analysis tools are used to evaluate the impact of a small capacity addition with respect to compliance with [Applicable Regional Reliability Council](#) the contingency criteria [in the Applicable Standards](#). Generally, small capacity additions will have very limited and isolated impacts on system facilities. If criteria violations are observed, further AC testing is required.

Short circuit calculations are performed for small resource additions to ensure that circuit breaker capabilities are not exceeded.

Once the Feasibility Study is completed, a Feasibility Study report will be prepared and transmitted to the Interconnection Customer along with a System Impact Study Agreement. In order to remain in the New Services Queue, the Interconnection Customer must return the executed System Impact Study Agreement within 30 days, along with documents demonstrating that an initial air permit application has been filed, if required, and the deposit contained in Section 204.3A of the Tariff. In some cases, where no network impacts are identified and there are no other projects in the vicinity of the small resource addition, the System Impact Study may not be required and the project will proceed directly to the Facilities Study.

111.2 Feasibility Study

Feasibility Study analyses can generally be expedited by examining a limited contingency set that focuses on the impact of the small Energy Resource addition on contingency limits in the vicinity of the resource. Linear analysis tools are used to evaluate the impact of a small Energy Resource addition with respect to compliance with ~~Applicable Regional Reliability Council~~ the contingency criteria in the Applicable Standards. Generally, small resource additions will have very limited and isolated impacts on system facilities. If criteria violations are observed, further AC testing is required.

Short circuit calculations are performed for small resource additions to ensure that circuit breaker capabilities are not exceeded.

Once the Feasibility Study is completed, a Feasibility Study report will be prepared and transmitted to the Interconnection Customer along with a System Impact Study Agreement. In order to remain in the New Services Queue, the Interconnection Customer must return the executed System Impact Study Agreement within 30 days, along with documents demonstrating that an initial air permit application has been filed, if required, and the deposit contained in Section 204.3A of the Tariff. In some cases, where no network impacts are identified and there are no other projects in the vicinity of the small resource addition, the System Impact Study may not be required and the project will proceed directly to the Facilities Study.

230.3 Loss of Capacity Interconnection Rights:

230.3.1 Operational Standards:

To retain Capacity Interconnection Rights, the Generation Capacity Resource associated with the rights must operate or be capable of operating at the capacity level associated with the rights. Operational capability shall be established consistent with Schedule 9 of the Reliability Assurance Agreement Among Load Serving Entities in the PJM Region and the PJM Manuals. Generation Capacity Resources that meet these operational standards shall retain their Capacity Interconnection Rights regardless of whether they are available as a Generation Capacity Resource or are making sales outside the PJM Region.

230.3.2 Failure to Meet Operational Standards:

This Section 230.3.2 shall apply only in circumstances other than Deactivation of a Generation Capacity Resource. In the event a Generation Capacity Resource fails to meet the operational standards set forth in Section 230.3.1 of the Tariff for any consecutive three-year period (with the first such period commencing on the date the Interconnection Customer must demonstrate commercial operation of the generating unit(s) as specified in the Interconnection Service Agreement), the holder of the Capacity Interconnection Rights associated with such Generation Capacity Resource will lose its Capacity Interconnection Rights in an amount commensurate with the loss of generating capability. Any period during which the Generation Capacity Resource fails to meet the standards set forth in Section 230.3.1 as a result of an event that would constitute a Force Majeure event under Section 10 of the Tariff shall be excluded from such consecutive three-year period, provided that the holder of the Capacity Interconnection Rights exercises due diligence to remedy the event. A Generation Capacity Resource that loses Capacity Interconnection Rights pursuant to this section may continue Interconnection Service, to the extent of such lost rights, as an Energy Resource in accordance with (and for the remaining term of) its Interconnection Service Agreement and/or applicable terms of the Tariff.

230.3.3 Replacement of Generation:

In the event of the Deactivation of a Generation Capacity Resource (in accordance with Part V and ~~applicable VACAR or other requirements~~[any Applicable Standards](#)), any Capacity Interconnection Rights associated with such facility shall terminate one year from the Deactivation Date unless the holder of such rights (including any holder that acquired the rights after Deactivation) has submitted a new Generation Interconnection Request up to one year after the Deactivation Date which contemplates use of the same Capacity Interconnection Rights. The Interconnection Customer must provide notification to the Transmission Provider that it intends to utilize such Capacity Interconnection Rights on or before the date the Interconnection Customer executes the System Impact Study Agreement associated with the Generation Interconnection Request for which it intends to utilize such Capacity Interconnection Rights. Notwithstanding the previous sentence, Interconnection Customers in the New Services Queue prior to May 1, 2012 must provide notice of intent to utilize such Capacity Interconnection Rights when it executes its Facilities Study Agreement or, if it has already executed its Facilities Study Agreement, then by November 1, 2012. Such new Generation Interconnection Request

may include a request to increase Capacity Interconnection Rights in addition to the replacement of the previously deactivated amount as a single Generation Interconnection Request.

Transmission Provider may perform studies, as necessary, due to any changes in the electrical characteristics of any newly proposed equipment, or where there is a change in Point of Interconnection, which may result in the loss of a portion or all of the Capacity Interconnection Rights as determined by such studies.

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Upon execution of an Interconnection Service Agreement reflecting its new Interconnection Request, the holder of the Capacity Interconnection Rights will retain only such rights that are commensurate with the size in megawatts of the replacement generation, not to exceed the amount of the holder's Capacity Interconnection Rights associated with the facility upon Deactivation. Any desired increase in Capacity Interconnection Rights must be requested in the new Generation Interconnection Request and be accredited through the applicable procedures in Part IV and Part VI of the Tariff. In the event the new Interconnection Request to which this section refers is or is deemed to be terminated and/or withdrawn for any reason at any time, the pertinent Capacity Interconnection Rights shall not terminate until the end of the one year period from the Deactivation Date.

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 Transmission Provider and Transmission Owners 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. For the purposes of this Schedule 6A, the expected life of the Black Start Unit shall take into consideration expectations regarding both the enabling equipment and the generation unit itself.

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, in conjunction with the Transmission Owners, are 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 more than three Black Start Units at a Black Start Plant will be eligible for compensation under this Schedule 6A, unless specifically approved by the Transmission Provider as an exception. 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 or 6 below.

5. Owners of Black Start Units selected to provide Black Start Service in accordance with 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 Owner, with the consent of the Transmission Provider, or the Transmission Provider, with the consent of the Transmission Owner, provides written, one-year advance notice of its intention to terminate the commitment.

6. Owners of Black Start Units selected to provide Black Start Service in accordance with 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 a term based upon the age of the Black Start Unit or the longest expected life of the Incremental Black Start Capital Cost, as set forth in the applicable CRF Tables in Paragraph 18. For those Black Start Units that elect to recover new or additional Black Start Capital Costs in addition to a prior, FERC-approved cost recovery rate, the applicable commitment period shall be the longer of the FERC-approved recovery period or the applicable term of commitment as set forth in the CRF Tables in Paragraph 18. Either the Transmission Provider, with the consent of the Transmission Owner, or the Transmission Owner, with the consent of the Transmission Provider, may terminate the commitment with one year advance notice of its intention to the Black Start Unit owner, but the Transmission Owner shall reimburse the Black Start Unit owner for 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 (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)) in excess of the amount that would have been recovered pursuant to section 18 during the same period. At the conclusion of the term of commitment established under this section 6, a Black Start Unit shall commence a new term of commitment under either section 5 or 6, as applicable.

6A. 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)) in excess of the amount that would have been recovered pursuant to section 18 during the same period, but such unit remains eligible to establish a new commitment under section 5 or 6.

Performance Standards and Outage Restrictions

7. 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 90 minutes of a request from the Transmission Owner or the Transmission Provider.
- 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.

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 planned maintenance at any one time. This restriction excludes outages on common plant equipment that may make all units unavailable. A Black Start Unit not currently designated as critical and on the same voltage level may be substituted for a Black Start Unit that is subject to a planned outage to permit a concurrent planned outage of another critical Black Start Unit at the Black Start Plant to begin. The Black Start Unit used as a substitute must have had a valid annual test within the previous 12 months.

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 designated as critical shall be tested annually in accordance with the PJM manuals. The Black Start Unit owner shall determine the time of the annual test.

13. Compensation 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. To receive Black Start Service revenues, a Black Start Unit must have a successful annual test on record with the Transmission Provider within the preceding 13 months.

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 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 determines not to make the necessary repairs to enable the Black Start Unit to pass the annual test, the Black Start Unit owner will have failed to fulfill its commitment pursuant to section 5 or section 6, whichever is applicable, of this Schedule 6A and will be subject to the additional forfeiture of revenues set forth in section 6A.

Revenue Requirements

16. The 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, as applicable, or (ii) the formula rates set forth in section 18 of this Schedule 6A for the commitment term set forth in Paragraph 5 or 6 as applicable. Each generator's Black Start Service revenue requirements shall be an annual calculation. Requests 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 section III of Attachment M – Appendix and the PJM Manuals. The Market Monitoring Unit and the generator owner shall attempt to come to agreement on the level of each component included in the Black Start Service revenue requirements. The Black Start Service generator owner may submit Black Start Service revenue requirements that it chooses, provided that (i) it has participated in good faith with the process described in this section and in section III of Attachment M - Appendix, (ii) the Black Start Service revenue requirements are no higher than the level defined in any agreement reached by the Black Start Service generator 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.

In the event that the Black Start Service generator owner and Market Monitoring Unit cannot agree on the level of each component included in the calculation of the Black Start Service

revenue requirements, and the Black Start Service generator owner submits its own values to the Office of the Interconnection that are inconsistent with the Market Monitoring Unit's determination, the Office of the Interconnection shall determine whether to accept such values subject to the requirements of the Tariff and the PJM Manuals. If the Office of the Interconnection does not accept the values submitted by the Black Start Service generator owner in such case, the Black Start Service generator owner may file its proposed values with the Commission for approval. Pursuant to section III of Attachment M - Appendix, if the Office of the Interconnection accepts the Black Start Service revenue requirements submitted by the Black Start Service generator owner in such case, the Market Monitoring Unit may petition the Commission for an order that would require the Black Start Service generator to utilize the values determined by the Market Monitoring Unit or such other values as determined by the Commission. 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.

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 Paragraph 5 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 the Black Start Unit's installed capacity, expressed in MW.

“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 Black Start Units with a commitment established under section 5, X shall be .01 for Hydro units, .02 for Diesel or CT units.

Black Start Units with a commitment established under Paragraph 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

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

Where:

“Net Cone” is the then current installed capacity (“ICAP”) net Cost of New Entry (expressed in \$/MW year) for the CONE area where the Black Start Unit is located.

“Black Start NERC-CIP Unit Capacity” is the Black Start Unit’s installed capacity, expressed in MW, but, for purposes of this calculation, capped at 100 MW for Hydro units, or 50 MW for Diesel or 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).

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

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

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

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 paragraph 18. However, under no circumstances will PJM or the Black Start Unit owner restructure or modify that existing FERC-approved rate without FERC approval.

“Incremental Black Start Capital Costs” are 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 Owner in order to meet NERC Reliability Standards that apply to Black Start Units solely on the basis of the provision of Black Start Service by such unit. However, Incremental Black Start Capital Costs shall not include any capital costs that the Black Start Unit owner is recovering for that unit pursuant to a FERC-approved recovery rate.

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

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

Or:

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

Capital Improvement Lifespan (Years)	Levelized CRF
16-20	0.125
11-15	0.146
6-10	0.198
1-5	0.363

In those circumstances where a Black Start Unit owner has elected to recover Incremental Black Start Capital Costs, in addition to a FERC-approved recovery rate, its applicable term of commitment shall be the greater of: (i) the FERC-approved recovery period, or; (ii) the applicable term of commitment as established by the CRF Tables above.

After a Black Start Unit has recovered its allowable Incremental Black Start Capital Costs or Incremental Black Start NERC-CIP Capital Costs, as provided by the applicable Capital Cost Recovery Rate, and has satisfied its applicable commitment period required under Paragraph 6, the Black Start Unit shall be committed to providing black start in accordance with Paragraph 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.

Training Costs:

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

50 staff hours/year/plant*75/hour

Fuel Storage Costs:

Black Start Units that cannot use oil for fuel shall calculate Fuel Storage Costs or “FSC” as zero. Black Start Units that can use oil for fuel shall calculate Fuel Storage Costs in accordance with the following formula:

$$\{ \text{MTSL} + [(\# \text{ Run Hours}) * (\text{Fuel Burn Rate})] \} * \\ (12 \text{ Month Forward Strip} + \text{Basis}) * (\text{Bond Rate})$$

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.

“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.

“MTSL” is the “minimum tank suction level” and shall apply where no direct current pumps are available for the Black Start Unit.

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 those Black Start Units that elect to recover new or additional Black Start Capital Costs under section 6 above, the incentive factor, Z, shall be equal to zero.

At least every two years, PJM shall review the formula and its costs components set forth in this section, 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 Paragraph 18 no later than thirty (30) days prior to the effective date of the recovery. At the written request of any 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 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. Monthly credits are provided to generators that submit to the Transmission Provider their annual revenue requirements established pursuant to section 17 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.

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 ~~Applicable Regional Reliability Council 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 of generation units nominated by each transmission zone and allocated to network service customers and point-to-point reservations.

26. Revenue requirements for Black Start Units nominated by a Transmission Owner as critical (regardless of zonal location) will be allocated to the nominating Transmission Owner's zone.

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 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 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.

SCHEDULE 8
Non-Firm Point-To-Point Transmission Service

1) The Transmission Customer shall pay for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth below for the Point of Delivery:

Summary of Charges

Point of Delivery	Monthly Charge (\$/kW)	Weekly Charge (\$/kW)	Daily On-Peak ^{1/} Charge (\$/kW)	Daily Off-Peak ^{2/} Charge (\$/kW)	Hourly On-Peak ^{3/} Charge (\$/MWh)	Hourly Off-Peak ^{4/} Charge (\$/MWh)
Border of PJM	1.574	0.3632	0.0726	0.0519	4.54	2.16
AE Zone	1.984	0.4580	0.0920	0.0650	5.7	2.72
BG&E Zone	1.306	0.3010	0.0600	0.0430	3.8	1.80
Delmarva Zone	1.615	0.3730	0.0750	0.0530	4.6	2.21
JCPL Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
MetEd Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
Penelec Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
PECO Zone	2.189	0.5051	0.1010	0.0722	6.3	3.01
PPL Zone: Total charge is the sum of the components	PPL: * AEC: 0.039 UGI: *	PPL: * AEC: 0.0089 UGI: *	PPL: * AEC: 0.0018 UGI: *	PPL: * AEC: 0.0013 UGI: *	PPL: * AEC: 0.11 UGI: *	PPL: * AEC: 0.05 UGI: *
Pepco Zone	1.750	0.4040	0.0810	0.0580	5.0	2.40
PSE&G Zone	1.975	0.4557	0.0911	0.0651	5.7	2.71
AP Zone	1.737	0.4009	0.0802	0.0573	5.0	2.39
Rockland Zone	2.676	0.6176	0.1235	0.0882	7.7	3.67
ComEd Zone ^{5/}	6/					

* PPL Electric Utilities Corporation's and UGI Utilities' respective component of the total charge is posted on the PJM Internet website.

AEP East Zone ^{7/} Nov. 1, 2005 SECA Ended W-JF Line In	AEP East Zone ^{7/}	Rate Pursuant to Attachment H-14	Monthly Charge X 12 / 52 0.249 48	Weekly Charge / 5	Weekly Charge / 7	Daily On-Peak Charge / 16
Dayton Zone	Dayton Zone	1.306	0.3014	0.060 3	0.0431	3.77
Duquesne Zone	Duquesne Zone	1.18	0.27	0.054 0	0.0386	3.38
Dominion Zone ^{8/}	Dominion Zone ^{8/}					
ATSI Zone	ATSI Zone	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21
DEOK Zone	DEOK Zone	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22

- 1/ Monday - Friday except the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.
- 2/ Saturday and Sunday and the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.
- 3/ 7:00 a.m. up to the hour ending 11:00 p.m.
- 4/ 11:00 p.m. up to the hour ending 7:00 a.m.
- 5/ Each month, revenue credits will be applied to the gross charge in accordance with Paragraph 9 below to determine the actual charge to the Transmission Customer.
- 6/ The charges for the ComEd zone are posted on PJM's website. In addition to the other rates set forth in this schedule, customers within the ComEd zone shall be charged for recovery of RTO start-up costs at the following rates, each computed to four decimal places:
Annual Rate - \$/kW/year = \$1,523,039, divided by the 1 CP demand for the ComEd zone for the prior calendar year;
Monthly Rate - \$/kW/month. = Annual Rate divided by 12;
Weekly Rate - \$/kW/week = Annual Rate divided by 52;
Daily rate - \$/kW/day = Weekly Rate divided by 5.
In order to ensure that the charge does not result in either an over-recovery or under-recovery of ComEd's start-up costs, PJM will institute an annual true-up mechanism in the month of May of each of the years 2008-2014. In May of each of those years, PJM will compare the amount collected under this charge for the previous 12 months with the target annual amount of \$1,523,039 and calculate any credits or surcharges that would be needed to ensure that \$1,523,039 is collected for each year. Any credit or surcharge will be assessed in the June bills for years 2008-2014, consistent with the above methodology.

- 7/ The rates for non-firm point-to-point transmission service in the AEP Zone will be charged at the monthly, weekly, daily or hourly rate equivalent to the rate effective in such period under Attachment H-14. In addition to other rates set forth in this schedule, customers within the AEP East Zone shall be charged for recovery of RTO start-up costs at the following rates, each computed to four decimal places:

Annual Rate - \$/kW/year = \$2,362,185, plus any applicable true-up adjustment, divided by the 1 CP demand for the AEP East Zone for the prior calendar year;

Monthly Rate - \$/kW/month. = Annual Rate divided by 12;

Weekly Rate - \$/kW/week = Annual Rate divided by 52;

Daily Rate - \$/kW/day = Weekly Rate divided by 5.

For the period November 1, 2005 through March 31, 2006, the rate shall be \$8.94/MW-month; for the period April 1 through December 31, 2006, the rate shall be \$8.60/MW-month, thereafter, the rate will be subject to the following true-up:

In order to ensure that the charge does not result in either over-recovery or under-recovery of AEP's start-up costs, PJM will institute an annual true-up mechanism and implement revised charges as of January 1st of each of the years 2007-2019. In January of each of those years, PJM will compare the amount collected under this charge for the previous year or part thereof with the target annual amount of \$2,362,185 and calculate the rates that would be needed, given the expected billing demands, to collect \$2,362,185, adjusted for any prior year over-collection or under-collection. In the final year that the rate is collected, PJM will calculate the rate to collect five-twelfths of the annual amount, (\$984,244), plus or minus any prior year true up amount, by May 31 of that year, and shall charge such rate until that amount is collected, whether that date be before or after May 31, 2020.

Effective December 1, 2004, the charge for Points of Delivery at the Border of PJM and the Transitional Revenue Neutrality Charge under this Schedule 8 shall not apply to any Reserved Capacity with a Point of Delivery of the Midwest Independent Transmission System Operator, Inc. obtained pursuant to requests submitted on or after November 17, 2003, for service commencing on or after April 1, 2004. Effective April 1, 2006, the charge for Points of Delivery at the Border of PJM and the Transitional Revenue Neutrality Charge under this Schedule 7 shall not apply to any Reserved Capacity with a Point of Delivery of the Midwest Independent Transmission System Operator, Inc.

- 8/ The service period charges rounded to four decimal places for the Dominion Zone are as follows:

Monthly Charge - \$/kW/month = the formula rate for Network Integration Transmission Service as described in Attachment H-16 and Attachment H-16A divided by 12 divided by 1000 kW/MW;

Weekly Charge - $\$/kW/week = 12 \text{ times Monthly Charge divided by } 52;$

Daily On-Peak Charge - $\$/kW/day = \text{Weekly Charge divided by } 5;$

Daily Off-Peak Charge - $\$/kW/day = \text{Weekly Charge divided by } 7;$

Hourly On-Peak Charge - $\$/MWh = \text{Daily On-Peak Charge} / 16 \text{ hours} * 1000 \text{ kW/ MW};$

Hourly Off-Peak Charge - $\$/MWh = \text{Daily Off-Peak Charge} / 24 \text{ hours} * 1000 \text{ kW/ MW}.$

2) The total demand charge in any week, pursuant to a reservation for Daily On-Peak Delivery or Daily Off-Peak Delivery, shall not exceed the Weekly Delivery rate specified in section (1) above for weekly service times the highest amount in kilowatts of Reserved Capacity and any additional transmission service, if any, in any day during such week.

3) **Hourly delivery:** The basic charge shall be that agreed upon by the Parties at the time this service is reserved and in no event shall exceed the amounts set forth above for a Point of Delivery.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified in section (1) above for daily service times the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified in section (1) above for weekly service times the highest amount in kilowatts of Reserved Capacity in any hour during such week.

4) **Discounts:** Three principal requirements apply to discounts for transmission service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the OASIS, (2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an Affiliate's use) must occur solely by posting on OASIS, and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount agreed upon for service on a path, from point(s) of receipt to point(s) of delivery, the Transmission Provider must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same point(s) of delivery on the Transmission System.

5) **Congestion, Losses and Capacity Export:** A Transmission Customer desiring Non-Firm Point-to-Point Transmission Service may elect to pay transmission congestion charges. If the Transmission Customer so elects, it shall either (a) if the applicable Transmission Congestion Charge as calculated pursuant to Attachment K is positive, pay the higher of the applicable Transmission Congestion Charge or the applicable rate under section (1) above, or (b) if the applicable Transmission Congestion Charge as calculated pursuant to Attachment K is negative, pay or be credited the sum of the applicable Transmission Congestion Charge and the rate under section (1) above. The Transmission Customer shall be responsible for losses as specified in the

Tariff. Any Transmission Customer that is a Capacity Export Transmission Customer, as defined in Attachment DD to this Tariff, shall pay for any applicable charges, and receive any applicable credits, for such a customer pursuant to Attachment DD.

6) **Other Supporting Facilities and Taxes:** In addition to the charges set forth in section (1) of this schedule, the Transmission Customer shall pay charges determined on a case-by-case basis for facilities necessary to provide Transmission Service at voltages lower than those shown in Attachment H for the applicable Zone(s) and any amounts necessary to reimburse the Transmission Provider for any amounts payable as sales, excise, “Btu,” carbon, value-added or similar taxes (other than taxes based upon or measured by net income) with respect to the amounts payable pursuant to the Tariff.

~~7) **Transitional Revenue Neutrality Charge:** In addition to the rates set forth in Section (1) of this Schedule and any other applicable charges, the Transmission Customer shall also pay for Reserved Capacity for delivery at the border of the area comprised of the PJM Control Area and PJM West region a non-discountable charge of \$0.241/kw/mo., \$0.0556/kw/week, \$0.0079/kw/day (both on-peak and off-peak), or \$0.33/Mw/hour (both on-peak and off-peak). PJM shall distribute all revenues from the Transitional Revenue Neutrality Charge to Allegheny Power. The charge provided for under this section (7) shall terminate effective as of the day on which the sum total of the revenues collected by this charge, the Transitional Revenue Neutrality Charge under Schedule 7, and the Transitional Market Expansion Charge under Schedule 11 equal \$84,993,360.~~

87) **Transmission Enhancement Charges:** In addition to the rates set forth in Section (1) of this Schedule and any other applicable charges, the Transmission Customer shall also pay any Transmission Enhancement Charges for which it is designated as a Responsible Customer under Schedule 12 appended to the Tariff.

98) **Determination of monthly charges for ComEd Zone:** On a monthly basis, revenue credits shall be calculated based on the sum of ComEd’s share of revenues collected during the month from: (i) the PJM Border Rate under Schedule 7; (ii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; (iii) Seams Elimination Charge/Cost Adjustment/Assignment (“SECA”) revenues allocable to ComEd under the Tariff; and (iv) any Point-To-Point Transmission Service where the Point of Receipt and the Point of Delivery are both internal to the ComEd Zone. On this basis, the sum of these revenues will appear as a reduction to the gross monthly rate stated above on a Transmission Customer’s bill in that month for service under this schedule.

109) **Resales:** The rates and rules governing charges and discounts stated above shall not apply to resales of transmission service, compensation for which shall be governed by section 23.1 of the Tariff.

SCHEDULE 10-RFC
Reliability First Corporation Charge

- a) Reliability-First Corporation (RFC) is one of the Regional ~~Reliability Organizations (RRO)~~ Entities of NERC. Its purpose is to ensure the reliability of the interconnected bulk power system. This schedule will recover RFC's statutory costs of operations as set forth below.
- b) PJM will charge each customer using Network Integration and Point-to-Point Transmission Service under this Tariff each month a charge equal to the RFC Rate times the total quantity in MWhs of energy delivered to load (including losses) that such customer serves in the PJM Region, excluding the Dominion Zone and the ATSI Zone, during such month. The exclusion applicable to the ATSI Zone shall expire on January 1, 2012.
- c) A fixed rate will be charged for the first eleven billing periods of the current year. During the final billing period, a true-up component will be applied to adjust for any under or over collections for the current year.
- d) NERC will submit final estimated costs to be recovered under this Schedule 10-RFC, determinants, and rates to the Transmission Provider no later than September 30th for the next calendar year. The Transmission Provider will post the rates for both components for the next calendar year no later than October 31st of the current year.
- e) The RFCR shall be calculated each year in accordance with the formula:

$$\text{RFCR} = \frac{\text{CYRC}}{\text{PJMRTL}}$$

where:

RFCR is the RFC Rate.

CYRC is the Current Year RFC Charges. These charges are the FERC approved funding for RFC for the year for which RFCR is being calculated. In the final billing for each calendar year a true-up component will be included applying any credit or deficiencies for the current year based on RFC's actual revenues as compared to RFC's FERC approved funding received under the schedule for the current year.

The Transmission Provider's RFC Total Hourly Load (PJMRTL) is the estimated total quantity in MWhs of energy to be delivered to load (including losses) in the PJM Region, less the total quantity in MWhs of energy to be delivered to load (including losses) in the Dominion Zone, under Network Integration and Point-to-Point Transmission Service by all customers during the year for which RFCR is being calculated.

- f) RFC is responsible for pursuing any and all defaults under this Schedule 10-RFC. Thus, the Transmission Provider will not deem any customer in default under the tariff for failure to pay any charges under this Schedule 10-RFC.

ATTACHMENT D

Methodology for Completing a System Impact Study

The Transmission Provider will notify applicants for transmission service of the need to conduct a System Impact Study whenever the Transmission Provider determines that available transmission capability may not be sufficient to provide the requested firm service(s). The purpose of the impact study will be to determine the effect the requested service(s) will have on system operations, identify any system constraints, redispatch options and whether system expansion will be required to provide the requested service(s).

The Commission's comparability standard will be applied in evaluating the impact of all requests. Specifically, the Transmission Provider will use the same due diligence in completing System Impact Studies for any Eligible Customers that it uses when completing studies for any Transmission Owner that requests service from the Transmission Provider.

Requests for long-term firm transmission service will be evaluated, to the extent possible, as a part of the on-going planning process for Bulk Transmission Supply in the PJM Region. Appropriate planning studies will be conducted annually to assess the capability of the PJM Region Transmission System to deliver the planned Network Resources to the Forecasted Network Loads of the existing load serving entities and any prior committed Firm Point-to-Point Service transmission customers. The loads and resources of Eligible Customers requesting new or additional service during the normal planning cycle will be incorporated into this aggregate planning process along with the loads and resources of all other Firm Point-to-Point and load serving entities for which prior commitments to provide service have been made. Requests for long-term firm service made at times that will not permit the evaluation of impacts as part of the normal planning process, and requests for short-term firm service, will require that special impact studies be completed.

The Transmission Provider plans and evaluates the PJM Region Transmission System in strict compliance with the following:

1. North American Electric Reliability Council ("NERC") Reliability Principles and Guides
2. ~~Principles and Standards for Planning the Bulk Electric Systems of Applicable Regional Reliability Councils~~Applicable Standards
3. Transmission planning criteria, methods and procedures described in the "FERC Form No. 715 - Annual Transmission Planning and Evaluation Report" for each Applicable Regional ~~Reliability Council~~Entity.

In evaluating the impact of any request for new or additional service(s), the Transmission Provider will first determine the capability of the system to reliably provide prior committed Network and Point-to-Point service for the term of the requested new or additional service(s), or the normal planning horizon (generally 10 years), whichever is shorter. Requests for new or

additional service(s) will then be incorporated into the system representation data and the appropriate system analyses will be completed to evaluate the impacts of the requested services.

1.3 Definitions.

1.3.1 Acceleration Request.

“Acceleration Request” shall mean a request pursuant to section 1.9.4A of this Schedule to accelerate or reschedule a transmission outage scheduled pursuant to sections 1.9.2 or 1.9.4.

1.3.1A Auction Revenue Rights.

“Auction Revenue Rights” or “ARRs” shall mean the right to receive the revenue from the Financial Transmission Right auction, as further described in Section 7.4 of this Schedule.

1.3.1B Auction Revenue Rights Credits.

“Auction Revenue Rights Credits” shall mean the allocated share of total FTR auction revenues or costs credited to each holder of Auction Revenue Rights, calculated and allocated as specified in Section 7.4.3 of this Schedule.

1.3.1B.01 Batch Load Demand Resource.

“Batch Load Demand Resource” shall mean a Demand Resource that has a cyclical production process such that at most times during the process it is consuming energy, but at consistent regular intervals, ordinarily for periods of less than ten minutes, it reduces its consumption of energy for its production processes to minimal or zero megawatts.

1.3.1B.02 Congestion Price.

“Congestion Price” shall mean the congestion component of the Locational Marginal Price, which is the effect on transmission congestion costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing the consumption by a Demand Resource, based on the effect of increased generation from or consumption by the resource on transmission line loadings, calculated as specified in Section 2 of Schedule 1 of this Agreement.

1.3.1B.03 Curtailment Service Provider.

“Curtailment Service Provider” or “CSP” shall mean a Member or a Special Member, which action on behalf of itself or one or more other Members or non-Members, participates in the PJM Interchange Energy Market, *Ancillary Services markets, and/or Reliability Pricing Model* by causing a reduction in demand.

1.3.1B.04 Day-ahead Congestion Price.

“Day-ahead Congestion Price” shall mean the Congestion Price resulting from the Day-ahead Energy Market.

1.3.1C Day-ahead Energy Market.

“Day-ahead Energy Market” shall mean the schedule of commitments for the purchase or sale of energy and payment of Transmission Congestion Charges developed by the Office of the Interconnection as a result of the offers and specifications submitted in accordance with Section 1.10 of this Schedule.

1.3.1C.01 Day-ahead Loss Price.

“Day-ahead Loss Price” shall mean the Loss Price resulting from the Day-ahead Energy Market.

1.3.1D Day-ahead Prices.

“Day-ahead Prices” shall mean the Locational Marginal Prices resulting from the Day-ahead Energy Market.

1.3.1D.01 Day-ahead Scheduling Reserves.

“Day-ahead Scheduling Reserves” shall mean thirty-minute reserves as defined by the Reliability First Corporation and SERC.

1.3.1D.02 Day-ahead Scheduling Reserves Requirement.

“Day-ahead Scheduling Reserves Requirement” shall mean the thirty-minute reserve requirement for the PJM Region established consistent with ~~Reliability First Corporation and SERC reliability standards, or those of any additional and/or successor regional reliability organization(s) that are responsible for establishing reliability requirements for the PJM Region~~ the Applicable Standards, plus any additional thirty-minute reserves scheduled in response to an RTO-wide Hot or Cold Weather Alert or other reasons for conservative operations.

1.3.1D.03 Day-ahead Scheduling Reserves Resources.

“Day-ahead Scheduling Reserves Resources” shall mean synchronized and non-synchronized generation resources and Demand Resources electrically located within the PJM Region that are capable of providing Day-ahead Scheduling Reserves.

1.3.1D.04 Day-ahead Scheduling Reserves Market.

“Day-ahead Scheduling Reserves Market” shall mean the schedule of commitments for the purchase or sale of Day-ahead Scheduling Reserves developed by the Office of the Interconnection as a result of the offers and specifications submitted in accordance with Section 1.10 of this Schedule.

1.3.1D.05 Day-ahead System Energy Price.

“Day-ahead System Energy Price” shall mean the System Energy Price resulting from the Day-ahead Energy Market.

1.3.1E Decrement Bid.

“Decrement Bid” shall mean a bid to purchase energy at a specified location in the Day-ahead Energy Market. An accepted Decrement Bid results in scheduled load at the specified location in the Day-ahead Energy Market.

1.3.1E.01 Demand Resource.

“Demand Resource” shall mean a resource with the capability to provide a reduction in demand.

1.3.1F Dispatch Rate.

“Dispatch Rate” shall mean the control signal, expressed in dollars per megawatt-hour, calculated and transmitted continuously and dynamically to direct the output level of all generation resources dispatched by the Office of the Interconnection in accordance with the Offer Data.

1.3.1G Energy Storage Resource.

“Energy Storage Resource” shall mean flywheel or battery storage facility solely used for short term storage and injection of energy at a later time to participate in the PJM energy and/or Ancillary Services markets as a Market Seller.

1.3.2 Equivalent Load.

“Equivalent Load” shall mean the sum of a Market Participant’s net system requirements to serve its customer load in the PJM Region, if any, plus its net bilateral transactions.

1.3.2A Economic Load Response Participant.

“Economic Load Response Participant” shall mean a Member or Special Member that qualifies under Section 1.5A of this Schedule to participate in the PJM Interchange Energy Market *and/or Ancillary Services markets* through reductions in demand.

1.3.2A.01 Economic Minimum.

“Economic Minimum” shall mean the lowest incremental MW output level a unit can achieve while following economic dispatch.

1.3.2B Energy Market Opportunity Cost.

“Energy Market Opportunity Cost” shall mean the difference between (a) the forecasted cost to operate a specific generating unit when the unit only has a limited number of available run hours

due to limitations imposed on the unit by Applicable Laws and Regulations (as defined in PJM Tariff), and (b) the forecasted future hourly Locational Marginal Price at which the generating unit could run while not violating such limitations. Energy Market Opportunity Cost therefore is the value associated with a specific generating unit's lost opportunity to produce energy during a higher valued period of time occurring within the same compliance period, which compliance period is determined by the applicable regulatory authority and is reflected in the rules set forth in PJM Manual 15. Energy Market Opportunity Costs shall be limited to those resources which are specifically delineated in Schedule 2 of the Operating Agreement.

1.3.3 External Market Buyer.

"External Market Buyer" shall mean a Market Buyer making purchases of energy from the PJM Interchange Energy Market for consumption by end-users outside the PJM Region, or for load in the PJM Region that is not served by Network Transmission Service.

1.3.4 External Resource.

"External Resource" shall mean a generation resource located outside the metered boundaries of the PJM Region.

1.3.5 Financial Transmission Right.

"Financial Transmission Right" or "FTR" shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2 of this Schedule.

1.3.5A Financial Transmission Right Obligation.

"Financial Transmission Right Obligation" shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2(b) of this Schedule.

1.3.5B Financial Transmission Right Option.

"Financial Transmission Right Option" shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2(c) of this Schedule.

1.3.6 Generating Market Buyer.

"Generating Market Buyer" shall mean an Internal Market Buyer that is a Load Serving Entity that owns or has contractual rights to the output of generation resources capable of serving the Market Buyer's load in the PJM Region, or of selling energy or related services in the PJM Interchange Energy Market or elsewhere.

1.3.7 Generator Forced Outage.

"Generator Forced Outage" shall mean an immediate reduction in output or capacity or removal from service, in whole or in part, of a generating unit by reason of an Emergency or threatened

Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the facility, as specified in the relevant portions of the PJM Manuals. A reduction in output or removal from service of a generating unit in response to changes in market conditions shall not constitute a Generator Forced Outage.

1.3.8 Generator Maintenance Outage.

“Generator Maintenance Outage” shall mean the scheduled removal from service, in whole or in part, of a generating unit in order to perform necessary repairs on specific components of the facility, if removal of the facility meets the guidelines specified in the PJM Manuals.

1.3.9 Generator Planned Outage.

“Generator Planned Outage” shall mean the scheduled removal from service, in whole or in part, of a generating unit for inspection, maintenance or repair with the approval of the Office of the Interconnection in accordance with the PJM Manuals.

1.3.9A Increment Bid.

“Increment Bid” shall mean an offer to sell energy at a specified location in the Day-ahead Energy Market. An accepted Increment Bid results in scheduled generation at the specified location in the Day-ahead Energy Market.

1.3.9B Interface Pricing Point.

“Interface Pricing Point” shall have the meaning specified in section 2.6A.

1.3.10 Internal Market Buyer.

“Internal Market Buyer” shall mean a Market Buyer making purchases of energy from the PJM Interchange Energy Market for ultimate consumption by end-users inside the PJM Region that are served by Network Transmission Service.

1.3.11 Inadvertent Interchange.

“Inadvertent Interchange” shall mean the difference between net actual energy flow and net scheduled energy flow into or out of the individual Control Areas operated by PJM.

1.3.11.01 Load Management.

“Load Management” shall mean either a Demand Resource (“DR”) or an Interruptible Load for Reliability (“ILR”) resource, both as defined in the Reliability Assurance Agreement.

1.3.11A Load Reduction Event.

“Load Reduction Event” shall mean a reduction in demand by a Member or Special Member for the purpose of participating in the PJM Interchange Energy Market.

1.3.11A.01 Location.

“Location” as used in the Economic Load Response rules shall mean an end-use customer site as defined by the relevant electric distribution company account number.

1.3.11B Loss Price.

“Loss Price” shall mean the loss component of the Locational Marginal Price, which is the effect on transmission loss costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing the consumption by a Demand Resource based on the effect of increased generation from or consumption by the resource on transmission losses, calculated as specified in Section 2 of Schedule 1 of this Agreement.

1.3.12 Market Operations Center.

“Market Operations Center” shall mean the equipment, facilities and personnel used by or on behalf of a Market Participant to communicate and coordinate with the Office of the Interconnection in connection with transactions in the PJM Interchange Energy Market or the operation of the PJM Region.

1.3.12A Maximum Emergency.

“Maximum Emergency” shall mean the designation of all or part of the output of a generating unit for which the designated output levels may require extraordinary procedures and therefore are available to the Office of the Interconnection only when the Office of the Interconnection declares a Maximum Generation Emergency and requests generation designated as Maximum Emergency to run. The Office of the Interconnection shall post on the PJM website the aggregate amount of megawatts that are classified as Maximum Emergency.

1.3.13 Maximum Generation Emergency.

“Maximum Generation Emergency” shall mean an Emergency declared by the Office of the Interconnection to address either a generation or transmission emergency in which the Office of the Interconnection anticipates requesting one or more Generation Capacity Resources, or Non-Retail Behind The Meter Generation resources to operate at its maximum net or gross electrical power output, subject to the equipment stress limits for such Generation Capacity Resource or Non-Retail Behind The Meter resource in order to manage, alleviate, or end the Emergency.

1.3.14 Minimum Generation Emergency.

“Minimum Generation Emergency” shall mean an Emergency declared by the Office of the Interconnection in which the Office of the Interconnection anticipates requesting one or more

generating resources to operate at or below Normal Minimum Generation, in order to manage, alleviate, or end the Emergency.

1.3.14A NERC Interchange Distribution Calculator.

“NERC Interchange Distribution Calculator” shall mean the NERC mechanism that is in effect and being used to calculate the distribution of energy, over specific transmission interfaces, from energy transactions.

1.3.14B Net Benefits Test.

“Net Benefits Test” shall mean a calculation to determine whether the benefits of a reduction in price resulting from the dispatch of Economic Load Response exceeds the cost to other loads resulting from the billing unit effects of the load reduction, as specified in Section 3.3A.4 of this Schedule.

1.3.15 Network Resource.

“Network Resource” shall have the meaning specified in the PJM Tariff.

1.3.16 Network Service User.

“Network Service User” shall mean an entity using Network Transmission Service.

1.3.17 Network Transmission Service.

“Network Transmission Service” shall mean transmission service provided pursuant to the rates, terms and conditions set forth in Part III of the PJM Tariff, or transmission service comparable to such service that is provided to a Load Serving Entity that is also a Transmission Owner.

1.3.17A Non-Regulatory Opportunity Cost.

“Non-Regulatory Opportunity Cost” shall mean the difference between (a) the forecasted cost to operate a specific generating unit when the unit only has a limited number of starts or available run hours resulting from (i) the physical equipment limitations of the unit, for up to one year, due to original equipment manufacturer recommendations or insurance carrier restrictions, (ii) a fuel supply limitation, for up to one year, resulting from an event of force majeure; and, (b) the forecasted future hourly Locational Marginal Price at which the generating unit could run while not violating such limitations. Non-Regulatory Opportunity Cost therefore is the value associated with a specific generating unit’s lost opportunity to produce energy during a higher valued period of time occurring within the same period of time in which the unit is bound by the referenced restrictions, and is reflected in the rules set forth in PJM Manual 15. Non-Regulatory Opportunity Costs shall be limited to those resources which are specifically delineated in Schedule 2 of the Operating Agreement.

1.3.17B Non-Variable Loads.

“Non-Variable Loads” shall have the meaning specified in section 1.5A.6 of this Schedule.

1.3.18 Normal Maximum Generation.

“Normal Maximum Generation” shall mean the highest output level of a generating resource under normal operating conditions.

1.3.19 Normal Minimum Generation.

“Normal Minimum Generation” shall mean the lowest output level of a generating resource under normal operating conditions.

1.3.20 Offer Data.

“Offer Data” shall mean the scheduling, operations planning, dispatch, new resource, and other data and information necessary to schedule and dispatch generation resources and Demand Resource(s) for the provision of energy and other services and the maintenance of the reliability and security of the transmission system in the PJM Region, and specified for submission to the PJM Interchange Energy Market for such purposes by the Office of the Interconnection.

1.3.21 Office of the Interconnection Control Center.

“Office of the Interconnection Control Center” shall mean the equipment, facilities and personnel used by the Office of the Interconnection to coordinate and direct the operation of the PJM Region and to administer the PJM Interchange Energy Market, including facilities and equipment used to communicate and coordinate with the Market Participants in connection with transactions in the PJM Interchange Energy Market or the operation of the PJM Region.

1.3.21A On-Site Generators.

“On-Site Generators” shall mean generation facilities (including Behind The Meter Generation) that (i) are not Capacity Resources, (ii) are not injecting into the grid, (iii) are either synchronized or non-synchronized to the Transmission System, and (iv) can be used to reduce demand for the purpose of participating in the PJM Interchange Energy Market.

1.3.22 Operating Day.

“Operating Day” shall mean the daily 24 hour period beginning at midnight for which transactions on the PJM Interchange Energy Market are scheduled.

1.3.23 Operating Margin.

“Operating Margin” shall mean the incremental adjustments, measured in megawatts, required in PJM Region operations in order to accommodate, on a first contingency basis, an operating contingency in the PJM Region resulting from operations in an interconnected Control Area.

Such adjustments may result in constraints causing Transmission Congestion Charges, or may result in Ancillary Services charges pursuant to the PJM Tariff.

1.3.24 Operating Margin Customer.

“Operating Margin Customer” shall mean a Control Area purchasing Operating Margin pursuant to an agreement between such other Control Area and the LLC.

1.3.25 PJM Interchange.

“PJM Interchange” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load exceeds, or is exceeded by, the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup; or (c) the hourly scheduled deliveries of Spot Market Energy by a Market Seller from an External Resource; or (d) the hourly net metered output of any other Market Seller; or (e) the hourly scheduled deliveries of Spot Market Energy to an External Market Buyer; or (f) the hourly scheduled deliveries to an Internal Market Buyer that is not a Network Service User.

1.3.26 PJM Interchange Export.

“PJM Interchange Export” shall mean the following, as determined in accordance with Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load is exceeded by the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup sales; or (c) the hourly scheduled deliveries of Spot Market Energy by a Market Seller from an External Resource; or (d) the hourly net metered output of any other Market Seller.

1.3.27 PJM Interchange Import.

“PJM Interchange Import” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load exceeds the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup purchases; or (c) the hourly scheduled deliveries of Spot Market Energy to an External Market Buyer; or (d) the hourly scheduled deliveries to an Internal Market Buyer that is not a Network Service User.

1.3.28 PJM Open Access Same-time Information System.

“PJM Open Access Same-time Information System” shall mean the electronic communication system for the collection and dissemination of information about transmission services in the PJM Region, established and operated by the Office of the Interconnection in accordance with FERC standards and requirements.

1.3.28A Planning Period Quarter.

“Planning Period Quarter” shall mean any of the following three month periods in the Planning Period: June, July and August; September, October and November; December, January and February; or, March, April and May.

1.3.28B Planning Period Balance.

“Planning Period Balance” shall mean the entire period of time remaining in the Planning Period following the month that a monthly auction is conducted.

1.3.29 Point-to-Point Transmission Service.

“Point-to-Point Transmission Service” shall mean transmission service provided pursuant to the rates, terms and conditions set forth in Part II of the PJM Tariff.

1.3.29A PRD Curve

PRD Curve shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29B PRD Provider

PRD Provider shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29C PRD Reservation Price

PRD Reservation Price shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29D PRD Substation

PRD Substation shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29E Price Responsive Demand

Price Responsive Demand shall have the meaning provided in the Reliability Assurance Agreement.

1.3.30 Ramping Capability.

“Ramping Capability” shall mean the sustained rate of change of generator output, in megawatts per minute.

1.3.30.01 Real-time Congestion Price.

“Real-time Congestion Price” shall mean the Congestion Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.30.02 Real-time Loss Price.

“Real-time Loss Price” shall mean the Loss Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.30A Real-time Prices.

“Real-time Prices” shall mean the Locational Marginal Prices resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.30B Real-time Energy Market.

“Real-time Energy Market” shall mean the purchase or sale of energy and payment of Transmission Congestion Charges for quantity deviations from the Day-ahead Energy Market in the Operating Day.

1.3.30B.01 Real-time System Energy Price.

“Real-time System Energy Price” shall mean the System Energy Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.31 Regulation.

“Regulation” shall mean the capability of a specific generation resource or Demand Resource with appropriate telecommunications, control and response capability to increase or decrease its output or adjust load in response to a regulating control signal, in accordance with the specifications in the PJM Manuals.

1.3.31.01 Residual Auction Revenue Rights.

“Residual Auction Revenue Rights” shall mean incremental stage 1 Auction Revenue Rights created within a Planning Period by an increase in transmission system capability or a change in any other relevant factor that was not modeled pursuant to section 7.5 of Schedule 1 of this Agreement in compliance with section 7.4.2 (h) of Schedule 1 of this Agreement, and, if modeled, would have increased the amount of stage 1 Auction Revenue Rights allocated pursuant to section 7.4.2 of Schedule 1 of this Agreement; provided that, the foregoing notwithstanding, Residual Auction Revenue Rights shall exclude: 1) Incremental Auction Revenue Rights allocated pursuant to Part VI of the Tariff; and 2) Auction Revenue Rights allocated to entities that are assigned cost responsibility pursuant to Schedule 6 of this Agreement for transmission upgrades that create such rights.

1.3.31.02 Special Member.

“Special Member” shall mean an entity that satisfies the requirements of Section 1.5A.02 of this Schedule or the special membership provisions established under the Emergency Load Response Program.

1.3.31A [Reserved]

1.3.31B [Reserved]

1.3.32 Spot Market Backup.

“Spot Market Backup” shall mean the purchase of energy from, or the delivery of energy to, the PJM Interchange Energy Market in quantities sufficient to complete the delivery or receipt obligations of a bilateral contract that has been curtailed or interrupted for any reason.

1.3.33 Spot Market Energy.

“Spot Market Energy” shall mean energy bought or sold by Market Participants through the PJM Interchange Energy Market at System Energy Prices determined as specified in Section 2 of this Schedule.

1.3.33A State Estimator.

“State Estimator” shall mean the computer model of power flows specified in Section 2.3 of this Schedule.

1.3.33B Station Power.

“Station Power” shall mean energy used for operating the electric equipment on the site of a generation facility located in the PJM Region or for the heating, lighting, air-conditioning and office equipment needs of buildings on the site of such a generation facility that are used in the operation, maintenance, or repair of the facility. Station Power does not include any energy (i) used to power synchronous condensers; (ii) used for pumping at a pumped storage facility; (iii) used for compressors at a compressed air energy storage facility; (iv) used for charging an Energy Storage Resource; or (v) used in association with restoration or black start service.

1.3.33B.001 Sub-meter.

“Sub-meter” shall mean a metering point for electricity consumption that does not include all electricity consumption for the end-use customer as defined by the electric distribution company account number. PJM shall only accept sub-meter load data from end-use customers for measurement and verification of Regulation service as set forth in the Economic Load Response rules and PJM Manuals.

1.3.33B.01 Synchronized Reserve.

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

1.3.33B.02 Synchronized Reserve Event.

“Synchronized Reserve Event” shall mean a request from the Office of the Interconnection to generation resources and/or Demand Resources able, assigned or self-scheduled, to provide Synchronized Reserve within ten minutes, to increase the energy output or reduce load by the amount of assigned or self-scheduled Synchronized Reserve capability.

1.3.33B.03 System Energy Price.

“System Energy Price” shall mean the energy component of the Locational Marginal Price, which is the price at which the Market Seller has offered to supply an additional increment of energy from a resource, calculated as specified in Section 2 of Schedule 1 of this Agreement.

1.3.33C Target Allocation.

“Target Allocation” shall mean the allocation of Transmission Congestion Credits as set forth in Section 5.2.3 of this Schedule or the allocation of Auction Revenue Rights Credits as set forth in Section 7.4.3 of this Schedule.

1.3.34 Transmission Congestion Charge.

“Transmission Congestion Charge” shall mean a charge attributable to the increased cost of energy delivered at a given load bus when the transmission system serving that load bus is operating under constrained conditions, or as necessary to provide energy for third-party transmission losses in accordance with Section 9.3, which shall be calculated and allocated as specified in Section 5.1 of this Schedule.

1.3.35 Transmission Congestion Credit.

“Transmission Congestion Credit” shall mean the allocated share of total Transmission Congestion Charges credited to each holder of Financial Transmission Rights, calculated and allocated as specified in Section 5.2 of this Schedule.

1.3.36 Transmission Customer.

“Transmission Customer” shall mean an entity using Point-to-Point Transmission Service.

1.3.37 Transmission Forced Outage.

“Transmission Forced Outage” shall mean an immediate removal from service of a transmission facility by reason of an Emergency or threatened Emergency, unanticipated failure, or other

cause beyond the control of the owner or operator of the transmission facility, as specified in the relevant portions of the PJM Manuals. A removal from service of a transmission facility at the request of the Office of the Interconnection to improve transmission capability shall not constitute a Forced Transmission Outage.

1.3.37A Transmission Loading Relief.

“Transmission Loading Relief” shall mean NERC’s procedures for preventing operating security limit violations, as implemented by PJM as the security coordinator responsible for maintaining transmission security for the PJM Region.

1.3.37B Transmission Loading Relief Customer.

“Transmission Loading Relief Customer” shall mean an entity that, in accordance with Section 1.10.6A, has elected to pay Transmission Congestion Charges during Transmission Loading Relief in order to continue energy schedules over contract paths outside the PJM Region that are increasing the cost of energy in the PJM Region.

1.3.37C Transmission Loss Charge.

“Transmission Loss Charge” shall mean the charges to each Market Participant, Network Customer, or Transmission Customer for the cost of energy lost in the transmission of electricity from a generation resource to load as specified in Section 5 of this Schedule.

1.3.38 Transmission Planned Outage.

“Transmission Planned Outage” shall mean any transmission outage scheduled in advance for a pre-determined duration and which meets the notification requirements for such outages specified in this Agreement or the PJM Manuals.

1.3.38A Variable Loads.

“Variable Loads” shall have the meaning specified in section 1.5A.6 of this Schedule.

1.3.39 Zonal Base Load.

“Zonal Base Load” shall mean the lowest daily zonal peak load from the twelve month period ending October 21 of the calendar year immediately preceding the calendar year in which an annual Auction Revenue Right allocation is conducted, increased by the projected load growth rate for the relevant Zone.

1.6 Office of the Interconnection.

1.6.1 Operation of the PJM Interchange Energy Market.

The Office of the Interconnection shall operate the PJM Interchange Energy Market in accordance with this Agreement.

1.6.2 Scope of Services.

The Office of the Interconnection shall perform the services pertaining to the PJM Interchange Energy Market specified in this Agreement, including but not limited to the following:

- i) Administer the PJM Interchange Energy Market as part of the PJM Region, including scheduling and dispatching of generation resources, accounting for transactions, maintaining appropriate records, and monitoring the compliance of Market Participants with the provisions of this Agreement, all in accordance with applicable provisions of the Operating Agreement, and the Schedules to this Agreement;
- ii) Review and evaluate the qualification of entities to be Market Buyers, Market Sellers, or Economic Load Response Participants under applicable provisions of this Agreement;
- iii) Coordinate, in accordance with applicable provisions of this Agreement, the Reliability Assurance Agreement, and the Consolidated Transmission Owners Agreement, maintenance schedules for generation and transmission resources operated as part of the PJM Region;
- iv) Provide or coordinate the provision of ancillary services necessary for the operation of the PJM Region or the PJM Interchange Energy Market;
- v) Determine and declare that an Emergency is expected to exist, exists, or has ceased to exist, in all or any part of the PJM Region, or in another directly or indirectly interconnected Control Area and serve as a primary point of contact for interested state or federal agencies;
- vi) Administer (a) agreements for the transfer of energy in conditions constituting an Emergency in the PJM Region or in an interconnected Control Area, and the mutual provision of other support in such Emergency conditions with other interconnected Control Areas, and (b) purchases of Emergency energy offered by Members from resources that are not Capacity Resources in conditions constituting an Emergency in the PJM Region;
- vii) Coordinate the curtailment or shedding of load, or other measures appropriate to alleviate an Emergency, in order to preserve reliability in accordance with NERC, or Applicable Regional [Reliability Council Entity](#) principles, guidelines and standards, and to ensure the operation of the PJM Region in accordance with Good Utility Practice and this Agreement;
- viii) Protect confidential information as specified in this Agreement; and

ix) Send a representative to meetings of the Members Committee or other Committees, subcommittees, or working groups specified in this Agreement or formed by the Members Committee when requested to do so by the chair or other head of such committee or other group.

1.6.3 Records and Reports.

The Office of the Interconnection shall prepare and maintain such records and prepare such reports, including, but not limited to quarterly budget reports, as are required to document the performance of its obligations to the Market Participants hereunder in a form adopted by the Office of the Interconnection upon consideration of the advice and recommendations of the Members Committee. The Office of the Interconnection shall also produce special reports reasonably requested by the Members Committee and consistent with FERC's standards of conduct; provided, however, the Market Participants shall reimburse the Office of the Interconnection for the costs of producing any such report. Notwithstanding the foregoing, the Office of the Interconnection shall not be required to disclose confidential or commercially sensitive information in any such report.

1.6.4 PJM Manuals.

The Office of the Interconnection shall prepare, maintain and update the PJM Manuals consistent with this Agreement. The PJM Manuals shall be available for inspection by the Market Participants, regulatory authorities with jurisdiction over the LLC or any Member, and the public.

1.7 General.

1.7.1 Market Sellers.

Only Market Sellers shall be eligible to submit offers to the Office of the Interconnection for the sale of electric energy or related services in the PJM Interchange Energy Market. Market Sellers shall comply with the prices, terms, and operating characteristics of all Offer Data submitted to and accepted by the PJM Interchange Energy Market.

1.7.2 Market Buyers.

Only Market Buyers shall be eligible to purchase energy or related services in the PJM Interchange Energy Market. Market Buyers shall comply with all requirements for making purchases from the PJM Interchange Energy Market.

1.7.2A Economic Load Response Participants.

Only Economic Load Response Participants shall be eligible to participate in the Real-time Energy Market and the Day-ahead Energy Market by submitting offers to the Office of the Interconnection to reduce demand.

1.7.3 Agents.

A Market Participant may participate in the PJM Interchange Energy Market through an agent, provided that the Market Participant informs the Office of the Interconnection in advance in writing of the appointment of such agent. A Market Participant participating in the PJM Interchange Energy Market through an agent shall be bound by all of the acts or representations of such agent with respect to transactions in the PJM Interchange Energy Market, and shall ensure that any such agent complies with the requirements of this Agreement.

1.7.4 General Obligations of the Market Participants.

(a) In performing its obligations to the Office of the Interconnection hereunder, each Market Participant shall at all times (i) follow Good Utility Practice, (ii) comply with all applicable laws and regulations, (iii) comply with the applicable principles, guidelines, standards and requirements of FERC, NERC and [each Applicable Regional Reliability Councils Applicable Regional Entity](#), (iv) comply with the procedures established for operation of the PJM Interchange Energy Market and PJM Region and (v) cooperate with the Office of the Interconnection as necessary for the operation of the PJM Region in a safe, reliable manner consistent with Good Utility Practice.

(b) Market Participants shall undertake all operations in or affecting the PJM Interchange Energy Market and the PJM Region including but not limited to compliance with all Emergency procedures, in accordance with the power and authority of the Office of the Interconnection with respect to the operation of the PJM Interchange Energy Market and the PJM Region as established in this Agreement, and as specified in the Schedules to this

Agreement and the PJM Manuals. Failure to comply with the foregoing operational requirements shall subject a Market Participant to such reasonable charges or other remedies or sanctions for non-compliance as may be established by the PJM Board, including legal or regulatory proceedings as authorized by the PJM Board to enforce the obligations of this Agreement.

(c) The Office of the Interconnection may establish such committees with a representative of each Market Participant, and the Market Participants agree to provide appropriately qualified personnel for such committees, as may be necessary for the Office of the Interconnection and PJMSettlement to perform its obligations hereunder.

(d) All Market Participants shall provide to the Office of the Interconnection the scheduling and other information specified in the Schedules to this Agreement, and such other information as the Office of the Interconnection may reasonably require for the reliable and efficient operation of the PJM Region and PJM Interchange Energy Market, and for compliance with applicable regulatory requirements for posting market and related information. Such information shall be provided as much in advance as possible, but in no event later than the deadlines established by the Schedules to this Agreement, or by the Office of the Interconnection in conformance with such Schedules. Such information shall include, but not be limited to, maintenance and other anticipated outages of generation or transmission facilities, scheduling and related information on bilateral transactions and self-scheduled resources, and implementation of active load management, interruption of load, Price Responsive Demand, and other load reduction measures. The Office of the Interconnection shall abide by appropriate requirements for the non-disclosure and protection of any confidential or proprietary information given to the Office of the Interconnection by a Market Participant. Each Market Participant shall maintain or cause to be maintained compatible information and communications systems, as specified by the Office of the Interconnection, required to transmit scheduling, dispatch, or other time-sensitive information to the Office of the Interconnection in a timely manner.

(e) Subject to the requirements for Economic Load Response Participants in section 1.5A above, each Market Participant shall install and operate, or shall otherwise arrange for, metering and related equipment capable of recording and transmitting all voice and data communications reasonably necessary for the Office of the Interconnection and PJMSettlement to perform the services specified in this Agreement. A Market Participant that elects to be separately billed for its PJM Interchange shall, to the extent necessary, be individually metered in accordance with Section 14 of this Agreement, or shall agree upon an allocation of PJM Interchange between it and the Market Participant through whose meters the unmetered Market Participant's PJM Interchange is delivered. The Office of the Interconnection shall be notified of the allocation by the foregoing Market Participants.

(f) Each Market Participant shall operate, or shall cause to be operated, any generating resources owned or controlled by such Market Participant that are within the PJM Region or otherwise supplying energy to or through the PJM Region in a manner that is consistent with the standards, requirements or directions of the Office of the Interconnection and that will permit the Office of the Interconnection to perform its obligations under this

Agreement; provided, however, no Market Participant shall be required to take any action that is inconsistent with Good Utility Practice or applicable law.

(g) Each Market Participant shall follow the directions of the Office of the Interconnection to take actions to prevent, manage, alleviate or end an Emergency in a manner consistent with this Agreement and the procedures of the PJM Region as specified in the PJM Manuals.

(h) Each Market Participant shall obtain and maintain all permits, licenses or approvals required for the Market Participant to participate in the PJM Interchange Energy Market in the manner contemplated by this Agreement.

(i) Consistent with Section 36.1.1 of the PJM Tariff, to the extent its generating facility is dispatchable, a Market Participant shall submit an Economic Minimum in the Real-time Energy Market that is no greater than the higher of its physical operating minimum or its Capacity Interconnection Rights, as that term is defined in the PJM Tariff, associated with such generating facility under its Interconnection Service Agreement under Attachment O of the PJM Tariff or a wholesale market participation agreement.

1.7.5 Market Operations Center.

Each Market Participant shall maintain a Market Operations Center, or shall make appropriate arrangements for the performance of such services on its behalf. A Market Operations Center shall meet the performance, equipment, communications, staffing and training standards and requirements specified in this Agreement for the scheduling and completion of transactions in the PJM Interchange Energy Market and the maintenance of the reliable operation of the PJM Region, and shall be sufficient to enable (i) a Market Seller or an Economic Load Response Participant to perform all terms and conditions of its offers to the PJM Interchange Energy Market, and (ii) a Market Buyer or an Economic Load Response Participant to conform to the requirements for purchasing from the PJM Interchange Energy Market.

1.7.6 Scheduling and Dispatching.

(a) The Office of the Interconnection shall schedule and dispatch in real-time generation resources and/or Demand Resources economically on the basis of least-cost, security-constrained dispatch and the prices and operating characteristics offered by Market Sellers, continuing until sufficient generation resources and/or Demand Resources are dispatched to serve the PJM Interchange Energy Market energy purchase requirements under normal system conditions of the Market Buyers (taking into account any reductions to such requirements in accordance with PRD Curves properly submitted by PRD Providers), as well as the requirements of the PJM Region for ancillary services provided by generation resources and/or Demand Resources, in accordance with this Agreement. Such scheduling and dispatch shall recognize transmission constraints on coordinated flowgates external to the Transmission System in accordance with Appendix A to the Joint Operating Agreement between the Midwest Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. (PJM Rate

Schedule FERC No. 38) and on other such flowgates that are coordinated in accordance with agreements between the LLC and other entities. Scheduling and dispatch shall be conducted in accordance with this Agreement.

(b) The Office of the Interconnection shall undertake to identify any conflict or incompatibility between the scheduling or other deadlines or specifications applicable to the PJM Interchange Energy Market, and any relevant procedures of another Control Area, or any tariff (including the PJM Tariff). Upon determining that any such conflict or incompatibility exists, the Office of the Interconnection shall propose tariff or procedural changes, and undertake such other efforts as may be appropriate, to resolve any such conflict or incompatibility.

(c) To protect its generation or distribution facilities, or local Transmission Facilities not under the monitoring responsibility and dispatch control of the Office of the Interconnection, an entity may request that the Office of the Interconnection schedule and dispatch generation or reductions in demand to meet a limit on Transmission Facilities different from that which the Office of the Interconnection has determined to be required for reliable operation of the Transmission System. To the extent consistent with its other obligations under this Agreement, the Office of the Interconnection shall schedule and dispatch generation and reductions in demand in accordance with such request. An entity that makes a request pursuant to this section 1.7.6(c) shall be responsible for all generation and other costs resulting from its request that would not have been incurred by operating the Transmission System and scheduling and dispatching generation in the manner that the Office of the Interconnection otherwise has determined to be required for reliable operation of the Transmission System.

1.7.7 Pricing.

The price paid for energy bought and sold in the PJM Interchange Energy Market and for demand reductions will reflect the hourly Locational Marginal Price at each load and generation bus, determined by the Office of the Interconnection in accordance with this Agreement. Transmission Congestion Charges and Transmission Loss Charges, which shall be determined by differences in Congestion Prices and Loss Prices in an hour, shall be calculated by the Office of the Interconnection, and collected by PJMSettlement, and the revenues therefrom shall be disbursed by PJMSettlement in accordance with this Schedule.

1.7.8 Generating Market Buyer Resources.

A Generating Market Buyer may elect to self-schedule its generation resources up to that Generating Market Buyer's Equivalent Load, in accordance with and subject to the procedures specified in this Schedule, and the accounting and billing requirements specified in Section 3 to this Schedule. PJMSettlement shall not be a contracting party with respect to such self-scheduled or self-supplied transactions.

1.7.9 Delivery to an External Market Buyer.

A purchase of Spot Market Energy by an External Market Buyer shall be delivered to a bus or busses at the electrical boundaries of the PJM Region specified by the Office of the

Interconnection, or to load in such area that is not served by Network Transmission Service, using Point-to-Point Transmission Service paid for by the External Market Buyer. Further delivery of such energy shall be the responsibility of the External Market Buyer.

1.7.10 Other Transactions.

(a) **Bilateral Transactions.**

(i) In addition to transactions in the PJM Interchange Energy Market, Market Participants may enter into bilateral contracts for the purchase or sale of electric energy to or from each other or any other entity, subject to the obligations of Market Participants to make Generation Capacity Resources available for dispatch by the Office of the Interconnection. Such bilateral contracts shall be for the physical transfer of energy to or from a Market Participant and shall be reported to and coordinated with the Office of the Interconnection in accordance with this Schedule and pursuant to the LLC's rules relating to its eSchedules and Enhanced Energy Scheduler tools.

(ii) For purposes of clarity, with respect to all bilateral contracts for the physical transfer of energy to a Market Participant inside the PJM Region, title to the energy that is the subject of the bilateral contract shall pass to the buyer at the source specified for the bilateral contract, and the further transmission of the energy or further sale of the energy into the PJM Interchange Energy Market shall be transacted by the buyer under the bilateral contract. With respect to all bilateral contracts for the physical transfer of energy to an entity outside the PJM Region, title to the energy shall pass to the buyer at the border of the PJM Region and shall be delivered to the border using transmission service. In no event shall the purchase and sale of energy between Market Participants under a bilateral contract constitute a transaction in the PJM Interchange Energy Market or be construed to define PJMSettlement as a contracting party to any bilateral transactions between Market Participants.

(iii) Market Participants that are parties to bilateral contracts for the purchase and sale and physical transfer of energy reported to and coordinated with the Office of the Interconnection under this Schedule shall use all reasonable efforts, consistent with Good Utility Practice, to limit the megawatt hours of such reported transactions to amounts reflecting the expected load and other physical delivery obligations of the buyer under the bilateral contract.

(iv) All payments and related charges for the energy associated with a bilateral contract shall be arranged between the parties to the bilateral contract and shall not be billed or settled by the Office of the Interconnection or PJMSettlement. The LLC, PJMSettlement, and the Members will not assume financial responsibility for the failure of a party to perform obligations owed to the other party under a bilateral contract reported and coordinated with the Office of the Interconnection under this Schedule.

(v) A buyer under a bilateral contract shall guarantee and indemnify the LLC, PJMSettlement, and the Members for the costs of any Spot Market Backup used to meet

the bilateral contract seller's obligation to deliver energy under the bilateral contract and for which payment is not made to PJMSettlement by the seller under the bilateral contract, as determined by the Office of the Interconnection. Upon any default in obligations to the LLC or PJMSettlement by a Market Participant, the Office of the Interconnection shall (i) not accept any new eSchedules or Enhanced Energy Scheduler reporting by the Market Participant and (ii) terminate all of the Market Participant's eSchedules and Enhanced Energy Schedules associated with its bilateral contracts previously reported to the Office of the Interconnection for all days where delivery has not yet occurred. All claims regarding a buyer's default to a seller under a bilateral contract shall be resolved solely between the buyer and the seller. In such circumstances, the seller may instruct the Office of the Interconnection to terminate all of the eSchedules and Enhanced Energy Schedules associated with bilateral contracts between buyer and seller previously reported to the Office of the Interconnection. PJMSettlement shall assign its claims against a seller with respect to a seller's nonpayment for Spot Market Backup to a buyer to the extent that the buyer has made an indemnification payment to PJMSettlement with respect to the seller's nonpayment.

(vi) Bilateral contracts that do not contemplate the physical transfer of energy to or from a Market Participant are not subject to this Schedule, shall not be reported to and coordinated with the Office of the Interconnection, and shall not in any way constitute a transaction in the PJM Interchange Energy Market.

(b) Market Participants shall have Spot Market Backup with respect to all bilateral transactions that contemplate the physical transfer of energy to or from a Market Participant, that are not dynamically scheduled pursuant to Section 1.12 and that are curtailed or interrupted for any reason (except for curtailments or interruptions through active load management for load located within the PJM Region).

(c) To the extent the Office of the Interconnection dispatches a Generating Market Buyer's generation resources, such Generating Market Buyer may elect to net the output of such resources against its hourly Equivalent Load. Such a Generating Market Buyer shall be deemed a buyer from the PJM Interchange Energy Market to the extent of its PJM Interchange Imports, and shall be deemed a seller to the PJM Interchange Energy Market to the extent of its PJM Interchange Exports.

(d) A Market Seller may self-supply Station Power for its generation facility in accordance with the following provisions:

(i) A Market Seller may self-supply Station Power for its generation facility during any month (1) when the net output of such facility is positive, or (2) when the net output of such facility is negative and the Market Seller during the same month has available at other of its generation facilities positive net output in an amount at least sufficient to offset fully such negative net output. For purposes of this subsection (d), "net output" of a generation facility during any month means the facility's gross energy output, less the Station Power requirements of such facility, during that month. The determination of a generation facility's or a Market Seller's monthly net output under this

subsection (d) will apply only to determine whether the Market Seller self-supplied Station Power during the month and will not affect the price of energy sold or consumed by the Market Seller at any bus during any hour during the month. For each hour when a Market Seller has positive net output and delivers energy into the Transmission System, it will be paid the LMP at its bus for that hour for all of the energy delivered. Conversely, for each hour when a Market Seller has negative net output and has received Station Power from the Transmission System, it will pay the LMP at its bus for that hour for all of the energy consumed.

(ii) Transmission Provider will determine the extent to which each affected Market Seller during the month self-supplied its Station Power requirements or obtained Station Power from third-party providers (including affiliates) and will incorporate that determination in its accounting and billing for the month. In the event that a Market Seller self-supplies Station Power during any month in the manner described in subsection (1) of subsection (d)(i) above, Market Seller will not use, and will not incur any charges for, transmission service. In the event, and to the extent, that a Market Seller self-supplies Station Power during any month in the manner described in subsection (2) of subsection (d)(i) above (hereafter referred to as “remote self-supply of Station Power”), Market Seller shall use and pay for transmission service for the transmission of energy in an amount equal to the facility’s negative net output from Market Seller’s generation facility(ies) having positive net output. Unless the Market Seller makes other arrangements with Transmission Provider in advance, such transmission service shall be provided under Part II of the PJM Tariff and shall be charged the hourly rate under Schedule 8 of the PJM Tariff for Non-Firm Point-to-Point Transmission Service with an election to pay congestion charges, provided, however, that no reservation shall be necessary for such transmission service and the terms and charges under Schedules 1, 1A, 2 through 6, 9 and 10 of the PJM Tariff shall not apply to such service. The amount of energy that a Market Seller transmits in conjunction with remote self-supply of Station Power will not be affected by any other sales, purchases, or transmission of capacity or energy by or for such Market Seller under any other provisions of the PJM Tariff.

(iii) A Market Seller may self-supply Station Power from its generation facilities located outside of the PJM Region during any month only if such generation facilities in fact run during such month and Market Seller separately has reserved transmission service and scheduled delivery of the energy from such resource in advance into the PJM Region.

1.7.11 Emergencies.

(a) The Office of the Interconnection, with the assistance of the Members’ dispatchers as it may request, shall be responsible for monitoring the operation of the PJM Region, for declaring the existence of an Emergency, and for directing the operations of Market Participants as necessary to manage, alleviate or end an Emergency. The standards, policies and procedures of the Office of the Interconnection for declaring the existence of an Emergency, including but not limited to a Minimum Generation Emergency, and for managing, alleviating or ending an Emergency, shall apply to all Members on a non-discriminatory basis. Actions by the

Office of the Interconnection and the Market Participants shall be carried out in accordance with this Agreement, the NERC Operating Policies, Applicable Regional [Reliability Council Entity](#) reliability principles and standards, Good Utility Practice, and the PJM Manuals. A declaration that an Emergency exists or is likely to exist by the Office of the Interconnection shall be binding on all Market Participants until the Office of the Interconnection announces that the actual or threatened Emergency no longer exists. Consistent with existing contracts, all Market Participants shall comply with all directions from the Office of the Interconnection for the purpose of managing, alleviating or ending an Emergency. The Market Participants shall authorize the Office of the Interconnection and PJM Settlement to purchase or sell energy on their behalf to meet an Emergency, and otherwise to implement agreements with other Control Areas interconnected with the PJM Region for the mutual provision of service to meet an Emergency, in accordance with this Agreement.

(b) To the extent load must be shed to alleviate an Emergency in a Control Zone, the Office of the Interconnection shall, to the maximum extent practicable, direct the shedding of load within such Control Zone. The Office of the Interconnection may shed load in one Control Zone to alleviate an Emergency in another Control Zone under its control only as necessary after having first shed load to the maximum extent practicable in the Control Zone experiencing the Emergency and only to the extent that PJM supports other control areas (not under its control) in those situations where load shedding would be necessary, such as to prevent isolation of facilities within the Eastern Interconnection, to prevent voltage collapse, or to restore system frequency following a system collapse; provided, however, that the Office of the Interconnection may not order a manual load dump in a Control Zone solely to address capacity deficiencies in another Control Zone. This section shall be implemented consistent with the North American Electric Reliability Council and applicable reliability council standards.

1.7.12 Fees and Charges.

Each Market Participant, except for Special Members, shall pay all fees and charges of the Office of the Interconnection for operation of the PJM Interchange Energy Market as determined by and allocated to the Market Participant by the Office of the Interconnection in accordance with Schedule 3.

1.7.13 Relationship to the PJM Region.

The PJM Interchange Energy Market operates within and subject to the requirements for the operation of the PJM Region.

1.7.14 PJM Manuals.

The Office of the Interconnection shall be responsible for maintaining, updating, and promulgating the PJM Manuals as they relate to the operation of the PJM Interchange Energy Market. The PJM Manuals, as they relate to the operation of the PJM Interchange Energy Market, shall conform and comply with this Agreement, NERC operating policies, and Applicable Regional [Reliability Council Entity](#) reliability principles, guidelines and standards,

and shall be designed to facilitate administration of an efficient energy market within industry reliability standards and the physical capabilities of the PJM Region.

1.7.15 Corrective Action.

Consistent with Good Utility Practice, the Office of the Interconnection shall be authorized to direct or coordinate corrective action, whether or not specified in the PJM Manuals, as necessary to alleviate unusual conditions that threaten the integrity or reliability of the PJM Region, or the regional power system.

1.7.16 Recording.

Subject to the requirements of applicable State or federal law, all voice communications with the Office of the Interconnection Control Center may be recorded by the Office of the Interconnection and any Market Participant communicating with the Office of the Interconnection Control Center, and each Market Participant hereby consents to such recording.

1.7.17 Operating Reserves.

(a) The following procedures shall apply to any generation unit subject to the dispatch of the Office of the Interconnection for which construction commenced before July 9, 1996, or any Demand Resource subject to the dispatch of the Office of the Interconnection.

(b) The Office of the Interconnection shall schedule to the Operating Reserve and load-following objectives of the Control Zones of the PJM Region and the PJM Interchange Energy Market in scheduling generation resources and/or Demand Resources pursuant to this Schedule. A table of Operating Reserve objectives for each Control Zone is calculated and published annually in the PJM Manuals. Reserve levels are probabilistically determined based on the season's historical load forecasting error and forced outage rates.

(c) Nuclear generation resources shall not be eligible for Operating Reserve payments unless: 1) the Office of the Interconnection directs such resources to reduce output, in which case, such units shall be compensated in accordance with section 3.2.3(f) of this Schedule; or 2) the resource submits a request for a risk premium to the Market Monitoring Unit under the procedures specified in Section II.B of Attachment M - Appendix. A nuclear generation resource (i) must submit a risk premium consistent with its agreement under such process, or, (ii) if it has not agreed with the Market Monitoring Unit on an appropriate risk premium, may submit its own determination of an appropriate risk premium to the Office of the Interconnection, subject to acceptance by the Office of the Interconnection, with or without prior approval from the Commission.

(d) PJMSettlement shall be the Counterparty to the purchases and sales of Operating Reserve in the PJM Interchange Energy Market.

1.7.18 Regulation.

(a) Regulation to meet the Regulation objective of each Regulation Zone shall be supplied from generation resources and/or *demand resources* located within the metered electrical boundaries of such Regulation Zone. Generating Market Buyers, and Market Sellers offering Regulation, shall comply with applicable standards and requirements for Regulation capability and dispatch specified in the PJM Manuals.

(b) The Office of the Interconnection shall obtain and maintain for each Regulation Zone an amount of Regulation equal to the Regulation objective for such Regulation Zone as specified in the PJM Manuals.

(c) The Regulation range of a generation unit or *demand resource* shall be at least twice the amount of Regulation assigned.

(d) A generation unit capable of automatic energy dispatch that is also providing Regulation shall have its energy dispatch range reduced by twice the amount of the Regulation provided. The amount of Regulation provided by a generation unit shall serve to redefine the Normal Minimum Generation and Normal Maximum Generation energy limits of that generation unit, in that the amount of Regulation shall be added to the generation unit's Normal Minimum Generation energy limit, and subtracted from its Normal Maximum Generation energy limit.

(e) Qualified Regulation must satisfy the verification tests described in the PJM Manuals.

1.7.19 Ramping.

A generator dispatched by the Office of the Interconnection pursuant to a control signal appropriate to increase or decrease the generator's megawatt output level shall be able to change output at the ramping rate specified in the Offer Data submitted to the Office of the Interconnection for that generator.

1.7.19A Synchronized Reserve.

(a) Synchronized Reserve shall be supplied from generation resources and/or Demand Resources located within the metered boundaries of the PJM Region. Generating Market Buyers, and Market Sellers offering Synchronized Reserve shall comply with applicable standards and requirements for Synchronized Reserve capability and dispatch specified in the PJM Manuals

(b) The Office of the Interconnection shall obtain and maintain for each Synchronized Reserve Zone an amount of Synchronized Reserve equal to the Synchronized Reserve objective for such Synchronized Reserve Zone, as specified in the PJM Manuals.

(c) The Synchronized Reserve capability of a generation resource and Demand Resource shall be the increase in energy output or load reduction achievable by the generation resource and Demand Resource within a continuous 10-minute period.

(d) A generation unit capable of automatic energy dispatch that also is providing Synchronized Reserve shall have its energy dispatch range reduced by the amount of the Synchronized Reserve provided. The amount of Synchronized Reserve provided by a generation unit shall serve to redefine the Normal Maximum Generation energy limit of that generation unit in that the amount of Synchronized Reserve provided shall be subtracted from its Normal Maximum Generation energy limit.

1.7.19B Bilateral Transactions Regarding Regulation, Synchronized Reserve and Day-ahead Scheduling Reserves.

(a) In addition to transactions in the Regulation market, Synchronized Reserve market, and Day-ahead Scheduling Reserves Market, Market Participants may enter into bilateral contracts for the purchase or sale of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to or from each other or any other entity. Such bilateral contracts shall be for the physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to or from a Market Participant and shall be reported to and coordinated with the Office of the Interconnection in accordance with this Schedule and pursuant to the LLC's rules relating to its eMarket tools.

(b) For purposes of clarity, with respect to all bilateral contracts for the physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to a Market Participant in the PJM Region, title to the product that is the subject of the bilateral contract shall pass to the buyer at the source specified for the bilateral contract, and any further transactions associated with such products or further sale of such Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves in the markets for Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves, respectively, shall be transacted by the buyer under the bilateral contract. In no event shall the purchase and sale of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves between Market Participants under a bilateral contract constitute a transaction in PJM's markets for Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves, or otherwise be construed to define PJMSettlement as a contracting party to any bilateral transactions between Market Participants.

(c) Market Participants that are parties to bilateral contracts for the purchase and sale and physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves reported to and coordinated with the Office of the Interconnection under this Schedule shall use all reasonable efforts, consistent with Good Utility Practice, to limit the amounts of such reported transactions to amounts reflecting the expected requirements for Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves of the buyer pursuant to such bilateral contracts.

(d) All payments and related charges for the Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves associated with a bilateral contract shall be arranged between the parties to the bilateral contract and shall not be billed or settled by the Office of the Interconnection. The LLC, PJMSettlement, and the Members will not assume financial responsibility for the failure of a party to perform obligations owed to the other party under a bilateral contract reported and coordinated with the Office of the Interconnection under this Schedule.

(e) A buyer under a bilateral contract shall guarantee and indemnify the LLC, PJMSettlement, and the Members for the costs of any purchases by the seller under the bilateral contract in the markets for Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves used to meet the bilateral contract seller's obligation to deliver Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves under the bilateral contract and for which payment is not made to PJMSettlement by the seller under the bilateral contract, as determined by the Office of the Interconnection. Upon any default in obligations to the LLC or PJMSettlement by a Market Participant, the Office of the Interconnection shall (i) not accept any new eMarket reporting by the Market Participant and (ii) terminate all of the Market Participant's reporting of eMarkets schedules associated with its bilateral contracts previously reported to the Office of the Interconnection for all days where delivery has not yet occurred. All claims regarding a buyer's default to a seller under a bilateral contract shall be resolved solely between the buyer and the seller. In such circumstances, the seller may instruct the Office of the Interconnection to terminate all of the reported eMarkets schedules associated with bilateral contracts between buyer and seller previously reported to the Office of the Interconnection.

(f) Market Participants shall purchase Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves from PJM's markets for Regulation, Synchronized Reserve, Day-ahead Scheduling Reserves, in quantities sufficient to complete the delivery or receipt obligations of a bilateral contract that has been curtailed or interrupted for any reason, with respect to all bilateral transactions that contemplate the physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to or from a Market Participant.

1.7.20 Communication and Operating Requirements.

(a) Market Participants. Each Market Participant shall have, or shall arrange to have, its transactions in the PJM Interchange Energy Market subject to control by a Market Operations Center, with staffing and communications systems capable of real-time communication with the Office of the Interconnection during normal and Emergency conditions and of control of the Market Participant's relevant load or facilities sufficient to meet the requirements of the Market Participant's transactions with the PJM Interchange Energy Market, including but not limited to the following requirements as applicable.

(b) Market Sellers selling from generation resources and/or Demand Resources within the PJM Region shall: report to the Office of the Interconnection sources of energy and Demand Resources available for operation; supply to the Office of the Interconnection all applicable Offer Data; report to the Office of the Interconnection generation resources and Demand Resources that are self-scheduled; with respect to generation resources, report to the Office of the Interconnection bilateral sales transactions to buyers not within the PJM Region; confirm to the Office of the Interconnection bilateral sales to Market Buyers within the PJM Region; respond to the Office of the Interconnection's directives to start, shutdown or change output levels of generation units, or change scheduled voltages or reactive output levels of generation units, or reduce load from Demand Resources; continuously maintain all Offer Data concurrent with on-line operating information; and ensure that, where so equipped, generating

equipment and Demand Resources are operated with control equipment functioning as specified in the PJM Manuals.

(c) Market Sellers selling from generation resources outside the PJM Region shall: provide to the Office of the Interconnection all applicable Offer Data, including offers specifying amounts of energy available, hours of availability and prices of energy and other services; respond to Office of the Interconnection directives to schedule delivery or change delivery schedules; and communicate delivery schedules to the Market Seller's Control Area.

(d) Market Participants that are Load Serving Entities or purchasing on behalf of Load Serving Entities shall: respond to Office of the Interconnection directives for load management steps; report to the Office of the Interconnection Generation Capacity Resources to satisfy capacity obligations that are available for pool operation; report to the Office of the Interconnection all bilateral purchase transactions; respond to other Office of the Interconnection directives such as those required during Emergency operation.

(e) Market Participants that are not Load Serving Entities or purchasing on behalf of Load Serving Entities shall: provide to the Office of the Interconnection requests to purchase specified amounts of energy for each hour of the Operating Day during which it intends to purchase from the PJM Interchange Energy Market, along with Dispatch Rate levels above which it does not desire to purchase; respond to other Office of the Interconnection directives such as those required during Emergency operation.

(f) Economic Load Response Participants are responsible for maintaining demand reduction information, including the amount and price at which demand may be reduced. The Economic Load Response Participant shall provide this information to the Office of the Interconnection by posting it on the Load Response Program Registration link of the PJM website as required by the PJM Manuals. The Economic Load Response Participant shall notify the Office of the Interconnection of a demand reduction concurrent with, or prior to, the beginning of such demand reduction in accordance with the PJM Manuals. In the event that an Economic Load Response Participant chooses to measure load reductions using a Customer Baseline Load, the Economic Load Response Participant shall inform the Office of the Interconnection of a change in its operations or the operations of the end-use customer that would affect a relevant Customer Baseline Load as required by the PJM Manuals.

(g) PRD Providers shall be responsible for ensuring automated reductions to their Price Responsive Demand in response to price in accordance with their PRD Curves submitted to the Office of the Interconnection.

**ATTACHMENT N-1
FORM OF
SYSTEM IMPACT STUDY AGREEMENT**

(PJM Queue Position #____)

RECITALS

1. This System Impact Study Agreement, dated as of _____, is entered into, by and between _____ ("New Service Customer") and PJM Interconnection, L.L.C. ("Transmission Provider") pursuant to Part VI of the PJM Interconnection, L.L.C. Open Access Transmission Tariff ("PJM Tariff").
2. The Transmission Provider has: (i) pursuant to Section 36.2 of the PJM Tariff, completed an Interconnection Feasibility Study and provided the results of that study to the New Service Customer; (ii) received a valid Upgrade Request; or (iii) pursuant to Section 19 or Section 32, as applicable, of the PJM Tariff, the Transmission Provider has completed an Initial Study and provided the results of that study to the New Service Customer.
3. Pursuant to Sections 19.1, 32.1, 37, 110.2, 111.2, 204.2, or 204.3, as applicable, of the PJM Tariff, the New Service Customer (i) requests that the Transmission Provider perform a System Impact Study, and (ii) agrees to submit a deposit to the Transmission Provider which will be applied to the New Service Customer's cost responsibility for the System Impact Study, as set forth in Section 204.3A of the PJM Tariff.

PREVIOUS SUBMISSIONS

{For Interconnection Customers, use the following paragraph 4}

4. Except as otherwise specifically set forth in an attachment to this agreement, New Service Customer represents and warrants that the information provided in Section 3 of the Interconnection Feasibility Study Agreement dated _____, for the project designated _____ {insert Queue Position} by and between the New Service Customer and the Transmission Provider is accurate and complete as of the date of execution of this System Impact Study Agreement. New Service Customer further provides the following information and represents and warrants that said information is true and correct:

{For Generation Facilities, use the following paragraphs a through c}

- a. Specify whether the generation to be interconnected to the Transmission System is to be a Capacity Resource or an Energy Resource.

- b. Identification of evidence of initial application for the necessary air permits (attach documentation separately):

- c. Other information not previously provided that may be relevant to the study being conducted hereunder (attach generator data for stability study analysis):

{For Merchant Transmission Facilities, use the following paragraphs a through c}

- a. Provide evidence of ownership in, or right to acquire or control the site(s) where New Service Customer intends to install its major equipment, in the form of a deed, option agreement, lease or other similar document acceptable to PJM:

- b. Provide evidence of the rights or option to obtain such rights to use any existing transmission facilities within PJM that are necessary for construction of the proposed project.

- c. Other information not previously provided that may be relevant to the study being conducted hereunder:

{For New Service Customer other than Interconnection Customers, use the following paragraph 4}

4. Except as otherwise specifically set forth in an attachment to this agreement, New Service Customer represents and warrants that the information provided in Section ____ {insert applicable section number} of the New Service Request dated _____, for the request designated _____ {insert Queue Position} is accurate and complete as of the date of execution of this System Impact Study Agreement. New Service Customer further

provides the following information and represents and warrants that said information is true and correct:

PURPOSE OF THE SYSTEM IMPACT STUDY

5. Consistent with Section 205 of the PJM Tariff, the Transmission Provider, in consultation with the affected Transmission Owner(s), shall conduct a System Impact Study that identifies the system constraints relating to the New Service Requests being evaluated in the study and the Attachment Facilities, Local Upgrades, and Network Upgrades necessary to accommodate such New Service Requests. It is expected that the System Impact Study will be completed by {insert date}. In the event that the Transmission Provider is unable to complete the System Impact Study by that date, the Transmission Provider shall notify the New Service Customer and explain the reasons for the delay.
6. The System Impact Study conducted hereunder will provide more comprehensive estimates of the cost and length of time required to accommodate the New Service Customer's New Service Request than those developed through the Feasibility Study or Initial Study, if applicable, performed for the New Service Customer. These estimates shall represent a good faith attempt to determine the cost of necessary facilities and upgrades to accommodate the New Service Customer's New Service Request, and the New Service Customer's cost responsibility for them, but shall not be deemed final or binding. The scope of the System Impact Study {include for Merchant Transmission Facilities: may depend in part on the interconnection rights elected by the New Service Customer under Section 36.1.03 of the PJM Tariff and} may include (a) an assessment of sub-area import deliverability, (b) an assessment of sub-area export deliverability, (c) an assessment of project related system stability issues, (d) an assessment of project related short circuit duty issues, (e) a contingency analysis consistent with [NERC's the and each](#) Applicable Regional [Reliability CouncilEntity](#)'s reliability criteria, (f) an assessment of regional transmission upgrades that most effectively meet identified needs, and (g) an analysis to determine cost allocation responsibility for required facilities and upgrades. Final estimates will be developed only upon execution of a Facilities Study Agreement in accordance with Part VI of the PJM Tariff. The System Impact Study necessarily will employ various assumptions regarding the New Service Request, other pending requests, and PJM's Regional Transmission Expansion Plan at the time of the study. IN NO EVENT SHALL THE SYSTEM IMPACT STUDY IN ANY WAY BE DEEMED TO OBLIGATE THE TRANSMISSION PROVIDER OR THE TRANSMISSION OWNERS THAT MAY INTERCONNECT WITH THE NEW SERVICE CUSTOMER TO CONSTRUCT ANY FACILITIES OR UPGRADES.

CONFIDENTIALITY

7. The New Service Customer agrees to provide all information requested by the Transmission Provider necessary to complete the System Impact Study. Subject to paragraph 8 of this System Impact Study Agreement and to the extent required by Section 222 of the PJM Tariff, information provided pursuant to this Section 7 shall be and remain confidential.

8. Until completion of the System Impact Study, the Transmission Provider shall keep confidential all information provided to it by the New Service Customer. Pursuant to Section 205.4 of the PJM Tariff, upon completion of the System Impact Study, the Transmission Provider shall provide a copy of the System Impact Study to all New Service Customers whose New Service Requests were evaluated in the System Impact Study along with all related work papers. Additionally, Transmission Provider shall post on Transmission Provider's OASIS (i) the existence of the System Impact Study, (ii) the New Service Customers that had New Service Requests evaluated in the System Impact Study, (iii) the location and size in megawatts of each New Service Customer's generation project, if applicable, and (iv) each New Service Customer's Queue Position. Additionally, New Service Customer acknowledges and consents to such other disclosures as may be required under the PJM Tariff or the FERC's rules and regulations.
9. New Service Customer acknowledges that, consistent with Part VI of the PJM Tariff, the Transmission Owners will participate in the System Impact Study process and that the Transmission Provider may disseminate information to the Transmission Owners and rely upon them to conduct part or all of the System Impact Study.

COST RESPONSIBILITY

10. The New Service Customer shall reimburse the Transmission Provider for the actual cost of the System Impact Study in accordance with its cost responsibility as determined under Sections 110.2, 111.2 or 203 of the PJM Tariff. The deposit described in Section 3 of this Agreement, paid by the New Service Customer pursuant to Sections 110.2, 111.2, or 204.3A of the PJM Tariff, shall be applied toward the New Service Customer's System Impact Study cost responsibility. In the event that the Transmission Provider anticipates that the New Service Customer's study cost responsibility will substantially exceed the deposit, the Transmission Provider shall provide the New Service Customer with an estimate of the study costs and the New Service Customer's cost responsibility. Within 10 days of receiving such estimate, the New Service Customer may withdraw its New Service Request by providing notice to the Transmission Provider, in which event the deposit paid to Transmission Provider shall be refunded. Unless the New Service Request is withdrawn within 10 days, the New Service Customer agrees to pay the amount of its actual System Impact Study cost responsibility.

DISCLAIMER OF WARRANTY, LIMITATION OF LIABILITY

11. In analyzing and preparing the System Impact Study, the Transmission Provider, the Transmission Owner(s), and any other subcontractors employed by the Transmission Provider shall have to rely on information provided by the New Service Customer and possibly by third parties and may not have control over the accuracy of such information. Accordingly, NEITHER THE TRANSMISSION PROVIDER, THE TRANSMISSION OWNER(S), NOR ANY OTHER SUBCONTRACTORS EMPLOYED BY THE TRANSMISSION PROVIDER MAKES ANY WARRANTIES, EXPRESS OR IMPLIED, WHETHER ARISING BY OPERATION OF LAW, COURSE OF

PERFORMANCE OR DEALING, CUSTOM, USAGE IN THE TRADE OR PROFESSION, OR OTHERWISE, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WITH REGARD TO THE ACCURACY, CONTENT, OR CONCLUSIONS OF THE SYSTEM IMPACT STUDY. The New Service Customer acknowledges that it has not relied on any representations or warranties not specifically set forth herein and that no such representations or warranties have formed the basis of its bargain hereunder. Neither this System Impact Study Agreement nor the System Impact Study prepared hereunder is intended, nor shall either be interpreted, to constitute agreement by the Transmission Provider or the Transmission Owner(s) to provide any transmission or interconnection service to or on behalf of the New Service Customer either at this point in time or in the future.

12. In no event will the Transmission Provider, Transmission Owner(s) or other subcontractors employed by the Transmission Provider be liable for indirect, special, incidental, punitive, or consequential damages of any kind including loss of profits, whether arising under this System Impact Study Agreement or otherwise, even if the Transmission Provider, Transmission Owner(s), or other subcontractors employed by the Transmission Provider have been advised of the possibility of such a loss. Nor shall the Transmission Provider, Transmission Owner(s), or other subcontractors employed by the Transmission Provider be liable for any delay in delivery or of the non-performance or delay in performance of the Transmission Provider's obligations under this System Impact Study Agreement.

Without limitation of the foregoing, the New Service Customer further agrees that Transmission Owner(s) and other subcontractors employed by the Transmission Provider to prepare or assist in the preparation of any System Impact Study shall be deemed third party beneficiaries of this provision entitled "Disclaimer of Warranty/Limitation of Liability."

MISCELLANEOUS

13. Any notice or request made to or by either party regarding this System Impact Study Agreement shall be made to the representative of the other party as indicated below.

Transmission Provider

PJM Interconnection, L.L.C.
955 Jefferson Avenue
Valley Forge Corporate Center
Norristown, PA 19403-2497

New Service Customer

14. No waiver by either party of one or more defaults by the other in performance of any of the provisions of this System Impact Study Agreement shall operate or be construed as a waiver of any other or further default or defaults, whether of a like or different character.
15. This System Impact Study Agreement or any part thereof, may not be amended, modified, or waived other than by a writing signed by all parties hereto.
16. This System Impact Study Agreement shall be binding upon the parties hereto, their heirs, executors, administrators, successors, and assigns.
17. Neither this System Impact Study Agreement nor the System Impact Study performed hereunder shall be construed as an application for service under Part II or Part III of the PJM Tariff.
18. The provisions of Part VI of the PJM Tariff are incorporated herein and made a part hereof.
19. Capitalized terms used but not otherwise defined herein shall have the meaning ascribed to them in the PJM Tariff.
20. This System Impact Study Agreement shall be effective as of the date of the New Service Customer's execution of it and shall remain in effect until the earlier of (a) the date on which the Transmission Provider tenders the completed System Impact Study and a proposed Facilities Study Agreement to New Service Customer pursuant to Section 206 of the PJM Tariff, or (b) termination and withdrawal of the New Service Request(s) to which the System Impact Study hereunder relates.
21. **No Third-Party Beneficiaries**
This System Impact Study Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the parties, and the obligations herein assumed are solely for the use and benefit of the parties, their successors in interest and where permitted, their assigns.
22. **Multiple Counterparts**
This System Impact Study Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.
23. **No Partnership**
This System Impact Study Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the parties or to impose any partnership obligation or partnership liability upon either party. Neither party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other party.

24. Severability

If any provision or portion of this System Impact Study Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the parties shall negotiate in good faith to restore insofar as practicable the benefits to each party that were affected by such ruling, and (3) the remainder of this System Impact Study Agreement shall remain in full force and effect.

25. Governing Law, Regulatory Authority, and Rules

For Interconnection Requests, the validity, interpretation and enforcement of this System Impact Study Agreement and each of its provisions shall be governed by the laws of the state of _____ (where the Point of Interconnection is located), without regard to its conflicts of law principles. This System Impact Study Agreement is subject to all Applicable Laws and Regulations. Each party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

26. Reservation of Rights

The Transmission Provider shall have the right to make a unilateral filing with FERC to modify this System Impact Study Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and the Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this System Impact Study Agreement under any applicable provision of the Federal Power Act and FERC's rules and regulations; provided that each party shall have the right to protest any such filing by the other party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this System Impact Study Agreement shall limit the rights of the parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations, except to the extent that the parties otherwise agree as provided herein.

IN WITNESS WHEREOF, the Transmission Provider and the New Service Customer have caused this System Impact Study Agreement to be executed by their respective authorized officials.

Transmission Provider: PJM Interconnection, L.L.C.

By: _____
Name Title Date

Printed Name

New Service Customer: [Name of Party]

By: _____
Name Title Date

Printed Name

4.8 Under- and Over-Frequency Conditions:

The Transmission System is designed to automatically activate a load-shed program as required by [NERC and the each Applicable Regional Reliability Council Entity](#) in the event of an under-frequency system disturbance. A Generation Interconnection Customer shall implement under-frequency and over-frequency relay set points for the Customer Facility as required by [NERC and the each Applicable Regional Reliability Council Entity](#) to ensure “ride through” capability of the Transmission System. The response of a Generation Interconnection Customer’s Customer Facility to frequency deviations of predetermined magnitudes, both under-frequency and over-frequency deviations shall be studied and coordinated with the Transmission Provider in accordance with Good Utility Practice. The term “ride through” as used herein shall mean the ability of a Generation Interconnection Customer’s Customer Facility to stay connected to and synchronized with the Transmission System during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice.

6.1 Obligations:

Subject to Applicable Laws and Regulations, each Interconnection Party shall comply with the Emergency Condition procedures of NERC, the Applicable Regional ~~Reliability Council~~Entity, Transmission Provider, the Interconnected Transmission Owner and Interconnection Customer.

ATTACHMENT U

INDEPENDENT TRANSMISSION COMPANIES

References to section numbers in this Attachment U refer to sections of this Attachment U, unless otherwise specified.

This Attachment U sets forth a general framework for the development and operation of independent transmission companies (“ITCs”) as to certain of the transmission facilities for which the Transmission Provider, PJM Interconnection, L.L.C. (“PJM”), is otherwise responsible. The provisions of this Attachment U shall govern in the event of any conflict between this Attachment and the other provisions of the Tariff, except as to Attachment M of the Tariff. If there is a conflict between the provisions of Attachment U and Attachment M, the provisions of Attachment M shall govern. Under this Attachment U, certain responsibilities may be assigned to an ITC, if the ITC enters into an ITC Agreement in the form set forth in this Tariff and if FERC acceptance of the independence of the ITC and FERC approval or acceptance of the assignment is obtained as provided herein.

This Attachment U sets forth the standard terms and conditions, and the standard division of rights, responsibilities, and functions, in conformance with FERC policy and precedent, for any ITC that operates under PJM. Any entity or entities submitting a proposal to become an ITC (“ITC Sponsor”) shall enter into an ITC Agreement in the form set forth in Attachment V to the Tariff, which is subject to and incorporates the standard terms and conditions of this Attachment U and identifies the ITC Transmission Facilities (as defined herein).

It is recognized that PJM shall be responsible for administering any wholesale energy market (and providing all functions integral to such market administration) within the PJM region.

1. FERC APPROVAL

1.1 FERC Acceptance As A Prerequisite. Before receiving the rights and responsibilities provided for under this Attachment U, the ITC Sponsor shall apply for and receive a FERC order accepting the ITC proposal to be implemented and finding that the proposed ITC satisfies FERC’s independence criteria and that such entity may be treated as an ITC under this Attachment U.

1.2 Effect of FERC Acceptance. Once FERC issues an order accepting the filing and providing the finding required under Section 1.1, then the ITC, subject to satisfaction of the other requirements of this section 1, may operate under PJM consistent with the rights, responsibilities, and functions that have been accepted or approved by FERC.

1.3 Any entity or entities submitting a proposal to become an ITC (“ITC Sponsor”) shall submit a filing with FERC detailing each of the rights, responsibilities, and functions the ITC proposes to assume, which may consist of some or all of the rights, responsibilities, and functions set forth in this Attachment U, together with specifics on implementing any of these assigned rights, responsibilities, and functions. An ITC Sponsor must have, or demonstrate to

FERC that it shall have prior to implementation, ownership of, or the authority to direct the operation of, transmission facilities that are within the PJM region, or that are to be added to the PJM region as a result of the establishment of the ITC (such facilities referred to herein as the “ITC Transmission Facilities”).

1.4 Following the FERC approvals specified in section 1.1 above, the ITC shall assume the rights and responsibilities described herein on the first day of the calendar month (“ITC Commencement Date”) following the date on which the ITC provides written notice to Transmission Provider that the ITC is prepared to assume its responsibilities hereunder in accordance with section 15 below. PJM shall coordinate with the ITC prior to the ITC Commencement Date to ensure that PJM is capable as of the ITC Commencement Date of providing the responsibilities reserved to PJM hereunder as to the ITC Transmission Facilities and related bulk power facilities.

1.5 Prior to the ITC Commencement Date, the ITC and each owner of transmission facilities participating in such ITC shall execute, with respect to the transmission facilities over which it has the authority to direct the operation: (a) the Consolidated Transmission Owners Agreement; and (b) the Operating Agreement. In the event of any conflict between the ITC Agreement and the Operating Agreement that affects the PJM Region other than the ITC Transmission Facilities, the provisions of the Operating Agreement shall control pending dispute resolution, with final approval of the dispute’s resolution by FERC. In the event of any other express conflict between the ITC Agreement and the Operating Agreement or the transmission owners agreement executed by ITC, neither the transmission owners agreement nor the Operating Agreement shall be interpreted to limit the rights and responsibilities assigned to ITC in its role as an ITC pursuant to the ITC Agreement.

2. SECURITY COORDINATION

2.1 Regional Reliability Authority. PJM shall be the regional Reliability Authority under NERC standards for all PJM transmission facilities, including any ITC Transmission Facilities. As the Reliability Authority, PJM is responsible for monitoring and directing corrective action for reliability for all areas in the PJM region.

2.2 ITC Actions to Preserve System Security. An ITC may monitor and analyze the security of the ITC Transmission Facilities and may take actions to protect the ITC Transmission Facilities from physical damage or prevent injury or damage to persons or property in accordance with good utility practice and the PJM Operating Manuals, as they may be modified pursuant to Section 16 of this Attachment U, before requesting assistance from PJM. At the earliest possible time, the ITC shall inform PJM of any such actions taken and coordinate further actions with PJM.

2.3 Ultimate Authority. Notwithstanding any other provision in this Attachment U, PJM may intercede and direct appropriate actions in its role as the regional Reliability Authority. The ITC shall be responsible for implementing such corrective actions directed by PJM. If such PJM action or direction is disputed, PJM’s position shall control pending resolution of the dispute.

3. BASE TRANSMISSION RATES

3.1 Right to File Rate Changes. The ITC shall possess the unilateral right, subject to consultation with PJM, to file at FERC and to place into effect pursuant to FPA Section 205 the rates for transmission services for delivery to the zone or zones comprising the ITC Transmission Facilities (including incentive rate structures, but excluding ancillary services, except as permitted by section 17, and excluding the congestion pricing methodology for the PJM region), and for additional services, if any, solely involving the ITC Transmission Facilities, and the revenue requirement for such zones for use in developing rates for other transmission services provided by PJM. Such rate or rate structure changes shall be included in discrete schedules or portions of the Tariff (hereafter, such the “ITC Rate Schedule”). The ITC shall consult with PJM prior to making a section 205 rate filing to ensure that PJM has adequate opportunity to determine whether the proposal results in adverse impacts outside the zone or zones comprising the ITC Transmission Facilities.

3.2 Limitations. The ITC may not implement transmission rates in accordance with Section 3.1 that violate the terms of the Consolidated Transmission Owners Agreement.

3.3 No Rate Pancaking. Notwithstanding its rights under Section 3.1, the ITC shall not implement rates or a rate structure that results in a Transmission Customer paying more than one base transmission charge for use of the Transmission System for any one transaction.

4. REVENUE DISTRIBUTION

4.1 ITC Receipt of Transmission Revenues. The ITC shall receive and/or retain revenues resulting from the provision of transmission service under the Tariff in accordance with the applicable revenue distribution procedures of the Consolidated Transmission Owners Agreement. The ITC may take no unilateral action that interferes with or affects the revenue distribution provided for in such agreements or that interferes with the collection by PJM of the revenues due it for services it provides or arranges.

4.2 Redistribution of Revenues. The ITC may distribute the revenues due it in accordance with section 4.1 above in any manner it wishes subject to receiving any necessary regulatory approvals, without involvement of PJM.

5. MANAGEMENT OF CONGESTION PRICING METHODOLOGY

5.1 Subject to FERC approval, PJM shall determine the congestion pricing methodology for the PJM region, administer the dispatch of the generation and transmission facilities in the PJM region in accordance with the approved methodology, calculate the resulting congestion prices, and conduct all related billing and settlement.

6. ACTIONS TO ENHANCE TRANSMISSION PERFORMANCE

6.1 The ITC may take actions with respect to the system comprised of the ITC Transmission Facilities that can be accommodated within the framework of the approved congestion pricing

methodology referenced in Section 5.1 above. It may do this through targeted transmission system investment, outage management, the determination of transmission device settings, establishing contractual arrangements (e.g., with generators and LSE's), changes in technology, and other operating actions affecting the ITC Transmission Facilities. Before it first implements such actions, the ITC shall consult with PJM to develop procedures for inclusion in the PJM Operating Manuals for each class of such action that the ITC may thereafter implement. In such consultation, PJM shall consider whether the type of action can be accommodated within the framework of the approved congestion pricing methodology and whether the type of action would result in violations of regional reliability criteria applied in the PJM region. Following inclusion of procedures for each such type of action in the Manuals, the ITC may implement such actions in coordination with PJM in the manner set forth in the manuals. In addition, the ITC and PJM shall cooperate with one another in solving operational issues outside the ITC region that affect the ITC Transmission Facilities, or inside the ITC region that affect facilities outside such region.

6.2 Incentive Mechanisms. The ITC shall possess the unilateral right to file with FERC incentive mechanisms relating to the system comprised of the ITC Transmission Facilities in a manner that can be accommodated within the framework of the approved methodology referenced in Section 5.1 above. The ITC shall consult with PJM prior to filing any such mechanism to allow PJM to consider whether any such proposed mechanism can be so accommodated and whether it would result in violations of regional reliability criteria applied in the PJM region. In addition, prior to the implementation of any such incentive mechanism, the ITC and PJM shall coordinate the operation of any such mechanism. PJM shall modify the PJM Operating Manuals as necessary to allow for the implementation of any FERC-approved incentive mechanism.

7. TARIFF ADMINISTRATION

7.1 Service under the Tariff. PJM is the Transmission Provider and remains responsible for administering the Tariff, which shall be amended to include the ITC Transmission Facilities and any provisions specific to the ITC Transmission Facilities that the ITC may propose pursuant to this Attachment U. Transmission Customers on the ITC Transmission Facilities will receive transmission service under the Tariff. PJM shall execute the agreements with customers for service under the Tariff, except that the ITC and PJM shall both execute agreements with customers for interconnection services. For transmission services for delivery to the zone or zones comprising the ITC Transmission Facilities, to the extent rate discounting is authorized as to such transmission services, the ITC shall make all decisions on rate discounts.

7.2 OASIS. PJM shall maintain the OASIS specified in section 4 of the Tariff. Customers shall apply for service on the PJM OASIS. PJM shall have responsibility for granting or denying all transmission service requests, but shall coordinate as necessary with ITC in developing its response to transmission service requests, including any necessary studies. The ITC shall be entitled to have and maintain a site page within the PJM OASIS for any additional services provided by such ITC.

7.3 Studies. PJM shall administer the contracts with the customers and shall provide the notices and make filings under this Tariff. If a system impact, facilities, or other study is required to address a connection to, or a constraint or other impact on, the ITC Transmission Facilities, then the ITC shall assume responsibility for the study subject to oversight by, and coordination with, PJM, and satisfaction of PJM criteria for such studies as set forth in the joint planning protocol developed pursuant to Section 10.3. The study agreement shall be executed by PJM; provided however, that nothing herein shall preclude the ITC from entering into additional agreements with customers regarding studies.

7.4 ATC. PJM shall calculate Available Transfer Capability (“ATC”), in accordance with Attachment C to the Tariff, for all facilities, including the ITC Transmission Facilities, provided that the ITC shall possess the unilateral right to provide, pursuant to section 9.1 of this Attachment U, the ratings, transfer limits, inputs, assumptions, and corresponding operating guides with respect to the ITC Transmission Facilities to be used in calculating ATC. If PJM disagrees with these ratings, transfer limits, calculations, inputs, assumptions, or corresponding operating guides, the ITC’s position shall prevail pending dispute resolution, unless PJM determines that ITC’s position would violate system reliability criteria, in which case PJM’s position shall prevail pending dispute resolution.

7.5 Scheduling. Customers will schedule through the processes established by PJM.

8. CURTAILMENTS

8.1 PJM shall be responsible for directing all curtailments consistent with the Tariff and the Operating Agreement. The ITC and PJM shall develop protocols to implement any curtailments ordered by PJM with respect to the ITC Transmission Facilities.

8.2 The ITC may propose to PJM operating methods to avoid and/or limit the need for curtailments, and may implement such measures involving operation of the ITC Transmission Facilities, in coordination with PJM; provided, however, that if PJM determines that a measure proposed by the ITC would exacerbate an existing violation of a system reliability criterion, or cause a violation of such criterion elsewhere on the system, or of another system reliability criterion, then that measure shall not be implemented, pending dispute resolution.

9. OPERATIONS

9.1 Ratings and Rating Procedures. The ITC is responsible for the establishment of ratings, transfer limits, and rating procedures for the ITC Transmission Facilities. The ITC shall provide notice to PJM of all changes in ratings, transfer limits, and rating procedures, along with the related information called for by section 1.9.8 of Schedule 1 to the PJM Operating Agreement, in accordance with the deadlines set forth in such section 1.9.8 and in accordance with the PJM Manuals, as they may be modified pursuant to Section 16; provided that nothing in section 1.9.8 shall preclude the ITC from instituting ratings changes (including, but not limited to, dynamic ratings changes) in accordance with applicable PJM Operating Manuals, as they may be revised pursuant to section 16 of this Attachment U. Notwithstanding sections 1.9.8 or 1.9.9(e) of

Schedule 1 to the Operating Agreement, should PJM dispute the application of a rating, then the ITC's position shall prevail pending dispute resolution.

9.2 Transmission Maintenance. The ITC shall be responsible for developing its own coordinated transmission maintenance and outage schedules for the ITC Transmission Facilities and shall advise PJM of all such maintenance and outage schedules, for all ITC Transmission Facilities, in accordance with section 1.9.2 of Schedule 1 to the Operating Agreement. PJM shall have the authority to disapprove transmission maintenance outages on the ITC Transmission Facilities if ITC fails to comply with the notice requirements of section 1.9.2 of Schedule 1 to the Operating Agreement, or if PJM determines that such outages would create a violation of system reliability criteria. PJM shall have the authority to revoke its previously granted approval of transmission maintenance outages on the ITC Transmission System if forced transmission outages or emergency circumstances occur such that proceeding with the approved outage would create a violation of system reliability criteria; provided that, where time permits, PJM will consult with the ITC to determine whether steps can be taken that would enable the maintenance outage to go forward as scheduled. PJM shall notify the ITC of the decision to reschedule or revoke approval of the transmission maintenance outage as soon as possible after the circumstances arise that create the need for the rescheduling or revocation. Within a reasonable time after it requires a transmission maintenance outage to be rescheduled or revokes its approval of such an outage, PJM shall consult with the ITC to explain the reasons for its decisions and to consider measures that the parties may adopt to avoid the need for further rescheduling or revocation of outages.

9.3 Generation Maintenance. In accordance with the Operating Agreement and with procedures in the PJM Manuals, as they may be modified pursuant to Section 16, the ITC shall promptly provide PJM with any advance notice of scheduled outages it receives from generators, and PJM shall promptly provide the ITC with any advance notice it receives of scheduled generator outages that affect the ITC Transmission Facilities, to permit the ITC to schedule transmission outages on the ITC Transmission Facilities and perform its other functions hereunder, and to permit PJM to exercise its responsibilities under the PJM Operating Agreement with respect to generator outages. The ITC may agree to coordinate with generators to modify its planned transmission outage schedules in coordination with generator outage schedules.

9.4 Scheduling and Dispatch. PJM shall be responsible for administering day-ahead and real-time wholesale energy markets, including transmission security monitoring and constrained economic dispatch, for all facilities, including the ITC Transmission Facilities. The ITC shall manage the configuration and topology of the ITC Transmission Facilities, including acting as the primary interface for all switching, maintenance, ratings, transfer limits, and monitoring, subject to the direction of PJM as the regional Reliability Authority, and in accordance with the PJM Operating Manuals, as they may be revised pursuant to Section 16 of this Attachment U.

9.5 Operations. The ITC shall have the authority and responsibility, in accordance with its agreements with the owners of the ITC Transmission Facilities, the terms of the Consolidated Transmission Owners Agreement, NERC and Applicable Regional ~~Reliability Council~~Entity standards and guidelines, and the PJM Operating Manuals, as such manuals may be revised pursuant to section 16 of this Attachment U, to operate those facilities in a safe, economical, and

reliable manner. PJM shall have the authority and responsibility to issue operating instructions to the ITC as they relate to the ITC Transmission Facilities in accordance with the PJM Manuals, as they may be revised pursuant to Section 16 of this Attachment U, provided that nothing herein shall be construed to require a change in the physical control of the ITC Transmission Facilities using the ITC's control center facilities and equipment. The ITC and PJM shall seek agreement (where time limitations allow) on real-time operational decisions affecting the ITC Transmission Facilities not otherwise specified in the PJM Operating Manuals. In the absence of such agreement, or if time limitations do not permit reaching agreement, PJM shall exercise its authority to direct operations, subject to any actions the ITC may take in accordance with section 2.2 of this Attachment U.

10. PLANNING

10.1 PJM has the ultimate authority for developing a Regional Transmission Expansion Plan for its entire region, including the ITC Transmission Facilities, and may direct expansions as required in accordance with Schedule 6 to the PJM Operating Agreement, or successor provisions, as they may be amended. In the event of disputes between PJM and ITC concerning the contents of such Regional Transmission Expansion Plan, the position of PJM, as the ultimate authority for planning in the region, shall prevail. Pursuant to the joint planning protocol developed under Section 10.3 below, PJM shall be responsible for setting appropriate planning criteria and the ITC shall be responsible for studying the need for modifications, enhancements, or additions to the ITC Transmission Facilities and for proposing a plan of modifications, enhancements, or additions to the ITC Transmission Facilities. Each component of a timely plan proposed by the ITC shall be incorporated without PJM approval in the Regional Transmission Expansion Plan if PJM determines that such component does not materially adversely affect the Transmission System other than the ITC Transmission Facilities. The ITC also may suggest, in accordance with any established stakeholder procedures under Schedule 6 of the PJM Operating Agreement, potential modifications, enhancements, or additions to transmission facilities in the PJM region other than the ITC Transmission Facilities. Subject to any necessary FERC approval, the ITC may adopt any procedures it deems necessary with respect to the ITC's development of a plan of enhancements or expansions, so long as such procedures do not adversely affect PJM's ability to prepare the Regional Transmission Expansion Plan in a timely and efficient manner. Nothing in this Attachment U impairs the rights of affected parties to participate in the PJM planning process in accordance with Commission-approved procedures. During the planning process the ITC shall adhere to all Applicable Regional [Reliability Council Entity](#), NERC and PJM Planning criteria. The ITC shall participate with PJM in the development of the system needs analysis, any system impact studies and the transmission expansion plans as necessary to promote fully coordinated and efficient solutions.

10.2 Interconnection Requests. Customer requests for interconnection, including requests for interconnection with the ITC Transmission Facilities, will be coordinated by PJM in accordance with the Tariff and the PJM Manuals, as they may be modified pursuant to Section 16 of this Attachment U. The ITC shall assume primary responsibility for interconnection projects on the ITC Transmission Facilities. PJM shall be responsible for setting interconnection standards, receiving interconnection requests, administering the queue, coordinating the analysis of requests for interconnection with ITC Transmission Facilities with requests for interconnection with non-

ITC Transmission Facilities, and ensuring that proposed interconnections to the ITC Transmission Facilities will not materially adversely affect the Transmission System other than the ITC Transmission Facilities. PJM as the Transmission Provider under this Tariff also shall retain primary responsibility for all service-related matters under the Tariff, including issuance and administration of interconnection rights. ITC shall regularly and frequently update PJM on the status and results of all interconnect studies performed by or for the ITC, in accordance with the joint planning protocol developed pursuant to Section 10.3. The results of any ITC studies prepared in response to interconnection requests shall be reflected in the Regional Transmission Expansion Plan.

10.3 Joint Planning Protocol. PJM and ITC shall develop a joint planning protocol to facilitate the seamless and efficient integration of all ITC transmission planning, study and analysis efforts, and all ITC proposals for transmission enhancements, modifications, and additions into the Regional Transmission Expansion Plan under Schedule 6 to the Operating Agreement and the regional generation interconnection queuing, study, and cost allocation process under Part IV of the Tariff. Such protocols shall be designed to facilitate the preparation of the Regional Transmission Expansion Plan, and shall reflect and accommodate the procedures, timelines, and study cycles employed for the regional transmission planning and generation interconnection process. PJM and ITC shall each implement the provisions of the joint planning protocol. PJM and ITC shall consult regularly concerning the extent to which changes to the joint planning protocol may be required to achieve the foregoing purposes in light of experience and, as applicable, the coordination of planning activities among PJM and all ITCs in the PJM region.

10.4 Material Adverse Effect. As used in this Attachment, a material adverse effect on the Transmission System other than the ITC Transmission Facilities shall not be present only if all of the following statements are true:

1. The proposed facility or requested service does not result in any non-ITC facilities in the PJM Region exceeding thermal, voltage, or stability limits, consistent with all applicable reliability criteria; and
2. The proposed facility or requested service does not result in any circuit breaker on non-ITC facilities in the PJM Region exceeding its interrupting capability.

11. BILLING AND REMITTANCE

11.1 PJM Responsibilities. PJM shall be responsible for all billing, settlement, and revenue distribution, except as provided in Section 11.2 below.

11.2 ITC Responsibilities. The ITC may elect to perform billing, settlement, and revenue distribution for the additional services, if any, provided by the ITC as referenced in section 3.1 of this Attachment U. The ITC may elect to contract for the provision of those functions by PJM or another third party.

12. MONITORING

12.1 The Market Monitoring Unit established under Attachment M of this Tariff shall monitor the services provided by the ITC, and the ITC-PJM relationship, to detect any problems that may inhibit a robust and competitive market. Transactions utilizing the ITC Transmission Facilities shall be subject to the authority of the Market Monitoring Unit on the same basis as transactions involving any other Market Participant (as defined in Attachment M) using other portions of the Transmission System. This provision is also found in Article IV, Section C-1 of Attachment M of the Tariff.

13. LIABILITY AND INDEMNITY

13.1 The ITC shall execute the Operating Agreement as a Member of PJM and the liability and indemnity provisions as set forth in section 16 of the Operating Agreement shall apply to acts or omissions resulting from, arising out of, or in any way connected with this Attachment or the ITC Agreement.

14. DISPUTE RESOLUTION

14.1 Dispute resolution as used herein refers to the dispute resolution procedures in section 12 of the Tariff, as it may be amended.

15. NOTIFICATION OF ASSUMPTION OF RESPONSIBILITIES

15.1 The ITC shall provide adequate notice to PJM of its intent to assume the responsibilities described in this Attachment U.

16. OPERATING PROCEDURES AND PROTOCOLS

16.1 Operating Guides, Manuals and Procedures. As provided in section 9.5 of this Attachment U, the ITC shall operate the ITC Transmission Facilities in accordance with the PJM Operating Manuals. Prior to start-up, and from time to time after the ITC commences operations, the ITC shall review such manuals and shall timely notify PJM of any changes or additions desired by the ITC to address specific conditions or operating procedures on the ITC Transmission Facilities. Subject to PJM's agreement, the PJM Manuals shall be revised or supplemented accordingly. PJM shall apprise ITC of subsequent changes to the PJM manuals through its established procedures for stakeholder notification of such changes. Any dispute between the ITC and PJM concerning changes to the PJM Manuals shall be resolved in accordance with Section 14.1, above. Nothing herein precludes the ITC from maintaining more detailed operating guides, manuals, and procedures specific to the ITC Transmission Facilities that are consistent with and subject to the operating guides and procedures in the PJM Manuals.

16.2 ITC Start-Up Procedures and Protocols. The ITC and PJM shall cooperate and use their best efforts to develop the necessary procedures and protocols to allow timely start-up of the ITC pursuant to this Attachment U.

17. ANCILLARY SERVICES

17.1 ITC System Control and Administrative Services. ITC shall recover its costs of providing system control and other administrative services through an appropriate schedule to the Tariff, as filed and made effective by ITC, subject to FERC acceptance.

17.2 System Restoration and Black Start Generation. PJM and the ITC shall coordinate in the preparation of a workable system restoration plan for the ITC Transmission Facilities in accordance with approved PJM Tariff requirements. PJM and the ITC shall be responsible for implementing their respective assigned duties under such system restoration plan.

17.3 Reactive Support. PJM shall be responsible for purchases of reactive support from generators under the PJM Tariff. If desired by ITC and approved by FERC, PJM shall designate ITC as a supplier of reactive support in accordance with an ITC Rate Schedule to be included in the PJM Tariff.

18. INFORMATION SHARING

18.1 Subject to FERC approval of any necessary changes to the PJM Operating Agreement, PJM shall share with the ITC information within the possession of PJM that is necessary for the ITC to perform those rights, responsibilities and functions that FERC authorizes the ITC to perform and the ITC shall share with PJM information within the possession of the ITC that is necessary for PJM to perform those rights, responsibilities and functions that FERC authorizes PJM to perform. If such data are immediately available, it is expected that the parties will establish communication links for data transfer as appropriate and necessary. Data requiring manipulation shall be made available within a reasonable time. In all cases, all data designated as confidential shall be handled as provided in section 18.2 of this Attachment U.

18.2 Confidentiality. To the extent ITC obtains from PJM or any Member of PJM any documents, data, or other information that has been designated by PJM or a Member as confidential, ITC shall treat such information in the same manner and subject to the same procedures, restrictions, and obligations as set forth in section 18.17 of the Operating Agreement. To the extent PJM obtains from ITC any documents, data, or other information that has been designated by ITC as confidential, PJM shall treat such information in accordance with the procedures, restrictions, and obligations as set forth in section 18.17 of the Operating Agreement.

19. INTERREGIONAL COORDINATION

19.1 PJM is responsible for coordination with all neighboring regions, including those adjacent to the ITC (or operated by the ITC in adjacent regions).

19.2 To the extent that an ITC (or its affiliates) is operating in PJM and a neighboring region, the ITC may, in coordination with PJM, undertake efforts to facilitate interregional coordination between PJM and the neighboring region. The ITC shall consult with PJM prior to implementing any such efforts to allow PJM to consider whether the actions could be accommodated within the framework of PJM's approved congestion pricing methodology and other rules and whether the actions would result in violations of regional reliability criteria applied in the PJM region.

20. REVISION OF ITC FUNCTIONS

20.1 The division of functions and responsibilities between PJM and ITC shall be as set forth in this Attachment U and the ITC Agreement and may be modified from time to time to reflect the functionality permitted for independent transmission companies in accordance with FERC policy as pronounced in proceedings concerning Standard Market Design or otherwise, and to reflect the experience of the parties in the actual performance of their functions hereunder. PJM and ITC from time to time will review the allocation of functions and responsibilities and address appropriate changes, if any, to the division of functions between ITC and PJM consistent with such FERC policy, and any such changes shall be subject to any required regulatory approvals.

ATTACHMENT V

FORM OF ITC AGREEMENT

1.0 This ITC Agreement, dated as of _____, is entered into, by and between PJM Interconnection, L.L.C. (“PJM”) and _____ (“Independent Transmission Company” or “ITC”).

2.0 ITC has, or shall have, prior to commencement of service as an ITC, ownership of, or functional control of, the transmission facilities for which it wishes to become the ITC (“ITC Transmission Facilities”). ITC desires to become an independent transmission company within the PJM region, in accordance with Attachment S to the PJM Open Access Transmission Tariff (“Tariff”).

3.0 This ITC Agreement is subject to and expressly incorporates by this reference the provisions of Attachment U to this Tariff, as it may be modified from time to time, which sets forth the standard division of responsibilities, and associated terms and conditions, for any ITC that operates in the PJM region.

4.0 Any responsibility or function of PJM not expressly assigned or transferred herein to ITC shall remain with PJM. Any responsibility or function of ITC under any agreement between ITC and any owner of transmission facilities not expressly assigned or transferred herein to PJM shall remain with ITC. Capitalized terms used herein that are not otherwise defined herein shall have the meaning given to such term in the Tariff.

5.0 PJM and ITC agree to assume, with respect to the ITC Transmission Facilities, the respective rights and responsibilities set forth in Attachment U to the Tariff.

6.0 The ITC Transmission Facilities that are the subject of this agreement are specifically identified in Schedule 1 to this ITC Agreement.

6.1 In the event ITC acquires or otherwise operates transmission facilities not identified in Schedule 1 to this Agreement that are outside the PJM region, such facilities shall not be deemed ITC Transmission Facilities unless ITC so chooses to designate or assign such facilities, subject to PJM’s agreement and FERC’s approval. If ITC acquires or otherwise operates transmission facilities not identified in Schedule 1 of this Agreement that are within the PJM region, such facilities shall be deemed ITC Transmission Facilities.

7.0 Following ITC’s satisfaction of the prerequisites specified in Attachment S, including FERC approvals, the ITC shall assume the rights and responsibilities described herein on the first day of the calendar month (“ITC Commencement Date”) following the date on which the ITC provides written certification to Transmission Provider that the ITC has in place the capability, including, without limitation, the approvals, licenses, assignments, trained and qualified personnel, systems, and facilities necessary to undertake its responsibilities hereunder. PJM shall coordinate with the ITC prior to the ITC Commencement Date to ensure that PJM is

capable as of the ITC Commencement Date of providing the responsibilities reserved to PJM hereunder as to the ITC Transmission Facilities and related bulk power facilities.

8.0 This Agreement shall remain in effect until the effective date of ITC's withdrawal from this Agreement. ITC may withdraw from this Agreement upon ninety (90) days advance written notice to PJM, provided that such withdrawal shall not be effective until ITC with respect to the ITC Transmission Facilities has (1) satisfied all applicable NERC and Applicable Regional ~~Reliability Council~~Entity requirements for operating a control area or being included within an existing control area; (2) put in place alternative arrangements for satisfaction of FERC's requirements with respect to comparable transmission services and, if required, participation in an RTO or Independent Transmission Provider; (3) transferred all of its functions and obligations as an ITC to one or more other entities to the satisfaction of FERC, and (4) received FERC approval or acceptance without suspension or hearing.

8.1 If ITC withdraws, it shall remain liable for any and all obligations incurred hereunder by ITC prior to the effective date of ITC's withdrawal.

8.2 If ITC becomes aware of any event that will cause ITC to relinquish functional control of any ITC Transmission Facilities, ITC shall notify PJM in writing as soon as practicable after becoming aware of such event.

9.0 This Agreement shall not be interpreted or construed to create any association, joint venture, or partnership between or among PJM and ITC or to impose any partnership obligation liability upon any either party. No party shall have the right, power or authority under this Agreement to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, any other party.

10.0 This Agreement is intended solely for the benefit of the parties and their respective successors and permitted assigns and is not intended to and shall not confer any rights or benefits on, any third party (other than the parties' successors and permitted assigns) that is not a signatory hereto.

11.0 This ITC Agreement shall inure to the benefit of and be binding upon the parties and their respective successors and assigns permitted herein, but shall not be assigned except to a successor in the operation of a party's Transmission Facilities by reason of a merger, consolidation, reorganization, sale, spin-off, or foreclosure, as a result of which substantially all such Transmission Facilities are acquired by such a successor, and such successor expressly is made a party to this Agreement, provided that any successor to either party shall procure all necessary regulatory approvals to exercise its rights and responsibilities in accordance with this Agreement.

12.0 This Agreement shall be interpreted, construed and governed by the laws of the state of Delaware.

13.0 Whether expressly so stated or not, all notices, demands, requests and other communications required or permitted by or provided for in this Agreement ("Notice") shall be given in writing to a party at the address set forth below, or at such other address as a party shall

designate for itself in writing in accordance with this section, and shall be delivered by hand or overnight courier:

For all Notices:

PJM Interconnection, L.L.C.
955 Jefferson Avenue
Valley Forge Corporate Center
Norristown, PA 19403-2497
Attn: Phillip Harris
President

With a copy to:

PJM Interconnection, L.L.C.
955 Jefferson Avenue
Valley Forge Corporate Center
Norristown, PA 19403-2497
Attn: Richard Wodyka
Chief Operating Officer

ITC

ITC represents and warrants to PJM that ITC has obtained, and at all times shall retain ownership of, or the authority to direct the operation of, the ITC Transmission Facilities; provided, however, that if a transmission owner participating in the ITC withdraws from the ITC, the description of the ITC Transmission Facilities in Schedule 1 shall be revised accordingly.

IN WITNESS WHEREOF, PJM and ITC have caused this ITC Agreement to be executed by their duly authorized representatives.

[signature blocks]

5.10 Auction Clearing Requirements

The Office of the Interconnection shall clear each Base Residual Auction and Incremental Auction for a Delivery Year in accordance with the following:

a) Variable Resource Requirement Curve

The Office of the Interconnection shall determine Variable Resource Requirement Curves for the PJM Region and for such Locational Deliverability Areas as determined appropriate in accordance with subsection (a)(iii) for such Delivery Year to establish the level of Capacity Resources that will provide an acceptable level of reliability consistent with the Reliability Principles and Standards. It is recognized that the variable resource requirement reflected in the Variable Resource Requirement Curve can result in an optimized auction clearing in which the level of Capacity Resources committed for a Delivery Year exceeds the PJM Region Reliability Requirement (less the Forecast RTO ILR Obligation for Delivery Years through May 31, 2012, or less the Short-Term Resource Procurement Target for Delivery Years thereafter) or Locational Deliverability Area Reliability Requirement (less the Forecast Zonal ILR Obligation for Delivery Years through May 31, 2012, or less the Short-Term Resource Procurement Target for Delivery Years thereafter for the Zones associated with such LDA) for such Delivery Year. For any auction, the Updated Forecast Peak Load, and Short-Term Resource Procurement Target applicable to such auction, shall be used, and Price Responsive Demand from any applicable approved PRD Plan, including any associated PRD Reservation Prices, shall be reflected in the derivation of the Variable Resource Requirement Curves, in accordance with the methodology specified in the PJM Manuals.

i) Methodology to Establish the Variable Resource Requirement Curve

Prior to the Base Residual Auction, in accordance with the schedule in the PJM Manuals, the Office of the Interconnection shall establish the Variable Resource Requirement Curve for the PJM Region as follows:

- Each Variable Resource Requirement Curve shall be plotted on a graph on which Unforced Capacity is on the x-axis and price is on the y-axis;
- The Variable Resource Requirement Curve for the PJM Region shall be plotted by first combining (i) a horizontal line from the y-axis to point (1), (ii) a straight line connecting points (1) and (2), (iii) a straight line connecting points (2) and (3), and (iv) a vertical line from point (3) to the x-axis, where:
 - For point (1), price equals: {the greater of [the Cost of New Entry] or [1.5 times (the Cost of New Entry minus the Net Energy and Ancillary Service Revenue Offset)]} divided by (one minus the pool-wide average EFORD) and Unforced Capacity equals: [the PJM Region Reliability Requirement multiplied by (100% plus the approved PJM Region Installed Reserve Margin (“IRM”)% minus

3%) divided by (100% plus IRM%)] minus the Forecast RTO ILR Obligation for Delivery Years through May 31, 2012 or less the Short-Term Resource Procurement Target for Delivery Years thereafter;

- For point (2), price equals: (the Cost of New Entry minus the Net Energy and Ancillary Service Revenue Offset) divided by (one minus the pool-wide average EFORD) and Unforced Capacity equals: [the PJM Region Reliability Requirement multiplied by (100% plus IRM% plus 1%) divided by (100% plus IRM%)] minus the Forecast RTO ILR Obligation for Delivery Years through May 31, 2012 or less the Short-Term Resource Procurement Target for Delivery Years thereafter; and
- For point (3), price equals [0.2 times (the Cost of New Entry minus the Net Energy and Ancillary Service Revenue Offset)] divided by (one minus the pool-wide average EFORD) and Unforced Capacity equals: [the PJM Region Reliability Requirement multiplied by (100% plus IRM% plus 5%) divided by (100% plus IRM%)] minus the Forecast RTO ILR Obligation for Delivery Years through May 31, 2012 or less the Short-Term Resource Procurement Target for Delivery Years thereafter;

ii) For any Delivery Year, the Office of the Interconnection shall establish a separate Variable Resource Requirement Curve for each LDA for which:

- A. the Capacity Emergency Transfer Limit is less than 1.15 times the Capacity Emergency Transfer Objective, as determined by the Office of the Interconnection in accordance with NERC and Applicable Regional ~~Reliability Council~~Entity guidelines; or
- B. such LDA had a Locational Price Adder in any one or more of the three immediately preceding Base Residual Auctions; or
- C. such LDA is determined in a preliminary analysis by the Office of the Interconnection to be likely to have a Locational Price Adder, based on historic offer price levels; provided however that for the Base Residual Auction conducted for the Delivery Year commencing on June 1, 2012, the ~~EMAAC~~Eastern Mid-Atlantic Region ("EMAR"), ~~SWMAAC~~Southwest Mid-Atlantic Region ("SWMAR"), and ~~MAAC~~Mid-Atlantic Region ("MAR") LDAs shall employ separate Variable Resource Requirement Curves regardless of the outcome of the above three tests; and provided further that the Office of the Interconnection may establish a separate Variable Resource Requirement Curve for an LDA not otherwise qualifying under the above three tests if it finds that such is required to achieve an acceptable level of reliability consistent with the Reliability

Principles and Standards, in which case the Office of the Interconnection shall post such finding, such LDA, and such Variable Resource Requirement Curve on its internet site no later than the March 31 last preceding the Base Residual Auction for such Delivery Year. The same process as set forth in subsection (a)(i) shall be used to establish the Variable Resource Requirement Curve for any such LDA, except that the Locational Deliverability Area Reliability Requirement for such LDA shall be substituted for the PJM Region Reliability Requirement and the LDA Short-Term Resource Procurement Target shall be substituted for the PJM Region Short-Term Resource Procurement Target. For purposes of calculating the Capacity Emergency Transfer Limit under this section, all generation resources located in the PJM Region that are, or that qualify to become, Capacity Resources, shall be modeled at their full capacity rating, regardless of the amount of capacity cleared from such resource for the immediately preceding Delivery Year.

iii) Procedure for ongoing review of Variable Resource Requirement Curve shape.

Beginning no later than for the Delivery Year that commences June 1, 2015, and continuing no later than for every third Delivery Year thereafter, the Office of the Interconnection shall perform a review of the shape of the Variable Resource Requirement Curve, as established by the requirements of the foregoing subsection. Such analysis shall be based on simulation of market conditions to quantify the ability of the market to invest in new Capacity Resources and to meet the applicable reliability requirements on a probabilistic basis. Based on the results of such review, PJM shall prepare a recommendation to either modify or retain the existing Variable Resource Requirement Curve shape. The Office of the Interconnection shall post the recommendation and shall review the recommendation through the stakeholder process to solicit stakeholder input. If a modification of the Variable Resource Requirement Curve shape is recommended, the following process shall be followed:

- A) If the Office of the Interconnection determines that the Variable Resource Requirement Curve shape should be modified, Staff of the Office of the Interconnection shall propose a new Variable Resource Requirement Curve shape on or before September 1, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new values would be applied.
- B) The PJM Members shall review the proposed modification to the Variable Resource Requirement Curve shape.
- C) The PJM Members shall either vote to endorse the proposed modification, to propose alternate modifications or to recommend no modification by October 31, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new values would be applied.

- D) The PJM Board of Managers shall consider a proposed modification to the Variable Resource Requirement Curve shape, and the Office of the Interconnection shall file any approved modified Variable Resource Requirement Curve shape with the FERC by December 1, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new values would be applied.

iv) Cost of New Entry

- A) For the Delivery Year commencing on June 1, 2012, and continuing thereafter unless and until changed pursuant to subsection (B) below, the Cost of New Entry for the PJM Region shall be \$112,868 per MW-year. The Cost of New Entry for each LDA shall be determined based upon the Transmission Owner zones that comprise such LDA, as provided in the table below. If an LDA combines transmission zones with differing Cost of New Entry values, the lowest such value shall be used.

Geographic Location Within the PJM Region Encompassing These Zones	Cost of New Entry in \$/MW-Year
PS, JCP&L, AE, PECO, DPL, RECO ("CONE Area 1")	<i>134,000</i>
BGE, PEPCO ("CONE Area 2")	<i>123,700</i>
AEP, Dayton, ComEd, APS, DQL, ATSI, DEOK ("CONE Area 3")	<i>123,500</i>
PPL, MetEd, Penelec ("CONE Area 4")	<i>130,100</i>
Dominion ("CONE Area 5")	<i>111,000</i>

- B) Beginning with the 2013-2014 Delivery Year, the CONE shall be adjusted to reflect changes in generating plant construction costs based on changes in the Applicable H-W Index, in accordance with the following:

(1) The Applicable H-W Index for any Delivery Year shall be the most recently published twelve-month change, at the time CONE values are required to be posted for the Base Residual Auction for such Delivery Year, in the Total Other Production Plant Index shown in the Handy-Whitman Index of Public Utility Construction Costs for the North Atlantic Region for purposes of CONE Areas 1, 2, and 4, for the North Central Region for purposes of CONE Area 3, and for the South Atlantic Region for purposes of CONE Area 5.

(2) The CONE in a CONE Area shall be adjusted prior to the Base Residual Auction for each Delivery Year by applying the Applicable H-W Index for such CONE Area to the Benchmark CONE for such CONE Area.

(3) The Benchmark CONE for a CONE Area shall be the CONE used for such CONE Area in the Base Residual Auction for the prior Delivery Year.

(4) Notwithstanding the foregoing, CONE values for any CONE Area for any Delivery Year shall be subject to amendment pursuant to appropriate filings with FERC under the Federal Power Act, including, without limitation, any filings resulting from the process described in section 5.10(a)(vii)(C) or any filing to establish new or revised CONE Areas.

v) Net Energy and Ancillary Services Revenue Offset

A) The Office of the Interconnection shall determine the Net Energy and Ancillary Services Revenue Offset each year for the PJM Region as (A) the annual average of the revenues that would have been received by the Reference Resource from the PJM energy markets during a period of three consecutive calendar years preceding the time of the determination, based on (1) the heat rate and other characteristics of such Reference Resource; (2) fuel prices reported during such period at an appropriate pricing point for the PJM Region with a fuel transmission adder appropriate for such region, as set forth in the PJM Manuals, assumed variable operation and maintenance expenses for such resource of \$6.47 per MWh, and actual PJM hourly average Locational Marginal Prices recorded in the PJM Region during such period; and (3) an assumption that the Reference Resource would be dispatched for both the Day-Ahead and Real-Time Energy Markets on a Peak-Hour Dispatch basis; plus (B) ancillary service revenues of \$2,199 per MW-year.

B) The Office of the Interconnection also shall determine a Net Energy and Ancillary Service Revenue Offset each year for each sub-region of the PJM Region for which the Cost of New Entry is determined as identified above, using the same procedures and methods as set forth in the previous subsection; provided, however, that: (1) the average hourly LMPs for the Zone in which the Reference Resource was assumed to be installed for purposes of the CONE estimate (as specified in the PJM Manuals) shall be used in place of the PJM Region average hourly LMPs; (2) if such sub-region was not integrated into the PJM Region for the entire applicable period, then the offset shall be calculated using only those whole calendar years during which the sub-region was integrated; and (3) a posted fuel pricing point in such sub-region, if available, and (if such pricing point is not available) a fuel

transmission adder appropriate to each assumed Cost of New Entry location from an appropriate PJM Region pricing point shall be used for each such sub-region.

vi) Adjustment to Net Energy and Ancillary Services Revenue Offset

Beginning with the Base Residual Auction scheduled for May 2010, the Net Energy and Ancillary Services Revenue Offset for a CONE Area shall be adjusted following any Delivery Year during which Scarcity Pricing was effective in such CONE Area pursuant to the Scarcity Pricing provisions of section 6A of Schedule 1 to the PJM Operating Agreement. Following each Delivery Year, the Scarcity Pricing revenues the Reference Resource in each CONE Area would have received during such Delivery Year shall be calculated based on the assumed heat rate and other characteristics of the Reference Resource, assumed Peak-Hour Dispatch, and the actual locational marginal prices and actual fuel prices during the Delivery Year for the applicable location, which shall be the transmission zone in which such resource was assumed to be installed for purposes of the estimate of CONE applicable to such CONE Area. The Scarcity Pricing revenues so determined shall be subtracted from the Net CONE otherwise calculated for such CONE Area for use in the Base Residual Auction next occurring after the Delivery Year in which Scarcity Pricing was effective in such CONE Area.

vii) Process for Establishing Parameters of Variable Resource Requirement Curve

- A) The parameters of the Variable Resource Requirement Curve will be established prior to the conduct of the Base Residual Auction for a Delivery Year and will be used for such Base Residual Auction.
- B) The Office of the Interconnection shall determine the PJM Region Reliability Requirement and the Locational Deliverability Area Reliability Requirement for each Locational Deliverability Area for which a Variable Resource Requirement Curve has been established for such Base Residual Auction on or before February 1, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new values will be applied, in accordance with the Reliability Assurance Agreement.
- C) Beginning no later than for the Delivery Year that commences June 1, 2015, and continuing no later than for every third Delivery Year thereafter, the Office of the Interconnection shall review the calculation of the Cost of New Entry for each CONE Area.
 - 1) If the Office of the Interconnection determines that the Cost of New Entry values should be modified, the Staff of the Office of the Interconnection shall propose new Cost of New Entry values on or before September 1, prior to the

conduct of the Base Residual Auction for the first Delivery Year in which the new values would be applied.

- 2) The PJM Members shall review the proposed values.
 - 3) The PJM Members shall either vote to endorse the proposed values or propose alternate values by October 31, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new values would be applied.
 - 4) The PJM Board of Managers shall consider Cost of New Entry values, and the Office of the Interconnection shall file any approved modified Cost of New Entry values with the FERC by December 1, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new values would be applied.
- D) Beginning no later than for the Delivery Year that commences June 1, 2015, and continuing no later than for every third Delivery Year thereafter, the Office of the Interconnection shall review the methodology set forth in this Attachment for determining the Net Energy and Ancillary Services Revenue Offset for the PJM Region and for each Zone.
- 1) If the Office of the Interconnection determines that the Net Energy and Ancillary Services Revenue Offset methodology should be modified, Staff of the Office of the Interconnection shall propose a new Net Energy and Ancillary Services Revenue Offset methodology on or before September 1, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new methodology would be applied.
 - 2) The PJM Members shall review the proposed methodology.
 - 3) The PJM Members shall either vote to endorse the proposed methodology or propose an alternate methodology by October 31, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new methodology would be applied.
 - 4) The PJM Board of Managers shall consider the Net Revenue Offset methodology, and the Office of the Interconnection shall file any approved modified Net Energy and Ancillary Services Revenue Offset values with

the FERC by December 1, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new values would be applied.

b) Locational Requirements

The Office of Interconnection shall establish locational requirements prior to the Base Residual Auction to quantify the amount of Unforced Capacity that must be committed in each Locational Deliverability Area, in accordance with the PJM Reliability Assurance Agreement.

c) Minimum Annual Resource Requirements

Prior to the Base Residual Auction and each Incremental Auction for each Delivery Year, beginning with the Delivery Year that starts on June 1, 2014, the Office of the Interconnection shall establish the Minimum Annual Resource Requirement and the Minimum Extended Summer Resource Requirement for the PJM Region and for each Locational Deliverability Area for which the Office of the Interconnection is required under section 5.10(a) of this Attachment DD to establish a separate VRR Curve for such Delivery Year.

d) Preliminary PJM Region Peak Load Forecast for the Delivery Year

The Office of the Interconnection shall establish the Preliminary PJM Region Load Forecast for the Delivery Year in accordance with the PJM Manuals by February 1, prior to the conduct of the Base Residual Auction for such Delivery Year.

e) Updated PJM Region Peak Load Forecasts for Incremental Auctions

The Office of the Interconnection shall establish the updated PJM Region Peak Load Forecast for a Delivery Year in accordance with the PJM Manuals by February 1, prior to the conduct of the First, Second, and Third Incremental Auction for such Delivery Year.

17. TRANSITION

17.1 Phase-in of the Reliability Pricing Model

The Reliability Pricing Model shall be phased in during the Transition Period as described below.

17.2 Reliability Pricing Model Auctions Conducted During Transition Period

- (a) The Office of the Interconnection shall conduct Base Residual Auctions for each Delivery Year in the Transition Period in accordance with the following schedule:

Delivery Year	Base Residual Auction Held
June 1, 2007 – May 31, 2008	April 2007
June 1, 2008 – May 31, 2009	July 2007
June 1, 2009 – May 31, 2010	October, 2007
June 1, 2010 – May 31, 2011	January, 2008
June 1, 2011 – May 31, 2012	May 2008

- b) The Office of the Interconnection shall conduct Incremental Auctions for each Delivery Year in the Transition Period in accordance with the following schedule:

Delivery Year	First Incremental Auction Held	Second Incremental Auction Held If Necessary	Third Incremental Auction Held
June 1, 2007 – May 31, 2008	None Held	None Held	None Held
June 1, 2008 – May 31, 2009	None Held	None Held	January, 2008
June 1, 2009 – May 31, 2010	None Held	April, 2008	January, 2009
June 1, 2010 – May 31, 2011	None Held	April, 2009	January, 2010
June 1, 2011 – May 31, 2012	June 2009	July 2010	February 2011

17.3 Transition Period Locational Deliverability Areas

The Office of the Interconnection shall establish Locational Deliverability Areas during the Transition Period in accordance with the following:

2007/2008, 2008/2009, and 2009/2010 Delivery Years

- [MAAC Region](#)[MAR](#) and APS (the zones listed below for [Eastern MAAC](#)[EMAR](#), [Southwestern MAAC](#)[SWMAR](#) and Western [MAAC](#)[Mid-Atlantic Region](#) (“[WMAR](#)”), plus APS)

- ComEd, AEP, Dayton, Dominion and Duquesne
- [Eastern MAACEMAR](#) (PSE&G, JCP&L, PECO, AE, DPL & RECO)
- [Southwestern MAACSWMAR](#) (PEPCO & BG&E)

2010/2011 and subsequent Delivery Years

- [MAAC RegionMAR](#)
- ComEd, AEP, Dayton, APS, and Duquesne
- Dominion
- [Eastern MAACEMAR](#)
- [Southwestern MAACSWMAR](#)
- [Western MAACWMAR](#) (Penelec, MetEd, PPL)
- Penelec
- ComEd
- AEP
- Dayton
- Duquesne
- APSAE
- BG&E
- DPL
- PECO
- PEPCO
- PSE&G
- JCP&L
- MetEd
- PPL
- PSEG northern region (north of Linden substation); and
- DPL southern region (south of Chesapeake and Delaware Canal).

17.4 Transition Period Variable Resource Requirement Curves

During the Transition Period, the Office of the Interconnection shall post on the PJM internet site the Variable Resource Requirement Curves that will apply for each Delivery Year no later than one month prior to the conduct of the Base Residual Auction for such Delivery Year.

17.5 Market Mitigation

The provisions of Section 6 of this Attachment shall apply to all Reliability Pricing Model Auctions conducted during the Transition Period; provided, however, that during the Transition Period, as to a Capacity Market Seller that owns or controls no more than 10,000 megawatts of Unforced Capacity in the PJM Region, the otherwise applicable Market Seller Offer Cap provided in Section 6 shall be increased by up to the following amounts in the following years for any Sell Offer submitted by such a seller in any Unconstrained LDA Group, with respect to no more than 3,000 megawatts of such Unforced Capacity:

- (a) \$10/MW-day for the 2007-2008 Delivery Year;

- (b) \$10/MW-day for the 2008-2009 Delivery Year; and
- (c) \$7.50/MW-day for the 2009-2010 Delivery Year;

For purposes of this provision, the 10,000 megawatt maximum shall apply separately to a Capacity Market Seller's resources subject to state rate-based regulation and resources that are not subject to state rate-based regulation.

17.6 Performance Assessment

Within six months after the end of the fourth Delivery Year, the Office of the Interconnection shall prepare, provide to Members, and file with FERC an assessment of the performance of the Reliability Pricing Model.

APPENDIX II

DEFINITIONS

1. Definitions.

The following definitions shall apply to this Agreement.

1.1 “Affiliate”

Affiliate shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

1.2 “Applicable Laws and Regulations”

Applicable Laws and Regulations shall mean all duly promulgated applicable federal, State and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority having jurisdiction over the relevant Parties, their respective facilities, and/or the respective services they provide.

1.3 “Applicable Regional ~~Reliability Council~~Entity”

Applicable Regional ~~Reliability Council~~Entity shall mean the ~~reliability council~~Regional Entity for the region in which the Transmission Owner or New Service Customer operates.

1.4 “Applicable Standards”

Applicable Standards shall mean the requirements and guidelines of NERC, the Applicable Regional ~~Reliability Council~~Entity and the Control Area in which the Direct Assignment Facilities or Customer-Funded Upgrades are electrically located, the PJM Manuals and applicable technical requirements and standards.

1.5 “Breach”

Breach shall mean the failure of a Party to perform or observe any material term or condition of the applicable Part of the PJM Tariff or this Upgrade CSA.

1.6 “Breaching Party”

Breaching Party shall mean a Party that is in Breach of the applicable Part of the PJM Tariff and/or this Upgrade CSA.

1.7 “Cancellation Costs”

Cancellation Costs shall mean the Costs and liabilities incurred in connection with: (a) cancellation of supplier and contractor written orders and agreements entered into to design, engineer, construct and install the Direct Assignment Facilities or Customer-Funded Upgrades identified in Appendix I to this Upgrade CSA; and/or (b) completion of some or all of the Direct Assignment Facilities or Customer-Funded Upgrades identified in Appendix I to this Upgrade CSA, or specific unfinished portions and/or removal of any or all of such Direct Assignment Facilities or Customer-Funded Upgrades which have been installed, to the extent required for the Transmission Owner and Transmission Provider to perform their respective obligations under this Upgrade CSA.

1.8 “Commission”

Commission shall mean the Federal Energy Regulatory Commission.

1.9 “Confidential Information”

Confidential Information shall mean any confidential, proprietary, or trade secret information of a plan, specification, pattern, procedure, design, engineering, device, list, concept, policy, or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed verbally, electronically, in writing, through inspection, or otherwise, and shall include, without limitation, all information relating to the producing Party’s technology, research and development, business affairs and pricing, and any information supplied by any Party to another such Party prior to the execution of a Transmission Service Agreement or this Upgrade CSA.

1.10 “Constructing Entity”

Constructing Entity shall mean either the Transmission Owner or the New Service Customer, depending on which entity has the construction responsibility pursuant to Part VI and this Upgrade CSA.

1.11 “Control Area”

Control Area shall mean an electric power system or combination of electric power systems to which a common automatic generation control scheme is applied in order to: (1) match, at all times, the power output of the generators within the electric power system(s) and capacity and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s); (2) maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice; (3) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice; and (4) provide sufficient generating capacity to maintain operating reserves in accordance with Good Utility Practice.

1.12 “Costs”

Costs shall mean all of the actual costs and expenses incurred by the Transmission Owner to complete its obligations under Section 2.4 of this Upgrade CSA, including, but not limited to, capital expenditures, overhead, return, and the costs of financing, equipment, labor, services, taxes, income tax gross-ups and any Incidental Expenses.

1.13 “Default”

Default shall mean the failure of a Breaching Party to cure its Breach in accordance with the applicable provisions of this Upgrade CSA and the PJM Tariff.

1.14 “Delivering Party”

Delivering Party shall mean the entity supplying capacity and energy to be transmitted at Point(s) of Receipt.

1.15 “Emergency Condition”

Emergency Condition shall mean a condition or situation: (i) that in the judgment of any Party is imminently likely to endanger life or property; or (ii) that in the judgment of the Transmission Owner or the Transmission Provider is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Transmission System, a Transmission Owner’s transmission system or distribution system to which the Transmission System is directly or indirectly connected; or (iii) that in the judgment of the New Service Customer is imminently likely (as determined in a non-discriminatory manner) to cause damage to the facility.

1.16 “Environmental Laws”

Environmental Laws shall mean Applicable Laws or Regulations relating to pollution or protection of the environment, natural resources or human health and safety.

1.17 “Facilities Study”

Facilities Study shall mean that certain Facilities Study conducted by Transmission Provider (or at its direction) to determine the design and specification of the Direct Assignment Facilities or Customer-Funded Upgrades necessary to accommodate the New Service Request, as applicable.

1.18 “Federal Power Act”

Federal Power Act shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a, et seq.

1.19 “FERC”

FERC shall mean the Federal Energy Regulatory Commission or its successor.

1.20 “Firm Point-To-Point Transmission Service”

Firm Point-To-Point Transmission Service shall mean Transmission Service under the PJM Tariff that is reserved and/or scheduled between specified Points of Receipt and Delivery pursuant to Part II of the PJM Tariff.

1.21 “Force Majeure”

Force Majeure shall mean any cause beyond the control of the affected Party, including but not restricted to, acts of God, flood, drought, earthquake, storm, fire, lightning, epidemic, war, riot, civil disturbance or disobedience, labor dispute, labor or material shortage, sabotage, acts of public enemy, explosions, orders, regulations or restrictions imposed by governmental, military, or lawfully established civilian authorities, which, in any of the foregoing cases, by exercise of due diligence such Party could not reasonably have been expected to avoid, and which, by the exercise of due diligence, it has been unable to overcome. Force Majeure does not include: (i) a failure of performance that is due to an affected Party’s own negligence or intentional wrongdoing; (ii) any removable or remediable causes (other than settlement of a strike or labor dispute) which an affected Party fails to remove or remedy within a reasonable time; or (iii) economic hardship of an affected Party.

1.22 “Good Utility Practice”

Good Utility Practice shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

1.23 “Governmental Authority”

Governmental Authority means any federal, State, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, arbitrating body, or other governmental authority having jurisdiction over any Party regarding any matter relating to this Upgrade CSA, as applicable.

1.24 “Hazardous Substances”

Hazardous Substances shall mean any chemicals, materials or substances defined as or included in the definition of “hazardous substances,” “hazardous wastes,” “hazardous materials,” “hazardous constituents,” “restricted hazardous materials,” “extremely hazardous substances,” “toxic substances,” “radioactive substances,” “contaminants,” “pollutants,” “toxic pollutants” or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

1.25 “Incidental Expenses”

Incidental Expenses shall mean those expenses incidental to the performance of design, engineering, procurement and construction of the Direct Assignment Facilities or Customer-Funded Upgrades identified in Appendix I to this Upgrade CSA, including, but not limited to, the expense of temporary construction power, telecommunications charges, Transmission Owner expenses associated with, but not limited to, document preparation, design review, engineering, installation, monitoring, and construction-related operations and maintenance for the Direct Assignment Facilities or Customer-Funded Upgrades identified in Appendix I to this Upgrade CSA.

1.26 “Local Upgrades”

Local Upgrades shall mean modifications or additions of facilities to abate any local thermal loading, voltage, short circuit, stability or similar engineering problem caused by the interconnection and delivery of generation to the Transmission System. Local Upgrades shall include: (i) Direct Connection Local Upgrades which are Local Upgrades that only serve the Customer Interconnection Facility and have no impact or potential impact on the Transmission System until the final tie-in is complete; and (ii) Non-Direct Connection Local Upgrades which are parallel flow Local Upgrades that are not Direct Connection Local Upgrades.

(i) Direct Connection Local Upgrades which are Local Upgrades that only serve the Customer Interconnection Facility and have no impact or potential impact on the Transmission System until the final tie-in is complete; and

(ii) Direct Connection Local Upgrades which are parallel flow Local Upgrades that are not Direct Connection Local Upgrades.

1.27 “Long-Term Firm Point-To-Point Transmission Service”

Long-Term Firm Point-To-Point Transmission Service shall mean Firm Point-To-Point Transmission Service under Part II of the PJM Tariff with a term of one year or more.

~~1.28 “MAAC”~~

~~MAAC shall mean the Mid-Atlantic Area Council, a reliability council under section 202 of the Federal Power Act, established pursuant to the MAAC Agreement dated 1 August 1994, or any successor thereto.~~

~~1.29 “MAAC Control Zone”~~

~~MAAC Control Zone shall mean the Control Zones comprised of the Transmission Facilities of one or more of the Transmission Owners in the Geographic area designated in the PJM Manuals as the MAAC Control Zone.~~

| **1.3028 “NERC”**

NERC shall mean the North American Electric Reliability Council or any successor thereto.

| **1.3129 “Network Upgrades”**

Network Upgrades shall mean modifications or additions to transmission-related facilities that are integrated with and support the Transmission Provider’s overall Transmission System for the general benefit of all users of such Transmission System. Network Upgrades shall include:

(i) **Direct Connection Network Upgrades** which are Network Upgrades that only serve the Customer Interconnection Facility and have no impact or potential impact on the Transmission System until the final tie-in is complete; and

(ii) **Non-Direct Connection Network Upgrades** which are parallel flow Network Upgrades that are not Direct Connection Network Upgrades.

| **1.3230 “Office of the Interconnection”**

Office of the Interconnection shall mean the Office of the Interconnection, as supervised by the Board of Managers of the PJM Interconnection, L.L.C., acting pursuant to the Operating Agreement.

| **1.3331 “Operating Agreement of the PJM Interconnection, L.L.C.” or “Operating Agreement”**

Operating Agreement of the PJM Interconnection, L.L.C.” or “Operating Agreement shall mean that agreement dated as of April 1, 1997 and as amended and restated as of June 2, 1997 and as amended from time to time thereafter, among the members of the PJM Interconnection, L.L.C.

| **1.3432 “Part I”**

Part I shall mean the PJM Tariff Definitions and Common Service Provisions contained in Sections 2 through 12 of the PJM Tariff.

| **1.3533 “Part II”**

Part II shall mean PJM Tariff Sections 13 through 27 pertaining to Point-To-Point Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments of the PJM Tariff.

| **1.3634 “Part III”**

Part III shall mean PJM Tariff Sections 28 through 35 pertaining to Network Integration Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments of the PJM Tariff.

1.3735 “Part IV”

Part IV shall mean PJM Tariff Sections 36 through 112 pertaining to generation or merchant transmission interconnection to the Transmission System in conjunction with applicable Common Service Provision of Part I and appropriate Schedules and Attachments.

1.3836 “Part VI”

Part VI shall mean PJM Tariff Sections 200 through 237 pertaining to the queuing, study, and agreements relating to New Service Requests, and the rights associated with Customer-Funded Upgrades in conjunction with the applicable Common Service Provision of Part I and appropriate Schedules and Attachments.

1.3937 “PJM Interchange Energy Market”

PJM Interchange Energy Market shall mean the regional competitive market administered by the Transmission Provider for the purchase and sale of spot electric energy at wholesale interstate commerce and related services, as more fully set forth in Attachment K – Appendix to the PJM Tariff and Schedule 1 to the Operating Agreement.

1.4038 “PJM Manuals”

PJM Manuals shall mean the instructions, rules, procedures and guidelines established by the Transmission Provider for the operation, planning, and accounting requirements of the PJM Region and the PJM Interchange Energy Market.

1.4139 “PJM Region”

PJM Region shall ~~mean the aggregate of the PJM West Region, the VACAR Control Zone, and the MAAC Control Zone~~have the meaning specified in the Operating Agreement.

~~**1.42 “PJM West Region”**~~

~~PJM West Region shall include the Zones of Allegheny Power; Commonwealth Edison Company (including Commonwealth Edison Co. of Indiana); AEP East Operating Companies; The Dayton Power and Light Company; and Duquesne Light Company.~~

1.4340 “Point(s) of Delivery”

Point(s) of Delivery shall mean the point(s) on the Transmission Provider’s Transmission System where capacity and energy transmitted by the Transmission Provider will be made available to the Receiving Party under Part II of the PJM Tariff. The Point(s) of Delivery shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

1.4441 “Point(s) of Receipt”

Point(s) of Receipt shall mean the point(s) of interconnection on the Transmission Provider's Transmission System where capacity and energy will be made available to the Transmission Provider by the Delivering Party under Part II of the PJM Tariff. The Point(s) of Receipt shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

1.4542 “Project Financing” means:

Project Financing shall mean

(a) One or more loans, leases, equity and/or debt financings, together with all modifications, renewals, supplements, substitutions and replacements thereof, the proceeds of which are used to finance or refinance the costs of the Direct Assignment Facilities or Customer-Funded Upgrades identified in Appendix I to this Upgrade CSA, any alteration, expansion or improvement to such Direct Assignment Facilities or Customer-Funded Upgrades, the purchase and sale of such Direct Assignment Facilities or Customer-Funded Upgrades or the operation of such Direct Assignment Facilities or Customer-Funded Upgrades;

(b) Loans and/or debt issues secured by the Direct Assignment Facilities or Customer-Funded Upgrades identified in Appendix I to this Upgrade CSA.

1.4643 “Project Finance Entity”

Project Finance Entity means: (a) a holder, trustee or agent for holders, of any component of Project Financing; or (b) any purchaser of capacity and/or energy produced by the facility to which New Service Customer has granted a mortgage or other lien as security for some or all of New Service Customer's obligations under the corresponding power purchase agreement.

1.4744 “Reasonable Efforts”

Reasonable Efforts shall mean, with respect to any action required to be made, attempted, or taken by Transmission Provider or Transmission Owner, such efforts as are timely and consistent with Good Utility Practice and with efforts that such Party would undertake for the protection of its own interests.

1.4845 “Receiving Party”

Receiving Party shall mean the entity receiving the capacity and energy transmitted by the Transmission Provider to Point(s) of Delivery.

1.4946 “Regional Transmission Expansion Plan” or “RTEP”

Regional Transmission Expansion Plan or “RTEP” shall mean the plan prepared by the Office of the Interconnection pursuant to Schedule 6 of the Operating Agreement for the enhancement and

expansion of the Transmission System in order to meet the demands for firm transmission service in the PJM Region.

1.5047 “Schedule and Scope of Work”

Schedule and Scope of Work shall mean that schedule and scope of work attached to the Upgrade CSA setting forth the scope and timing of work to be performed by the Transmission Owner, based upon the Facilities Study and subject to modification, as required, in accordance with Transmission Provider’s scope change process for projects set forth in the PJM Manuals.

1.5148 “Security”

Security shall mean the letter of credit or other reasonable form of security provided by the New Service Customer to the Transmission Provider pursuant to Section 213.4 of the PJM Tariff to secure the New Service Customer’s responsibility for Costs incurred pursuant to this Upgrade CSA.

1.5249 “Service Agreement”

Service Agreement shall mean the initial agreement and any amendments or supplements thereto entered into by the New Service Customer and the Transmission Provider for service under the PJM Tariff.

1.5350 “State”

State shall mean a state of the United States or the District of Columbia.

1.5451 “Transmission System”

Transmission System shall mean the facilities controlled or operated by the Transmission Provider within the PJM Region that are used to provide transmission service under Part II and Part III of the PJM Tariff.

~~1.55 “VACAR”~~

~~VACAR shall mean the group of five companies, consisting of Duke Energy, Carolina Power and Light, South Carolina Public Service Authority, South Carolina Electric and Gas, and Virginia Electric and Power Company.~~

**Section(s) of the
PJM Operating Agreement
(Redline Version)**

Definitions A - B

1.1 Act.

“Act” shall mean the Delaware Limited Liability Company Act, Title 6, §§ 18-101 to 18-1109 of the Delaware Code.

1.1A Active and Significant Business Interest.

“Active and Significant Business Interest” is a term that shall be used to assess the scope of a Member’s PJM membership and shall be based on a Member’s activity in the PJM RTO and/or Interchange Energy Markets. A Member’s Active and Significant Business Interest shall: 1) be determined relative to the scope of the Member’s PJM membership and activity in the PJM RTO and/or Interchange Energy Markets considering, among other things, the Member’s public statements and/or regulatory filings regarding its PJM activities; and 2) reflect a substantial contributor to the Member’s recent market activity, revenues, costs, investment, and/or earnings when considering the Member and its corporate affiliates’ interests within the PJM footprint.

1.2 Affiliate.

“Affiliate” shall mean any two or more entities, one of which controls the other or that are under common control. “Control” shall mean the possession, directly or indirectly, of the power to direct the management or policies of an entity. Ownership of publicly-traded equity securities of another entity shall not result in control or affiliation for purposes of this Agreement if the securities are held as an investment, the holder owns (in its name or via intermediaries) less than 10 percent of the outstanding securities of the entity, the holder does not have representation on the entity's board of directors (or equivalent managing entity) or vice versa, and the holder does not in fact exercise influence over day-to-day management decisions. Unless the contrary is demonstrated to the satisfaction of the Members Committee, control shall be presumed to arise from the ownership of or the power to vote, directly or indirectly, ten percent or more of the voting securities of such entity.

1.2A Affected Member.

“Affected Member” shall mean a Member which as a result of its participation in PJM’s markets or its membership in the LLC PJM provided confidential information to the Office of the Interconnection, which confidential information is requested by, or is disclosed to an Authorized Person under a Non-Disclosure Agreement.

1.3 Agreement or Operating Agreement.

“Agreement” or “Operating Agreement” shall mean this Amended and Restated Operating Agreement of PJM Interconnection, L.L.C., including all Schedules, Exhibits, Appendices, addenda or supplements hereto, as amended from time to time.

1.4 Annual Meeting of the Members.

“Annual Meeting of the Members” shall mean the meeting specified in Section 8.3.1 of this Agreement.

1.4.01 Associate Member.

“Associate Member” shall mean an entity that satisfies the requirements of Section 11.7 of this Agreement.

1.4A Authorized Commission.

“Authorized Commission” shall mean (i) a State public utility commission that regulates the distribution or supply of electricity to retail customers and is legally charged with monitoring the operation of wholesale or retail markets serving retail suppliers or customers within its State or (ii) an association or organization comprised exclusively of State public utility commissions described in the immediately preceding clause (i).

1.4B Authorized Person.

“Authorized Person” shall have the meaning set forth in Section 18.17.4.

1.5 Board Member.

“Board Member” shall mean a member of the PJM Board.

1.5A Applicable Regional ~~Reliability Council~~Entity.

“Applicable Regional ~~Reliability Council~~Entity” shall mean the ~~reliability council~~Regional Entity for the region in which a Member operates.

1.5B Behind The Meter Generation.

“Behind The Meter Generation” refers to a generating unit that delivers energy to load without using the Transmission System or any distribution facilities (unless the entity that owns or leases the distribution facilities has consented to such use of the distribution facilities and such consent has been demonstrated to the satisfaction of the Office of the Interconnection); provided, however, that Behind The Meter Generation does not include (i) at any time, any portion of such generating unit’s capacity that is designated as a Generation Capacity Resource, or (ii) in any hour, any portion of the output of such generating unit[s] that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market.

Definitions C - D

1.6 Capacity Resource.

“Capacity Resource” have the meaning provided in the Reliability Assurance Agreement.

1.6A Consolidated Transmission Owners Agreement.

“Consolidated Transmission Owners Agreement” dated as of December 15, 2005, by and among the Transmission Owners and by and between the Transmission Owners and PJM Interconnection, L.L.C.

1.7 Control Area.

“Control Area” shall mean an electric power system or combination of electric power systems bounded by interconnection metering and telemetry to which a common automatic generation control scheme is applied in order to:

- (a) match the power output of the generators within the electric power system(s) and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s);
- (b) maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice;
- (c) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice and the criteria of NERC and ~~the each applicable regional reliability council of NERC~~ Applicable Regional Entity;
- (d) maintain power flows on transmission facilities within appropriate limits to preserve reliability; and
- (e) provide sufficient generating capacity to maintain operating reserves in accordance with Good Utility Practice.

1.7.01 Control Zone.

“Control Zone” shall mean ~~any of the ECAR Control Zone(s), MAAC Control Zone, or MAIN Control Zone(s), or the VACAR Control Zone~~ one Zone or multiple contiguous Zones, as designated in the PJM Manuals.

1.7.01a Counterparty.

“Counterparty” shall mean PJMSettlement as the contracting party, in its name and own right and not as an agent, to an agreement or transaction with Market Participants or other entities, including the agreements and transactions with customers regarding transmission service and other transactions under the PJM Tariff and this Operating Agreement. PJMSettlement shall not be a counterparty to (i)

any bilateral transactions between Market Participants, or (ii) with respect to self-supplied or self-scheduled transactions reported to the Office of the Interconnection.

1.7.02 Default Allocation Assessment.

“Default Allocation Assessment” shall mean the assessment determined pursuant to section 15.2.2 of this Agreement.

1.7.03 Demand Resource.

“Demand Resource” shall have the meaning provided in the Reliability Assurance Agreement.

1.7A [Reserved].

1.7B [Reserved].

Definitions E - F

1.7C ~~ECAR.~~[Reserved]

~~“ECAR” shall mean the reliability council under section 202 of the Federal Power Act, established pursuant to the ECAR Coordination Agreement dated June 1, 1968, or any successor thereto~~

1.7D ~~ECAR Control Zone.~~[Reserved]

~~“ECAR Control Zone” shall mean any one of the one or more Control Zones comprised of the Transmission Facilities of one or more of the Transmission Owners for which ECAR is the Applicable Regional Reliability Council, as designated in the PJM Manuals.~~

1.8 Electric Distributor.

“Electric Distributor” shall mean a Member that: 1) owns or leases with rights equivalent to ownership electric distribution facilities that are used to provide electric distribution service to electric load within the PJM Region; or 2) is a generation and transmission cooperative or a joint municipal agency that has a member that owns electric distribution facilities used to provide electric distribution service to electric load within the PJM Region.

1.9 Effective Date.

“Effective Date” shall mean August 1, 1997, or such later date that FERC permits this Agreement to go into effect.

1.10 Emergency.

“Emergency” shall mean: (i) an abnormal system condition requiring manual or automatic action to maintain system frequency, or to prevent loss of firm load, equipment damage, or tripping of system elements that could adversely affect the reliability of an electric system or the safety of persons or property; or (ii) a fuel shortage requiring departure from normal operating procedures in order to minimize the use of such scarce fuel; or (iii) a condition that requires implementation of emergency procedures as defined in the PJM Manuals.

1.11 End-Use Customer.

“End-Use Customer” shall mean a Member that is a retail end-user of electricity within the PJM Region. A Member that is a retail end-user that owns generation may qualify as an End-Use customer if: (1) the average physical unforced capacity owned by the Member and its affiliates in the PJM region over the five Planning Periods immediately preceding the relevant Planning Period does not exceed the average PJM capacity obligation for the Member and its affiliates over the same time period; or (2) the average energy produced by the Member and its affiliates within the PJM region over the five Planning Periods immediately preceding the relevant Planning Period does not exceed the average energy consumed by that Member and its affiliates

within the PJM region over the same time period. The foregoing notwithstanding, taking retail service may not be sufficient to qualify a Member as an End-Use Customer.

1.12 FERC.

“FERC” shall mean the Federal Energy Regulatory Commission or any successor federal agency, commission or department exercising jurisdiction over this Agreement.

1.13 Finance Committee.

“Finance Committee” shall mean the body formed pursuant to Section 7.5.1 of this Agreement.

Definitions M - N

1.20 ~~MAAC.~~[Reserved]

~~“MAAC” shall mean the Mid Atlantic Area Council, a reliability council under § 202 of the Federal Power Act established pursuant to the MAAC Agreement dated August 1, 1994 or any successor thereto.~~

1.20A ~~MAAC Control Zone~~PJM Mid-Atlantic Region.

~~“MAAC Control Zone~~PJM Mid-Atlantic Region” shall mean the aggregate of the Transmission Facilities of Atlantic City Electric Company, Baltimore Gas and Electric Company, Delmarva Power and Light Company, Jersey Central Power and Light Company, Metropolitan Edison Company, PECO Energy Company, Pennsylvania Electric Company, PPL Electric Utilities Corporation, Potomac Electric Power Company, Public Service Electric and Gas Company, and Rockland Electric Company.

1.20B ~~MAIN.~~[Reserved]

~~“MAIN” shall mean the Mid America Interconnected Network, a reliability council under § 202 of the Federal Power Act established pursuant to the Amended and Restated Bylaws of MAIN, dated January 8, 1998, or any successor thereof.~~

1.20C ~~MAIN Control Zone.~~[Reserved]

~~“MAIN Control Zone” shall mean any one of the one or more Control Zones comprised of the Transmission Facilities of one or more of the Transmission Owners for which MAIN is the Applicable Regional Reliability Council, as designated in the PJM Manuals.~~

1.21 Market Buyer.

“Market Buyer” shall mean a Member that has met reasonable creditworthiness standards established by the Office of the Interconnection and that is otherwise able to make purchases in the PJM Interchange Energy Market.

1.22 Market Participant.

“Market Participant” shall mean a Market Buyer, a Market Seller, an Economic Load Response Participant, or all three.

1.23 Market Seller.

“Market Seller” shall mean a Member that has met reasonable creditworthiness standards established by the Office of the Interconnection and that is otherwise able to make sales in the PJM Interchange Energy Market.

1.24 Member.

“Member” shall mean an entity that satisfies the requirements of Section 11.6 of this Agreement and that (i) is a member of the LLC immediately prior to the Effective Date, or (ii) has executed an Additional Member Agreement in the form set forth in Schedule 4 hereof.

1.25 Members Committee.

“Members Committee” shall mean the committee specified in Section 8 of this Agreement composed of representatives of all the Members.

1.26 NERC.

“NERC” shall mean the North American Electric Reliability Council, or any successor thereto.

1.26A Non-Disclosure Agreement.

“Non-Disclosure Agreement” shall mean an agreement between an Authorized Person and the Office of the Interconnection, pursuant to Section 18 of this Agreement, the form of which is appended to this Agreement as Schedule 10, wherein the Authorized Person is given access to otherwise restricted confidential information, for the benefit of their respective Authorized Commission.

1.26B Non-Retail Behind The Meter Generation.

“Non-Retail Behind The Meter Generation” shall mean Behind the Meter Generation that is used by municipal electric systems, electric cooperatives, and electric distribution companies to serve load.

Definitions O - P

1.27 Office of the Interconnection.

“Office of the Interconnection” shall mean the LLC.

1.28 Operating Reserve.

“Operating Reserve” shall mean the amount of generating capacity scheduled to be available for a specified period of an Operating Day to ensure the reliable operation of a Control Zone, as specified in the PJM Manuals.

1.29 Original PJM Agreement.

“Original PJM Agreement” shall mean that certain agreement between certain of the Members, originally dated September 26, 1956, and as amended and supplemented up to and including December 31, 1996, relating to the coordinated operation of their electric supply systems and the interchange of electric capacity and energy among their systems.

1.30 Other Supplier.

“Other Supplier” shall mean a Member that: (i) is engaged in buying, selling or transmitting electric energy, capacity, ancillary services, financial transmission rights or other services available under PJM’s governing documents in or through the Interconnection or has a good faith intent to do so, and; (ii) does not qualify for the Generation Owner, Electric Distributor, Transmission Owner or End-Use Customer sectors.

1.31 PJM Board.

“PJM Board” shall mean the Board of Managers of the LLC, acting pursuant to this Agreement.

1.31A [Reserved].

1.32 PJM Control Area.

“PJM Control Area” shall mean the Control Area recognized by NERC as the PJM Control Area.

1.33 PJM Dispute Resolution Procedures.

“PJM Dispute Resolution Procedures” shall mean the procedures for the resolution of disputes set forth in Schedule 5 of this Agreement.

1.34 PJM Interchange Energy Market.

“PJM Interchange Energy Market” shall mean the regional competitive market administered by the Office of the Interconnection for the purchase and sale of spot electric energy at wholesale in interstate commerce and related services established pursuant to Schedule 1 to this Agreement.

1.35 PJM Manuals.

“PJM Manuals” shall mean the instructions, rules, procedures and guidelines established by the Office of the Interconnection for the operation, planning, and accounting requirements of the PJM Region and the PJM Interchange Energy Market.

1.35.01 PJM Market Monitor.

“PJM Market Monitor” shall mean the Market Monitoring Unit established under Attachment M to the PJM Tariff.

1.35A PJM Region.

“PJM Region” shall mean the aggregate of the ~~MAAC Control Zone, the PJM West Region, and VACAR Control Zone~~Zones within PJM as set forth in Attachment J to the PJM Tariff.

1.35B PJM South Region.

“PJM South Region” shall mean the ~~VACAR Control Zone~~Transmission Facilities of Virginia Electric and Power Company.

1.35C PJM Settlement.

“PJM Settlement” shall mean PJM Settlement, Inc. (or its successor), established by PJM as set forth in Section 3.3.

1.36 PJM Tariff.

“PJM Tariff” shall mean the PJM Open Access Transmission Tariff providing transmission service within the PJM Region, including any schedules, appendices, or exhibits attached thereto, as in effect from time to time.

1.36A [Reserved.]

1.36B PJM West Region.

“PJM West Region” shall mean the ~~aggregate of the ECAR Control Zone(s) and MAIN Control Zone(s)~~Zones of Allegheny Power; Commonwealth Edison Company (including Commonwealth Edison Co. of Indiana); AEP East Operating Companies; The Dayton Power and Light Company; the Duquesne Light Company; American Transmission Systems, Incorporated; Duke Energy Ohio, Inc. and Duke Energy Kentucky, Inc.

1.37 Planning Period.

“Planning Period” shall initially mean the 12 months beginning June 1 and extending through May 31 of the following year, or such other period established under the procedures of, as applicable, the Reliability Assurance Agreement.

1.38 President.

“President” shall have the meaning specified in Section 9.2.

1.38A Public Policy Objectives

“Public Policy Objectives” shall refer to Public Policy Requirements, as well as public policy initiatives of state or federal entities that have not been codified into law or regulation but which nonetheless may have important impacts on long term planning considerations.

1.38B Public Policy Requirements

“Public Policy Requirements” shall refer to policies pursued by state or federal entities, where such policies are reflected in enacted statutes or regulations, including but not limited to, state renewable portfolio standards and requirements under Environmental Protection Agency regulations.

Definitions Q - R

1.38.001 Regional Entity.

“Regional Entity” shall mean an organization that NERC has delegated the authority to propose and enforce reliability standards pursuant to the Federal Power Act.

1.38.01 Regional RTEP Project.

“Regional RTEP Project” shall mean a transmission expansion or enhancement rated at 230 kV or above which is required for compliance with the following PJM criteria: system reliability, operational performance or economic criteria, pursuant to a determination by the Office of the Interconnection.

1.38.01A Relevant Electric Retail Regulatory Authority:

An entity that has jurisdiction over and establishes prices and policies for competition for providers of retail electric service to end-customers, such as the city council for a municipal utility, the governing board of a cooperative utility, the state public utility commission or any other such entity.

1.38A Regulation Zone.

“Regulation Zone” shall mean any of those one or more geographic areas, each consisting of a combination of one or more Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, regulation service.

1.39 Related Parties.

“Related Parties” shall mean, solely for purposes of the governance provisions of this Agreement: (i) any generation and transmission cooperative and one of its distribution cooperative members; and (ii) any joint municipal agency and one of its members. For purposes of this Agreement, representatives of state or federal government agencies shall not be deemed Related Parties with respect to each other, and a public body's regulatory authority, if any, over a Member shall not be deemed to make it a Related Party with respect to that Member.

1.40 Reliability Assurance Agreement.

“Reliability Assurance Agreement” shall mean that certain Reliability Assurance Agreement Among Load-Serving Entities in the PJM Region, on file with FERC as PJM Interconnection, L.L.C. Rate Schedule FERC. No .42, establishing obligations, standards and procedures for maintaining the reliable operation of the PJM Region.

1.40A [Reserved].

1.40B [Reserved].

Definitions U - Z

1.47 User Group.

“User Group” shall mean a group formed pursuant to Section 8.7 of this Agreement.

1.47A VACAR.

“VACAR” shall mean the group of five companies, consisting of Duke Energy, Carolina Power and Light, South Carolina Public Service Authority, South Carolina Electric and Gas, and Virginia Electric and Power Company.

1.47B ~~VACAR Control Zone.~~[Reserved]

~~“VACAR Control Zone” shall mean the Transmission Facilities of Virginia Electric and Power Company.~~

1.48 Voting Member.

“Voting Member” shall mean (i) a Member as to which no other Member is an Affiliate or Related Party, or (ii) a Member together with any other Members as to which it is an Affiliate or Related Party.

1.49 Weighted Interest.

“Weighted Interest” shall be equal to $(0.1(1/N) + 0.5(B/C) + 0.2(D/E) + 0.2(F/G))$, where:

N = the total number of Members excluding ex officio Members and State Consumer Advocates (which, for purposes of Section 15.2 of this agreement, shall be calculated as of five o'clock p.m. Eastern Time on the date PJM declares a Member in default)

B = the Member's internal peak demand for the previous calendar year (which, for Load Serving Entities under the Reliability Assurance Agreement, shall be that used to calculate Accounted For Obligation as determined by the Office of the Interconnection pursuant to Schedule 7 of the Reliability Assurance Agreement averaged over the previous calendar year)

C = the sum of factor B for all Members

D = the Member's generating capability from Generation Capacity Resources located in the PJM Region as of January 1 of the current calendar year, determined by the Office of the Interconnection pursuant to Schedule 9 of the Reliability Assurance Agreement

E = the sum of factor D for all Members

F = the sum of the Member's circuit miles of transmission facilities multiplied by the respective operating voltage for facilities 100 kV and above as of January 1 of the current calendar year

G = the sum of factor F for all Members

1.50 [Reserved].

1.51 [Reserved].

1.52 Zone.

“Zone” shall mean an area within the PJM Region, as set forth in Attachment J to the PJM Tariff.

10.4 Duties and Responsibilities.

The Office of the Interconnection, under the direction of the President as supervised and overseen by the PJM Board, shall carry out the following duties and responsibilities, in accordance with the provisions of this Agreement:

- i) Administer and implement this Agreement;
- ii) Perform such functions in furtherance of this Agreement as the PJM Board, acting within the scope of its duties and responsibilities under this Agreement, may direct;
- iii) Prepare, maintain, update and disseminate the PJM Manuals;
- iv) Comply with NERC, and Applicable Regional ~~Reliability Council~~Entity operation and planning standards, principles and guidelines;
- v) Maintain an appropriately trained workforce, and such equipment and facilities, including computer hardware and software and backup power supplies, as necessary or appropriate to implement or administer this Agreement;
- vi) Direct the operation and coordinate the maintenance of the facilities of the PJM Region used for both load and reactive supply, so as to maintain reliability of service and obtain the benefits of pooling and interchange consistent with this Agreement, and the Reliability Assurance Agreement;
- vii) Direct the operation and coordinate the maintenance of the bulk power supply facilities of the PJM Region with such facilities and systems of others not party to this Agreement in accordance with agreements between the LLC and such other systems to secure reliability and continuity of service and other advantages of pooling on a regional basis;
- viii) Perform interchange accounting and maintain records pertaining to the operation of the PJM Interchange Energy Market and the PJM Region;
- ix) Notify the Members of the receipt of any application to become a Member, and of the action of the Office of the Interconnection on such application, including but not limited to the completion of integration of a new Member's system into the PJM Region, as specified in Section 11.6(f);
- x) Calculate the Weighted Interest and Default Allocation Assessment of each Member;
- xi) Maintain accurate records of the sectors in which each Voting Member is entitled to vote, and calculate the results of any vote taken in the Members Committee;
- xii) Furnish appropriate information and reports as are required to keep the Members regularly informed of the outlook for, the functioning of, and results achieved by the PJM Region;

- xiii) File with FERC on behalf of the Members any amendments to this Agreement or the Schedules hereto, any new Schedules hereto, and make any other regulatory filings on behalf of the Members or the LLC necessary to implement this Agreement;
- xiv) At the direction of the PJM Board, submit comments to regulatory authorities on matters pertinent to the PJM Region;
- xv) Consult with the standing or other committees established pursuant to Section 8.6(a) on matters within the responsibility of the committee;
- xvi) Perform operating studies of the bulk power supply facilities of the PJM Region and make such recommendations and initiate such actions as may be necessary to maintain reliable operation of the PJM Region;
- xvii) Accept, on behalf of the Members, notices served under this Agreement;
- xviii) Perform those functions and undertake those responsibilities transferred to it under the Consolidated Transmission Owners Agreement including (A) directing the operation of the transmission facilities of the parties to the East Consolidated Transmission Owners Agreement ~~(B) direct the operation of the transmission facilities of the Parties to the West Transmission Owners Agreement, (C) direct the operation of the transmission facilities of the Parties to the South Transmission Owner Agreement, (D)~~ administering the PJM Tariff, and ~~(E)~~ administering the Regional Transmission Expansion Planning Protocol set forth as Schedule 6 to this Agreement;
- xix) Perform those functions and undertake those responsibilities transferred to it under the Reliability Assurance Agreement, as specified in Schedule 8 of this Agreement;
- xx) Monitor the operation of the PJM Region, ensure that appropriate Emergency plans are in place and appropriate Emergency drills are conducted, declare the existence of an Emergency, and direct the operations of the Members as necessary to manage, alleviate or end an Emergency;
- xxi) Incorporate the grid reliability requirements applicable to nuclear generating units in the PJM Region planning and operating principles and practices;
- xxii) Initiate such legal or regulatory proceedings as directed by the PJM Board to enforce the obligations of this Agreement; and
- xxiii) Select an individual to serve as the Alternate Dispute Resolution Coordinator as specified in the PJM Dispute Resolution Procedures.

11.3 Member Responsibilities.

11.3.1 General.

To facilitate and provide for the work of the Office of the Interconnection and of the several committees appointed by the Members Committee, each Member shall, to the extent applicable;

- (a) Maintain complete and accurate records, if any, required to meet the purposes of this section and, subject to the provisions of this Agreement for the protection of the confidentiality of proprietary or commercially sensitive information, provide, as reasonably requested, data (excluding transactional data), documents, or records, to the Office of the Interconnection required for the following purposes: (i) maintenance of correct and updated Member and Affiliate Information, including appropriate personnel contacts, PJM committee representatives, organizational structure and other information as reasonably requested by the Office of the Interconnection to ensure the accuracy and completeness of Member records, (ii) maintenance of correct and updated Member and Affiliate Information on unit ownership, unit offer determination, unit offer submissions and unit operation, (iii) coordination of operations, (iv) accounting for all interchange transactions, (v) preparation of required reports, (vi) coordination of planning, including those data required for capacity accounting under the Reliability Assurance Agreement; (vii) preparation of maintenance schedules, (viii) analysis of system disturbances, and (ix) such other purposes, including those set forth in Schedule 2, as will contribute to the reliable and economic operation of the PJM Region and the administration by the Office of the Interconnection of the Agreement, the PJM Tariff and PJM Manuals – For the purposes of this subsection, Member and Affiliate Information means information regarding Members and either: (1) their direct and/or indirect subsidiaries subject to the jurisdiction of the FERC, or (2) their Related Parties;
- (b) Provide such recording, telemetering, revenue quality metering, communication and control facilities as are required for the coordination of its operations with the Office of the Interconnection and those of the other Members and to enable the Office of the Interconnection to operate the PJM Region and otherwise implement and administer this Agreement, including equipment required in normal and Emergency operations and for the recording and analysis of system disturbances;
- (c) Provide adequate and properly trained personnel to (i) permit participation in the coordinated operation of the PJM Region (ii) meet its obligation on a timely basis for supply of records and data, (iii) serve on committees and participate in their investigations, and (iv) share in the representation of the Interconnection in inter-regional and national reliability activities. Minimum training for Members that operate Market Operations Centers and local control centers shall include compliance with the applicable training standards and requirements in PJM Manual 01, Control Center Requirements, including the PJM System Operator Training Requirements in Attachment C;
- (d) Share in the costs of committee activities and investigations (including costs of consultants, computer time and other appropriate items), communication facilities used by all the Members (in addition to those provided in the Office of the Interconnection), and such other

expenses as are approved for payment by the PJM Board, such costs to be recovered as provided in Schedule 3;

(e) Comply with the requirements of the PJM Manuals and all directives of the Office of the Interconnection to take any action for the purpose of managing, alleviating or ending an Emergency, and authorize the Office of the Interconnection to direct the transfer or interruption of the delivery of energy on their behalf to meet an Emergency and to implement agreements with other Control Areas interconnected with the PJM Region for the mutual provision of service to meet an Emergency, and be subject to the emergency procedure charges specified in Schedule 9 of this Agreement for any failure to follow the Emergency instructions of the Office of the Interconnection. In addressing any Emergency, the Office of the Interconnection shall comply with the terms of any reserve sharing agreements in effect for any part of the PJM Region.

11.3.2 Facilities Planning and Operation.

Consistent with and subject to the requirements of this Agreement, the PJM Tariff, the governing agreements of ~~the each~~ Applicable Regional ~~Reliability Councils~~Entity, the Reliability Assurance Agreement, the Consolidated Transmission Owners Agreement, and the PJM Manuals, each Member shall cooperate with the other Members in the coordinated planning and operation of the facilities of its System within the PJM Region so as to obtain the greatest practicable degree of reliability, compatible economy and other advantages from such coordinated planning and operation. In furtherance of such cooperation each Member shall, as applicable:

(a) Consult with the other Members and the Office of the Interconnection, and coordinate the installation of its electric generation and Transmission Facilities with those of such other Members so as to maintain reliable service in the PJM Region;

(b) Coordinate with the other Members, the Office of the Interconnection and with others in the planning and operation of the regional facilities to secure a high level of reliability and continuity of service and other advantages;

(c) Cooperate with the other Members and the Office of the Interconnection in the implementation of all policies and procedures established pursuant to this Agreement for dealing with Emergencies, including but not limited to policies and procedures for maintaining or arranging for a portion of a Member's Generation Capacity Resources, at least equal to the applicable levels established from time to time by the Office of the Interconnection, to have the ability to go from a shutdown condition to an operating condition and start delivering power without assistance from the power system;

(d) Cooperate with the members of ~~the each~~ Applicable Regional ~~Reliability Councils~~Entity to augment the reliability of the bulk power supply facilities of the region and comply with Applicable Regional ~~Reliability Councils~~Entities and NERC operating and planning standards, principles and guidelines and the PJM Manuals implementing such standards, principles and guidelines;

- (e) Obtain or arrange for transmission service as appropriate to carry out this Agreement;
- (f) Cooperate with the Office of the Interconnection's coordination of the operating and maintenance schedules of the Member's generating and Transmission Facilities with the facilities of other Members to maintain reliable service to its own customers and those of the other Members and to obtain economic efficiencies consistent therewith;
- (g) Cooperate with the other Members and the Office of the Interconnection in the analysis, formulation and implementation of plans to prevent or eliminate conditions that impair the reliability of the PJM Region; and
- (h) Adopt and apply standards adopted pursuant to this Agreement and conforming to NERC, and Applicable Regional [Reliability Council Entity](#) standards, principles and guidelines and the PJM Manuals, for system design, equipment ratings, operating practices and maintenance practices.

11.3.3 Electric Distributors.

In addition to any of the foregoing responsibilities that may be applicable, each Member that is an Electric Distributor, whether or not that Member votes in the Members Committee in the Electric Distributor sector or meets the eligibility requirements for any other sector of the Members Committee, shall:

- (a) Accept, comply with or be compatible with all standards applicable within the PJM Region with respect to system design, equipment ratings, operating practices and maintenance practices as set forth in the PJM Manuals, or be subject to an interconnected Member's requirements relating to the foregoing, so that sufficient electrical equipment, control capability, information and communication are available to the Office of the Interconnection for planning and operation of the PJM Region;
- (b) Assure the continued compatibility of its local system energy management system monitoring and telecommunications systems to satisfy the technical requirements of interacting automatically or manually with the Office of the Interconnection as it directs the operation of the PJM Region;
- (c) Maintain or arrange for a portion of its connected load to be subject to control by automatic underfrequency, under-voltage, or other load-shedding devices at least equal to the levels established pursuant to the Reliability Assurance Agreement, or be subject to another Member's control for these purposes;
- (d) Provide or arrange for sufficient reactive capability and voltage control facilities to conform to Good Utility Practice and (i) to meet the reactive requirements of its system and customers and (ii) to maintain adequate voltage levels and the stability required by the bulk power supply facilities of the PJM Region;

- (e) Shed connected load, share Generation Capacity Resources, initiate Interruptible Load for Reliability programs, and take such other coordination actions as may be necessary in accordance with the directions of the Office of the Interconnection in Emergencies;
- (f) Maintain or arrange for a portion of its Generation Capacity Resources at least equal to the level established pursuant to the Reliability Assurance Agreement to have the ability to go from a shutdown condition to an operating condition and start delivering power without assistance from the power system;
- (g) Provide or arrange through another Member for the services of a 24-hour local control center to coordinate with the Office of the Interconnection, each such control center to be furnished with appropriate telemetry equipment as specified in the PJM Manuals, and to be staffed by system operators trained and delegated sufficient authority to take any action necessary to assure that the system for which the operator is responsible is operated in a stable and reliable manner. In addition to meeting any training standards and requirements specified in this Agreement, local control center staff shall be required to meet applicable training standards and requirements in PJM Manual 01, Control Center Requirements, including the PJM System Operator Training Requirements in Attachment C;
- (h) Provide to the Office of the Interconnection all System, accounting, customer tracking, load forecasting (including all load to be served from its System) and other data necessary or appropriate to implement or administer this Agreement, and the Reliability Assurance Agreement; and
- (i) Comply with the underfrequency relay obligations and charges specified in Schedule 7 of this Agreement.

11.3.4 Reports to the Office of the Interconnection.

Each Member shall report as promptly as possible to the Office of the Interconnection any changes in its operating practices and procedures relating to the reliability of the bulk power supply facilities of the PJM Region. The Office of the Interconnection shall review such reports, and if any change in an operating practice or procedure of the Member is not in accord with the established operating principles, practices and procedures for the PJM Region and such change adversely affects such region and regional reliability, it shall so inform such Member, and the other Members through their representative on the Operating Committee, and shall direct that such change be modified to conform to the established operating principles, practices and procedures.

11.6 Membership Requirements.

- (a) To qualify as a Member, an entity shall:
 - i) Be a Transmission Owner a Generation Owner, an Other Supplier, an Electric Distributor, or an End-Use Customer; and
 - ii) Accept the obligations set forth in this Agreement.
- (b) Certain Members that are Load Serving Entities are parties to the Reliability Assurance Agreement. Upon becoming a Member, any entity that is a Load Serving Entity in the PJM Region and that wishes to become a Market Buyer shall also simultaneously execute the Reliability Assurance Agreement
- (c) An entity that wishes to become a party to this Agreement shall apply, in writing, to the President setting forth its request, its qualifications for membership, its agreement to supply data as specified in this Agreement, its agreement to pay all costs and expenses in accordance with Schedule 3, and providing all information specified pursuant to the Schedules to this Agreement for entities that wish to become Market Participants. Any such application that meets all applicable requirements shall be approved by the President within sixty (60) days.
- (d) Nothing in this Section 11 is intended to remove, in any respect, the choice of participation by other utility companies or organizations in the operation of the PJM Region through inclusion in the System of a Member.
- (e) An entity whose application is accepted by the President pursuant to Section 11.6(c) shall execute a supplement to this Agreement in substantially the form prescribed in Schedule 4, which supplement shall be countersigned by the President. The entity shall become a Member effective on the date the supplement is countersigned by the President.
- (f) Entities whose applications contemplate expansion or rearrangement of the PJM Region may become Members promptly as described in Sections 11.6(c) and 11.6(e) above, but the integration of the applicant's system into all of the operation and accounting provisions of this Agreement and the Reliability Assurance Agreement, shall occur only after completion of all required installations and modifications of metering, communications, computer programming, and other necessary and appropriate facilities and procedures, as determined by the Office of the Interconnection. The Office of the Interconnection shall notify the other Members when such integration has occurred.
- (g) Entities that become Members will be listed in Schedule 12 of this Agreement.
- ~~(h) In accordance with the MAAC Agreement, a Member serving load in the MAAC Control Zone shall be a member of MAAC and any other Member may be a member of MAAC.~~
- (h) In accordance with this Agreement, Members agree that PJMSettlement shall be the Counterparty with respect to certain transactions under the PJM Tariff and this Agreement.

18.17 Confidentiality.

18.17.1 Party Access.

(a) No Member shall have a right hereunder to receive or review any documents, data or other information of another Member, including documents, data or other information provided to the Office of the Interconnection, to the extent such documents, data or information have been designated as confidential pursuant to the procedures adopted by the Office of the Interconnection and/or the PJM Market Monitor or to the extent that they have been designated as confidential by such other Member; provided, however, a Member may receive and review any composite documents, data and other information that may be developed based on such confidential documents, data or information if the composite does not disclose any individual Member's confidential data or information.

(b) Except as may be provided in this Agreement or in the PJM Open Access Transmission Tariff, the Office of the Interconnection shall not disclose to its Members or to third parties, any documents, data, or other information of a Member or entity applying for Membership, to the extent such documents, data, or other information has been designated confidential pursuant to the procedures adopted by the Office of the Interconnection and/or the PJM Market Monitor or by such Member or entity applying for membership; provided that nothing contained herein shall prohibit the Office of the Interconnection from providing any such confidential information to its agents, representatives, or contractors to the extent that such person or entity is bound by an obligation to maintain such confidentiality; provided further that nothing contained herein shall prohibit the Office of the Interconnection from providing Member confidential information to the North American Electric Reliability Council (NERC), or any of its regional reliability councils Applicable Regional Entity, or to any reliability coordinator, to the extent that (i) the Office of the Interconnection determines in its reasonable discretion that the exchange of such information is required to enhance and/or maintain reliability within the Members' Applicable Regional Reliability Councils Entities and their neighboring reliability councils Regional Entities, or within the region of any reliability coordinator, (ii) such entity is bound by a written agreement to maintain such confidentiality, and (iii) the Office of the Interconnection has notified the affected party of its intention to release such information no less than five business days prior to the release. The Office of the Interconnection and/or the PJM Market Monitor shall collect and use confidential information only in connection with its authority under this Agreement and the Open Access Transmission Tariff and the retention of such information shall be in accordance with PJM's data retention policies.

(c) Nothing contained herein shall prevent the Office of the Interconnection from releasing a Member's confidential data or information to a third party provided that the Member has delivered to the Office of the Interconnection and/or the PJM Market Monitor specific, written authorization for such release setting forth the data or information to be released, to whom such release is authorized, and the period of time for which such release shall be authorized. The Office of the Interconnection shall limit the release of a Member's confidential data or information to that specific authorization received from the Member. Nothing herein shall prohibit a Member from withdrawing such authorization upon written notice to the Office of the

Interconnection, who shall cease such release as soon as practicable after receipt of such withdrawal notice.

(d) Reciprocal provisions to Sections 18.17.1, 18.17.2, 18.17.3, 18.17.4 and 18.17.5 hereof, delineating the confidentiality requirements of PJM's Market Monitoring Unit, are set forth in Attachment M – Appendix, section I.

(e) Notwithstanding anything to the contrary in this Agreement or in the PJM Tariff, to allow the tracking of Market Participants' non-aggregated bids and offers over time as required by FERC Order No. 719, the Office of the Interconnection shall post on its Web site the non-aggregated bid data and Offer Data submitted by Market Participants (for participation on the PJM Interchange Energy Market) approximately four months after the bid or offer was submitted to the Office of the Interconnection. However, to protect the confidential, market sensitive and/or proprietary bidding strategies of Market Participants as well as the identity of Market Participants from being discernible from the published data, the posted information will not reveal the (a) name of the resource, (b) characteristics of a specific resource, (c) identity of the load, (d) name of the individual or entity submitting the data, (e) identity of the resource owner, or (f) location of the resource at a level lower than its Zone. The Office of the Interconnection also reserves the right to take any other precautionary measures that it deems appropriate to preserve the confidential, market sensitive and/or proprietary bidding strategies of Market Participants to the extent not specifically set forth herein.

18.17.2 Required Disclosure.

(a) Notwithstanding anything in the foregoing Section to the contrary, and subject to the provisions of Section 18.17.3, if a Member, the Office of the Interconnection is required by applicable law, or in the course of administrative or judicial proceedings, to disclose to third parties, information that is otherwise required to be maintained in confidence pursuant to this Agreement, that Member, the Office of the Interconnection may make disclosure of such information; provided, however, that as soon as the Member, the Office of the Interconnection learns of the disclosure requirement and prior to making disclosure, that Member, the Office of the Interconnection shall notify the affected Member or Members of the requirement and the terms thereof and the affected Member or Members may direct, at their sole discretion and cost, any challenge to or defense against the disclosure requirement. The disclosing Member, the Office of the Interconnection shall cooperate with such affected Members to the maximum extent practicable to minimize the disclosure of the information consistent with applicable law. Each Member, the Office of the Interconnection shall cooperate with the affected Members to obtain proprietary or confidential treatment of such information by the person to whom such information is disclosed prior to any such disclosure.

(b) Nothing in this Section 18.17 shall prohibit or otherwise limit the Office of the Interconnection's use of information covered herein if such information was: (i) previously known to the Office of the Interconnection without an obligation of confidentiality; (ii) independently developed by or for the Office of the Interconnection using nonconfidential information; (iii) acquired by the Office of the Interconnection from a third party which is not, to the Office of the Interconnection's knowledge, under an obligation of confidence with respect to

such information; (iv) which is or becomes publicly available other than through a manner inconsistent with this Section 18.17.

(c) The Office of the Interconnection shall impose on any contractors retained to provide technical support or otherwise to assist with the implementation or administration of this Agreement or of the Open Access Transmission Tariff a contractual duty of confidentiality consistent with this Agreement. A Member shall not be obligated to provide confidential or proprietary information to any contractor that does not assume such a duty of confidentiality, and the Office of the Interconnection shall not provide any such information to any such contractor without the express written permission of the Member providing the information.

18.17.3 Disclosure to FERC.

(a) Notwithstanding anything in this Section to the contrary, if the FERC or its staff, during the course of an investigation or otherwise, requests information from the Office of the Interconnection that is otherwise required to be maintained in confidence pursuant to this Agreement, the Office of the Interconnection shall provide the requested information to the FERC or its staff, within the time provided for in the request for information. In providing the information to the FERC or its staff, the Office of the Interconnection may, consistent with 18 C.F.R. § 388.112, request that the information be treated as confidential and non-public by the FERC and its staff and that the information be withheld from public disclosure. The Office of the Interconnection shall notify any affected Member(s) when it is notified by FERC or its staff, that a request for disclosure of, or decision to disclose, confidential information has been received, at which time the Office of the Interconnection and/or the affected Member may respond before such information would be made public, pursuant to 18 C.F.R. § 388.112.

(b) Section 18.17.3(a) shall not apply to requests for production of information under Subpart D of the FERC's Rules of Practice and Procedure (18 CFR Part 385) in proceedings before FERC and its administrative law judges. In all such proceedings, PJM shall follow the procedures in Section 18.17.2.

18.17.4 Disclosure to Authorized Commissions.

(a) Notwithstanding anything in this section to the contrary, the Office of the Interconnection shall disclose confidential information, otherwise required to be maintained in confidence pursuant to this Agreement, to an Authorized Commission under the following conditions:

- i) The Authorized Commission has provided the FERC with a properly-executed Certification in the form attached hereto as Schedule 10A. Upon receipt of the Authorized Commission's Certification, the FERC shall provide public notice of the Authorized Commission's filing pursuant to 18 C.F.R. § 385.2009. If any interested party disputes the accuracy and adequacy of the representations contained in the Authorized Commission's Certification, that party may file a protest with the Commission within 14 days of the date of such notice, pursuant to 18 C.F.R. § 385.211. The Authorized Commission may file a response to any

such protest within seven days. Each party shall bear its own costs in connection with such a FERC protest proceeding. If there are material changes in law that affect the accuracy and adequacy of the representations in the Certification filed with the Commission, the Authorized Commission shall, within thirty (30) days, submit an amended Certification identifying such changes. Any such amended Certification shall be subject to the same procedures for comment and review by the Commission as set forth above in this paragraph.

The Office of the Interconnection may not disclose data to an Authorized Commission during the Commission's consideration of the Certification and any filed protests. If the Commission does not act upon an Authorized Commission's Certification within 90 days of the date of filing, the Certification shall be deemed approved and the Authorized Commission shall be permitted to receive confidential information pursuant to this section. In the event that an interested party protests the Authorized Commission's Certification and the Commission approves the Certification, that party may not challenge any Information Request made by the Authorized Commission on the grounds that the Authorized Commission is unable to protect the confidentiality of the information requested, in the absence of a showing of changed circumstances.

- ii) Any confidential information provided to an Authorized Commission pursuant to this section shall not be further disclosed by the recipient Authorized Commission except by order of the Commission.
- iii) The Office of the Interconnection shall be expressly entitled to rely upon such Authorized Commission Certifications in providing confidential information to the Authorized Commission, and shall in no event be liable, or subject to damages or claims of any kind or nature hereunder, due to the ineffectiveness or inaccuracy of such Authorized Commission Certifications.
- iv) The Authorized Commission may provide confidential information obtained from the Office of the Interconnection to such of its employees, attorneys and contractors as needed to examine or handle that information in the course and scope of their work on behalf of the Authorized Commission, provided that (a) the Authorized Commission has internal procedures in place, pursuant to the Certification, to ensure that each person receiving such information agrees to protect the confidentiality of such information (such employees, attorneys or contractors to be defined hereinafter as "Authorized Persons"); (b) the Authorized Commission provides, pursuant to the Certification, a list of such Authorized Persons to the Office of the Interconnection and the PJM Market Monitor and updates such list, as necessary, every ninety (90) days; and (c) any third-party contractors provided access to confidential information sign a non-

disclosure agreement in the form attached hereto as Schedule 10 before being provided access to any such confidential information.

- v) The Office of the Interconnection shall maintain a schedule of all Authorized Persons and the Authorized Commissions they represent, which shall be made publicly available on its website, or by written request. Such schedule shall be compiled by the Office of the Interconnection, based on information provided by any Authorized Commission. The Office of the Interconnection shall update the schedule promptly upon receipt of information from an Authorized Commission, but shall have no obligation to verify or corroborate any such information, and shall not be liable or otherwise responsible for any inaccuracies in the schedule due to incomplete or erroneous information conveyed to and relied upon by the Office of the Interconnection in the compilation and/or maintenance of the schedule.

(b) The Office of the Interconnection may, in the course of discussions with an Authorized Person, orally disclose information otherwise required to be maintained in confidence, without the need for a prior Information Request. Such oral disclosures shall provide enough information to enable the Authorized Person or the Authorized Commission with which that Authorized Person is associated to determine whether additional Information Requests are appropriate. The Office of the Interconnection will not make any written or electronic disclosures of confidential information to the Authorized Person pursuant to this Section 18.17.4(b). In any such discussions, the Office of the Interconnection shall ensure that the individual or individuals receiving such confidential information are Authorized Persons as defined herein, orally designate confidential information that is disclosed, and refrain from identifying any specific Affected Member whose information is disclosed. The Office of the Interconnection shall also be authorized to assist Authorized Persons in interpreting confidential information that is disclosed. The Office of the Interconnection shall provide any Affected Member with oral notice of any oral disclosure immediately, but not later than one (1) business day after the oral disclosure. Such oral notice to the Affected Member shall include the substance of the oral disclosure, but shall not reveal any confidential information of any other Member and must be received by the Affected Member before the name of the Affected Member is released to the Authorized Person; provided however, disclosure of the identity of the Affected Party must be made to the Authorized Commission with which the Authorized Person is associated within two (2) business days of the initial oral disclosure.

(c) As regards Information Requests:

- (i) Information Requests to the Office of the Interconnection and/or PJM Market Monitor by an Authorized Commission shall be in writing, which shall include electronic communications, addressed to the Office of the Interconnection, and shall: (a) describe the information sought in sufficient detail to allow a response to the Information Request; (b) provide a general description of the purpose of the Information Request; (c) state the time period for which confidential information is requested; and (d) re-

affirm that only Authorized Persons shall have access to the confidential information requested. The Office of the Interconnection shall provide an Affected Member with written notice, which shall include electronic communication, of an Information Request by an Authorized Commission as soon as possible, but not later than two (2) business days after the receipt of the Information Request.

- (ii) Subject to the provisions of section (c)(iii), the Office of the Interconnection shall supply confidential information to the Authorized Commission in response to any Information Request within five (5) business days of the receipt of the Information Request, to the extent that the requested confidential information can be made available within such period; provided however, that in no event shall confidential information be released prior to the end of the fourth (4th) business day without the express consent of the Affected Member. To the extent that the Office of the Interconnection cannot reasonably prepare and deliver the requested confidential information within such five (5) day period, it shall, within such period, provide the Authorized Commission with a written schedule for the provision of such remaining confidential information. Upon providing confidential information to the Authorized Commission, the Office of the Interconnection shall either provide a copy of the confidential information to the Affected Member(s), or provide a listing of the confidential information disclosed; provided, however, that the Office of the Interconnection shall not reveal any Member's confidential information to any other Member.
- (iii) Notwithstanding section (c)(ii), above, should the Office of the Interconnection or an Affected Member object to an Information Request or any portion thereof, any of them may, within four (4) business days following the Office of the Interconnection's receipt of the Information Request, request, in writing, a conference with the Authorized Commission to resolve differences concerning the scope or timing of the Information Request; provided, however, nothing herein shall require the Authorized Commission to participate in any conference. Any party to the conference may seek assistance from FERC staff in resolution of the dispute or terminate the conference process at any time. Should such conference be refused or terminated by any participant or should such conference not resolve the dispute, then the Office of the Interconnection or the Affected Member may file a complaint with the Commission pursuant to Rule 206 objecting to the Information Request within ten (10) business days following receipt of written notice from any conference participant terminating such conference. Any complaints filed at FERC objecting to a particular Information Request shall be designated by the party as a "fast track" complaint and each party shall bear its own costs in connection with such FERC proceeding. The grounds for such a complaint shall be limited to the following: (a) the Authorized Commission is no

longer able to preserve the confidentiality of the requested information due to changed circumstances relating to the Authorized Commission's ability to protect confidential information arising since the filing of or rejection of a protest directed to the Authorized Commission's Certification; (b) complying with the Information Request would be unduly burdensome to the complainant, and the complainant has made a good faith effort to negotiate limitations in the scope of the requested information; or (c) other exceptional circumstances exist such that complying with the Information Request would result in harm to the complainant. There shall be a presumption that "exceptional circumstances," as used in the prior sentence, does not include circumstances in which an Authorized Commission has requested wholesale market data (or PJM Market Monitor workpapers that support or explain conclusions or analyses) generated in the ordinary course and scope of the operations of the Office of the Interconnection and/or the PJM Market Monitor. There shall be a presumption that circumstances in which an Authorized Commission has requested personnel files, internal emails and internal company memos, analyses and related work product constitute "exceptional circumstances" as used in the prior sentence. If no complaint challenging the Information Request is filed within the ten (10) day period defined above, the Office of the Interconnection shall utilize its best efforts to respond to the Information Request promptly. If a complaint is filed, and the Commission does not act on that complaint within ninety (90) days, the complaint shall be deemed denied and the Office of Interconnection shall use its best efforts to respond to the Information Request promptly.

- (iv) Any Authorized Commission may initiate appropriate legal action at FERC within ten (10) business days following receipt of information designated as "Confidential," challenging such designation. Any complaints filed at FERC objecting to the designation of information as "Confidential" shall be designated by the party as a "fast track" complaint and each party shall bear its own costs in connection with such FERC proceeding. The party filing such a complaint shall be required to prove that the material disclosed does not merit "Confidential" status because it is publicly available from other sources or contains no trade secret or other sensitive commercial information (with "publicly available" not being deemed to include unauthorized disclosures of otherwise confidential data).

(d) In the event of any breach of confidentiality of information disclosed pursuant to an Information Request by an Authorized Commission or Authorized Person:

- (i) The Authorized Commission or Authorized Person shall promptly notify the Office of the Interconnection, who shall, in turn, promptly notify any Affected Member of any inadvertent or intentional release, or possible release, of confidential information provided pursuant to this section.

- (ii) The Office of the Interconnection shall terminate the right of such Authorized Commission to receive confidential information under this section upon written notice to such Authorized Commission unless: (i) there was no harm or damage suffered by the Affected Member; or (ii) similar good cause is shown. Any appeal of the Office of the Interconnection's and/or the PJM Market Monitor's actions under this section shall be to FERC. An Authorized Commission shall be entitled to reestablish its certification as set forth in Section 18.17.4(a) by submitting a filing with the Commission showing that it has taken appropriate corrective action. If the Commission does not act upon an Authorized Commission's re-certification filing with sixty (60) days of the date of the filing, the re-certification shall be deemed approved and the Authorized Commission shall be permitted to receive confidential information pursuant to this section.
- (iii) The Office of the Interconnection and/or the Affected Member shall have the right to seek and obtain at least the following types of relief: (a) an order from FERC requiring any breach to cease and preventing any future breaches; (b) temporary, preliminary, and/or permanent injunctive relief with respect to any breach; and (c) the immediate return of all confidential information to the Office of the Interconnection.
- (iv) No Authorized Person or Authorized Commission shall have responsibility or liability whatsoever under this section for any and all liabilities, losses, damages, demands, fines, monetary judgments, penalties, costs and expenses caused by, resulting from, or arising out of or in connection with the release of confidential information to persons not authorized to receive it, provided that such Authorized Person is an agent, servant, employee or member of an Authorized Commission at the time of such unauthorized release. Nothing in this Section (d)(iv) is intended to limit the liability of any person who is not an agent, servant, employee or member of an Authorized Commission at the time of such unauthorized release for any and all economic losses, damages, demands, fines, monetary judgments, penalties, costs and expenses caused by, resulting from, or arising out of or in connection with such unauthorized release.
- (v) Any dispute or conflict requesting the relief in section (d)(ii) or (d)(iii)(a) above, shall be submitted to FERC for hearing and resolution. Any dispute or conflict requesting the relief in section (d)(iii)(c) above may be submitted to FERC or any court of competent jurisdiction for hearing and resolution.

18.17.5 Market Monitoring.

- a) Subject to the requirements of section 18.17.5(b), PJM may release confidential information of Public Service Electric & Gas Company (“PSE&G”), Consolidated Edison Company of New York (“ConEd”), and their affiliates, and the confidential information of any Member regarding generation and/or transmission facilities located within the PSE&G Zone to the New York Independent System Operator, Inc. (“New York ISO”), the market monitoring unit of the New York ISO and the New York ISO Market Advisor to the limited extent that PJM or its Market Monitoring Unit determines necessary to carry out the responsibilities of PJM, the New York ISO and the market monitoring units of PJM and the New York ISO under FERC Opinion No. 476 (see Consolidated Edison Company v. Public Service Electric and Gas Company, et al., 108 FERC ¶ 61,120, at P 215 (2004)) to conduct joint investigations to ensure that gaming, abuse of market power, or similar activities do not take place with regard to power transfers under the contracts that are the subject of FERC Opinion No. 476.
- b) PJM may release a Member’s confidential information pursuant to section 18.17.5(a) to the New York ISO, the market monitoring unit of the New York ISO and the New York ISO Market Advisor only if the New York ISO, the market monitoring unit of the New York ISO and the New York ISO Market Advisor are subject to obligations limiting the disclosure of such information that are equivalent to or greater than the limitations on disclosure specified in this section 18.17. Information received from the New York ISO, the market monitoring unit of the New York ISO, or the New York ISO Market Advisor under section 18.17.5(a) that is designated as confidential shall be protected from disclosure in accordance with this section 18.17.

18.17.6 Disclosure of EMS Data to Transmission Owners

- a) While the Office of the Interconnection has overall power system reliability in the Office of the Interconnection region, Transmission Owners within the Office of the Interconnection region perform certain reliability functions with respect to their individual Transmission Facilities and distribution systems. In order to facilitate reliable operations between the Office of the Interconnection and the Transmission Owners, the Office of the Interconnection may, without written authorization from any Member, install a read-only terminal in any Transmission Owner’s secure control room facility, with access to Office of the Interconnection’s Energy Management System (EMS) and its associated data transmission and generation data under the terms and conditions set forth in this section 18.17.6.
- b) The data and information produced by the Office of the Interconnection’s EMS are confidential and/or commercially sensitive because it will display the real-time status of electric transmission lines and generation facilities, the disclosure of which could impact the market and the commercial interests of its participants. In addition, the responsive information will contain detailed information about real-time grid conditions, transmission lines, power flows, and outages, which may fall within the definition of Critical Energy Infrastructure Information (CEII) as set forth in 18 CFR § 388.112. The Office of the Interconnection shall not release any generator cost, price or other market information without written authorization pursuant to section § 18.17.1 (c) supra. The only generator information that will be made available is real-time MW/MVAR output and Minimum/Maximum MW Range.

c) The confidential or CEII information provided to the Transmission Owner on a read-only PJM EMS terminal shall only be held in the secure control room facility of the Transmission Owner. Such data shall be used for informational and operational purposes within the control room by Transmission Function employees as defined in the FERC's rules and regulations, 18 C.F.R. § 358.3 (j). No "screen-scraping" or other data transfer of information from the read-only terminal to other Transmission Owner systems or databases shall be permitted. No storage of information from the read-only terminal shall be permitted. The data shall be held confidential within the transmission function environment and not be disclosed to other personnel within the Transmission Owners' company, subsidiaries, marketing organizations, energy affiliates or independent third parties. The Transmission Owner may use the confidential or CEII information only for the purpose of performing Transmission Owner's Reliability Function and shall not otherwise use the confidential information for its own benefit or for the benefit of any other person.

d) In the event of any breach:

- (i) The Transmission Owners shall promptly notify the Office of the Interconnection, which shall, in turn, promptly notify FERC and any Affected Member(s) of any inadvertent or intentional release, or possible release, of confidential or CEII information disclosed as provided above.
- (ii) The Office of the Interconnection shall terminate all rights of the Transmission Owner to receive confidential or CEII information as provided in this section 18.17.6; provided, however, that the Office of the Interconnection may restore a Transmission Owners' status after consulting with the Affected Member(s) and to the extent that: (a) the Office of the Interconnection determines that the disclosure was not due to the intentional, reckless or negligent action or omission of the Authorized Person; (b) there were no harm or damages suffered by the Affected Member(s); or (c) similar good cause shown. Any appeal of the Office of the Interconnection's actions under this section shall be to FERC.
- (iii) The Office of the Interconnection and/or the Affected Member(s) shall have the right to seek and obtain at least the following types of relief: (a) an order from FERC requiring any breach to cease and preventing any future breaches; (b) temporary, preliminary, and/or permanent injunctive relief and/or damages with respect to any breach; and (c) the immediate return of all confidential or CEII information to the Office of the Interconnection.
- (iv) Any dispute or conflict requesting the relief in section (d)(ii) or (d)(iii)(a) above, shall be submitted to FERC for hearing and resolution. Any dispute or conflict requesting the relief in section (d)(iii)(b) and (c) above may be submitted to FERC or any court of competent jurisdiction for hearing and resolution.

1.3 Definitions.

1.3.1 Acceleration Request.

“Acceleration Request” shall mean a request pursuant to section 1.9.4A of this Schedule to accelerate or reschedule a transmission outage scheduled pursuant to sections 1.9.2 or 1.9.4.

1.3.1A Auction Revenue Rights.

“Auction Revenue Rights” or “ARRs” shall mean the right to receive the revenue from the Financial Transmission Right auction, as further described in Section 7.4 of this Schedule.

1.3.1B Auction Revenue Rights Credits.

“Auction Revenue Rights Credits” shall mean the allocated share of total FTR auction revenues or costs credited to each holder of Auction Revenue Rights, calculated and allocated as specified in Section 7.4.3 of this Schedule.

1.3.1B.01 Batch Load Demand Resource.

“Batch Load Demand Resource” shall mean a Demand Resource that has a cyclical production process such that at most times during the process it is consuming energy, but at consistent regular intervals, ordinarily for periods of less than ten minutes, it reduces its consumption of energy for its production processes to minimal or zero megawatts.

1.3.1B.02 Congestion Price.

“Congestion Price” shall mean the congestion component of the Locational Marginal Price, which is the effect on transmission congestion costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing the consumption by a Demand Resource, based on the effect of increased generation from or consumption by the resource on transmission line loadings, calculated as specified in Section 2 of Schedule 1 of this Agreement.

1.3.1B.03 Curtailment Service Provider.

“Curtailed Service Provider” or “CSP” shall mean a Member or a Special Member, which action on behalf of itself or one or more other Members or non-Members, participates in the PJM Interchange Energy Market, *Ancillary Services markets, and/or Reliability Pricing Model* by causing a reduction in demand.

1.3.1B.04 Day-ahead Congestion Price.

“Day-ahead Congestion Price” shall mean the Congestion Price resulting from the Day-ahead Energy Market.

1.3.1C Day-ahead Energy Market.

“Day-ahead Energy Market” shall mean the schedule of commitments for the purchase or sale of energy and payment of Transmission Congestion Charges developed by the Office of the Interconnection as a result of the offers and specifications submitted in accordance with Section 1.10 of this Schedule.

1.3.1C.01 Day-ahead Loss Price.

“Day-ahead Loss Price” shall mean the Loss Price resulting from the Day-ahead Energy Market.

1.3.1D Day-ahead Prices.

“Day-ahead Prices” shall mean the Locational Marginal Prices resulting from the Day-ahead Energy Market.

1.3.1D.01 Day-ahead Scheduling Reserves.

“Day-ahead Scheduling Reserves” shall mean thirty-minute reserves as defined by the Reliability *First* Corporation and SERC.

1.3.1D.02 Day-ahead Scheduling Reserves Requirement.

“Day-ahead Scheduling Reserves Requirement” shall mean the thirty-minute reserve requirement for the PJM Region established consistent with ~~Reliability First Corporation and SERC reliability standards, or those of any additional and/or successor regional reliability organization(s) that are responsible for establishing reliability requirements for the PJM Region~~ the Applicable Standards, plus any additional thirty-minute reserves scheduled in response to an RTO-wide Hot or Cold Weather Alert or other reasons for conservative operations.

1.3.1D.03 Day-ahead Scheduling Reserves Resources.

“Day-ahead Scheduling Reserves Resources” shall mean synchronized and non-synchronized generation resources and Demand Resources electrically located within the PJM Region that are capable of providing Day-ahead Scheduling Reserves.

1.3.1D.04 Day-ahead Scheduling Reserves Market.

“Day-ahead Scheduling Reserves Market” shall mean the schedule of commitments for the purchase or sale of Day-ahead Scheduling Reserves developed by the Office of the Interconnection as a result of the offers and specifications submitted in accordance with Section 1.10 of this Schedule.

1.3.1D.05 Day-ahead System Energy Price.

“Day-ahead System Energy Price” shall mean the System Energy Price resulting from the Day-ahead Energy Market.

1.3.1E Decrement Bid.

“Decrement Bid” shall mean a bid to purchase energy at a specified location in the Day-ahead Energy Market. An accepted Decrement Bid results in scheduled load at the specified location in the Day-ahead Energy Market.

1.31E.01 Demand Resource.

“Demand Resource” shall mean a resource with the capability to provide a reduction in demand.

1.3.1F Dispatch Rate.

“Dispatch Rate” shall mean the control signal, expressed in dollars per megawatt-hour, calculated and transmitted continuously and dynamically to direct the output level of all generation resources dispatched by the Office of the Interconnection in accordance with the Offer Data.

1.3.1G Energy Storage Resource.

“Energy Storage Resource” shall mean flywheel or battery storage facility solely used for short term storage and injection of energy at a later time to participate in the PJM energy and/or Ancillary Services markets as a Market Seller.

1.3.2 Equivalent Load.

“Equivalent Load” shall mean the sum of a Market Participant’s net system requirements to serve its customer load in the PJM Region, if any, plus its net bilateral transactions.

1.3.2A Economic Load Response Participant.

“Economic Load Response Participant” shall mean a Member or Special Member that qualifies under Section 1.5A of this Schedule to participate in the PJM Interchange Energy Market *and/or Ancillary Services markets* through reductions in demand.

1.3.2A.01 Economic Minimum.

“Economic Minimum” shall mean the lowest incremental MW output level a unit can achieve while following economic dispatch

1.3.2B Energy Market Opportunity Cost.

“Energy Market Opportunity Cost” shall mean the difference between (a) the forecasted cost to operate a specific generating unit when the unit only has a limited number of available run hours

due to limitations imposed on the unit by Applicable Laws and Regulations (as defined in PJM Tariff), and (b) the forecasted future hourly Locational Marginal Price at which the generating unit could run while not violating such limitations. Energy Market Opportunity Cost therefore is the value associated with a specific generating unit's lost opportunity to produce energy during a higher valued period of time occurring within the same compliance period, which compliance period is determined by the applicable regulatory authority and is reflected in the rules set forth in PJM Manual 15. Energy Market Opportunity Costs shall be limited to those resources which are specifically delineated in Schedule 2 of the Operating Agreement.

1.3.3 External Market Buyer.

"External Market Buyer" shall mean a Market Buyer making purchases of energy from the PJM Interchange Energy Market for consumption by end-users outside the PJM Region, or for load in the PJM Region that is not served by Network Transmission Service.

1.3.4 External Resource.

"External Resource" shall mean a generation resource located outside the metered boundaries of the PJM Region.

1.3.5 Financial Transmission Right.

"Financial Transmission Right" or "FTR" shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2 of this Schedule.

1.3.5A Financial Transmission Right Obligation.

"Financial Transmission Right Obligation" shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2(b) of this Schedule.

1.3.5B Financial Transmission Right Option.

"Financial Transmission Right Option" shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2(c) of this Schedule.

1.3.6 Generating Market Buyer.

"Generating Market Buyer" shall mean an Internal Market Buyer that is a Load Serving Entity that owns or has contractual rights to the output of generation resources capable of serving the Market Buyer's load in the PJM Region, or of selling energy or related services in the PJM Interchange Energy Market or elsewhere.

1.3.7 Generator Forced Outage.

"Generator Forced Outage" shall mean an immediate reduction in output or capacity or removal from service, in whole or in part, of a generating unit by reason of an Emergency or threatened

Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the facility, as specified in the relevant portions of the PJM Manuals. A reduction in output or removal from service of a generating unit in response to changes in market conditions shall not constitute a Generator Forced Outage.

1.3.8 Generator Maintenance Outage.

“Generator Maintenance Outage” shall mean the scheduled removal from service, in whole or in part, of a generating unit in order to perform necessary repairs on specific components of the facility, if removal of the facility meets the guidelines specified in the PJM Manuals.

1.3.9 Generator Planned Outage.

“Generator Planned Outage” shall mean the scheduled removal from service, in whole or in part, of a generating unit for inspection, maintenance or repair with the approval of the Office of the Interconnection in accordance with the PJM Manuals.

1.3.9A Increment Bid.

“Increment Bid” shall mean an offer to sell energy at a specified location in the Day-ahead Energy Market. An accepted Increment Bid results in scheduled generation at the specified location in the Day-ahead Energy Market.

1.3.9B Interface Pricing Point.

“Interface Pricing Point” shall have the meaning specified in section 2.6A.

1.3.10 Internal Market Buyer.

“Internal Market Buyer” shall mean a Market Buyer making purchases of energy from the PJM Interchange Energy Market for ultimate consumption by end-users inside the PJM Region that are served by Network Transmission Service.

1.3.11 Inadvertent Interchange.

“Inadvertent Interchange” shall mean the difference between net actual energy flow and net scheduled energy flow into or out of the individual Control Areas operated by PJM.

1.3.11.01 Load Management.

“Load Management” shall mean either a Demand Resource (“DR”) or an Interruptible Load for Reliability (“ILR”) resource, both as defined in the Reliability Assurance Agreement.

1.3.11A Load Reduction Event.

“Load Reduction Event” shall mean a reduction in demand by a Member or Special Member for the purpose of participating in the PJM Interchange Energy Market.

1.3.11A.01 Location.

“Location” as used in the Economic Load Response rules shall mean an end-use customer site as defined by the relevant electric distribution company account number.

1.3.11B Loss Price.

“Loss Price” shall mean the loss component of the Locational Marginal Price, which is the effect on transmission loss costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing the consumption by a Demand Resource based on the effect of increased generation from or consumption by the resource on transmission losses, calculated as specified in Section 2 of Schedule 1 of this Agreement.

1.3.12 Market Operations Center.

“Market Operations Center” shall mean the equipment, facilities and personnel used by or on behalf of a Market Participant to communicate and coordinate with the Office of the Interconnection in connection with transactions in the PJM Interchange Energy Market or the operation of the PJM Region.

1.3.12A Maximum Emergency.

“Maximum Emergency” shall mean the designation of all or part of the output of a generating unit for which the designated output levels may require extraordinary procedures and therefore are available to the Office of the Interconnection only when the Office of the Interconnection declares a Maximum Generation Emergency and requests generation designated as Maximum Emergency to run. The Office of the Interconnection shall post on the PJM website the aggregate amount of megawatts that are classified as Maximum Emergency.

1.3.13 Maximum Generation Emergency.

“Maximum Generation Emergency” shall mean an Emergency declared by the Office of the Interconnection to address either a generation or transmission emergency in which the Office of the Interconnection anticipates requesting one or more Generation Capacity Resources, or Non-Retail Behind The Meter Generation resources to operate at its maximum net or gross electrical power output, subject to the equipment stress limits for such Generation Capacity Resource or Non-Retail Behind The Meter resource in order to manage, alleviate, or end the Emergency.

1.3.14 Minimum Generation Emergency.

“Minimum Generation Emergency” shall mean an Emergency declared by the Office of the Interconnection in which the Office of the Interconnection anticipates requesting one or more

generating resources to operate at or below Normal Minimum Generation, in order to manage, alleviate, or end the Emergency.

1.3.14A NERC Interchange Distribution Calculator.

“NERC Interchange Distribution Calculator” shall mean the NERC mechanism that is in effect and being used to calculate the distribution of energy, over specific transmission interfaces, from energy transactions.

1.3.14B Net Benefits Test.

“Net Benefits Test” shall mean a calculation to determine whether the benefits of a reduction in price resulting from the dispatch of Economic Load Response exceeds the cost to other loads resulting from the billing unit effects of the load reduction, as specified in Section 3.3A.4 of this Schedule.

1.3.15 Network Resource.

“Network Resource” shall have the meaning specified in the PJM Tariff.

1.3.16 Network Service User.

“Network Service User” shall mean an entity using Network Transmission Service.

1.3.17 Network Transmission Service.

“Network Transmission Service” shall mean transmission service provided pursuant to the rates, terms and conditions set forth in Part III of the PJM Tariff, or transmission service comparable to such service that is provided to a Load Serving Entity that is also a Transmission Owner.

1.3.17A Non-Regulatory Opportunity Cost.

“Non-Regulatory Opportunity Cost” shall mean the difference between (a) the forecasted cost to operate a specific generating unit when the unit only has a limited number of starts or available run hours resulting from (i) the physical equipment limitations of the unit, for up to one year, due to original equipment manufacturer recommendations or insurance carrier restrictions, (ii) a fuel supply limitation, for up to one year, resulting from an event of force majeure; and, (b) the forecasted future hourly Locational Marginal Price at which the generating unit could run while not violating such limitations. Non-Regulatory Opportunity Cost therefore is the value associated with a specific generating unit’s lost opportunity to produce energy during a higher valued period of time occurring within the same period of time in which the unit is bound by the referenced restrictions, and is reflected in the rules set forth in PJM Manual 15. Non-Regulatory Opportunity Costs shall be limited to those resources which are specifically delineated in Schedule 2 of the Operating Agreement.

1.3.17B Non-Variable Loads.

“Non-Variable Loads” shall have the meaning specified in section 1.5A.6 of this Schedule.

1.3.18 Normal Maximum Generation.

“Normal Maximum Generation” shall mean the highest output level of a generating resource under normal operating conditions.

1.3.19 Normal Minimum Generation.

“Normal Minimum Generation” shall mean the lowest output level of a generating resource under normal operating conditions.

1.3.20 Offer Data.

“Offer Data” shall mean the scheduling, operations planning, dispatch, new resource, and other data and information necessary to schedule and dispatch generation resources and Demand Resource(s) for the provision of energy and other services and the maintenance of the reliability and security of the transmission system in the PJM Region, and specified for submission to the PJM Interchange Energy Market for such purposes by the Office of the Interconnection.

1.3.21 Office of the Interconnection Control Center.

“Office of the Interconnection Control Center” shall mean the equipment, facilities and personnel used by the Office of the Interconnection to coordinate and direct the operation of the PJM Region and to administer the PJM Interchange Energy Market, including facilities and equipment used to communicate and coordinate with the Market Participants in connection with transactions in the PJM Interchange Energy Market or the operation of the PJM Region.

1.3.21A On-Site Generators.

“On-Site Generators” shall mean generation facilities (including Behind The Meter Generation) that (i) are not Capacity Resources, (ii) are not injecting into the grid, (iii) are either synchronized or non-synchronized to the Transmission System, and (iv) can be used to reduce demand for the purpose of participating in the PJM Interchange Energy Market.

1.3.22 Operating Day.

“Operating Day” shall mean the daily 24 hour period beginning at midnight for which transactions on the PJM Interchange Energy Market are scheduled.

1.3.23 Operating Margin.

“Operating Margin” shall mean the incremental adjustments, measured in megawatts, required in PJM Region operations in order to accommodate, on a first contingency basis, an operating contingency in the PJM Region resulting from operations in an interconnected Control Area.

Such adjustments may result in constraints causing Transmission Congestion Charges, or may result in Ancillary Services charges pursuant to the PJM Tariff.

1.3.24 Operating Margin Customer.

“Operating Margin Customer” shall mean a Control Area purchasing Operating Margin pursuant to an agreement between such other Control Area and the LLC.

1.3.25 PJM Interchange.

“PJM Interchange” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load exceeds, or is exceeded by, the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup; or (c) the hourly scheduled deliveries of Spot Market Energy by a Market Seller from an External Resource; or (d) the hourly net metered output of any other Market Seller; or (e) the hourly scheduled deliveries of Spot Market Energy to an External Market Buyer; or (f) the hourly scheduled deliveries to an Internal Market Buyer that is not a Network Service User.

1.3.26 PJM Interchange Export.

“PJM Interchange Export” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load is exceeded by the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup sales; or (c) the hourly scheduled deliveries of Spot Market Energy by a Market Seller from an External Resource; or (d) the hourly net metered output of any other Market Seller.

1.3.27 PJM Interchange Import.

“PJM Interchange Import” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load exceeds the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup purchases; or (c) the hourly scheduled deliveries of Spot Market Energy to an External Market Buyer; or (d) the hourly scheduled deliveries to an Internal Market Buyer that is not a Network Service User.

1.3.28 PJM Open Access Same-time Information System.

“PJM Open Access Same-time Information System” shall mean the electronic communication system for the collection and dissemination of information about transmission services in the PJM Region, established and operated by the Office of the Interconnection in accordance with FERC standards and requirements.

1.3.28A Planning Period Quarter.

“Planning Period Quarter” shall mean any of the following three month periods in the Planning Period: June, July and August; September, October and November; December, January and February; or March, April and May.

1.3.28B Planning Period Balance.

“Planning Period Balance” shall mean the entire period of time remaining in the Planning Period following the month that a monthly auction is conducted.

1.3.29 Point-to-Point Transmission Service.

“Point-to-Point Transmission Service” shall mean transmission service provided pursuant to the rates, terms and conditions set forth in Part II of the PJM Tariff.

1.3.29A PRD Curve

PRD Curve shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29B PRD Provider

PRD Provider shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29C PRD Reservation Price

PRD Reservation Price shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29D PRD Substation

PRD Substation shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29E Price Responsive Demand

Price Responsive Demand shall have the meaning provided in the Reliability Assurance Agreement.

1.3.30 Ramping Capability.

“Ramping Capability” shall mean the sustained rate of change of generator output, in megawatts per minute.

1.3.30.01 Real-time Congestion Price.

“Real-time Congestion Price” shall mean the Congestion Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.30.02 Real-time Loss Price.

“Real-time Loss Price” shall mean the Loss Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.30A Real-time Prices.

“Real-time Prices” shall mean the Locational Marginal Prices resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.30B Real-time Energy Market.

“Real-time Energy Market” shall mean the purchase or sale of energy and payment of Transmission Congestion Charges for quantity deviations from the Day-ahead Energy Market in the Operating Day.

1.3.30B.01 Real-time System Energy Price.

“Real-time System Energy Price” shall mean the System Energy Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.31 Regulation.

“Regulation” shall mean the capability of a specific generation resource or Demand Resource with appropriate telecommunications, control and response capability to increase or decrease its output or adjust load in response to a regulating control signal, in accordance with the specifications in the PJM Manuals.

1.3.31.01 Residual Auction Revenue Rights.

“Residual Auction Revenue Rights” shall mean incremental stage 1 Auction Revenue Rights created within a Planning Period by an increase in transmission system capability or a change in any other relevant factor that was not modeled pursuant to section 7.5 of Schedule 1 of this Agreement in compliance with section 7.4.2(h) of Schedule 1 of this Agreement, and, if modeled, would have increased the amount of stage 1 Auction Revenue Rights allocated pursuant to section 7.4.2 of Schedule 1 of this Agreement; provided that, the foregoing notwithstanding, Residual Auction Revenue Rights shall exclude: 1) Incremental Auction Revenue Rights allocated pursuant to Part VI of the Tariff; and 2) Auction Revenue Rights allocated to entities that are assigned cost responsibility pursuant to Schedule 6 of this Agreement for transmission upgrades that create such rights.

1.3.31.02 Special Member.

“Special Member” shall mean an entity that satisfies the requirements of Section 1.5A.02 of this Schedule or the special membership provisions established under the Emergency Load Response Program.

1.3.31A [Reserved.]

1.3.31B [Reserved.]

1.3.32 Spot Market Backup.

“Spot Market Backup” shall mean the purchase of energy from, or the delivery of energy to, the PJM Interchange Energy Market in quantities sufficient to complete the delivery or receipt obligations of a bilateral contract that has been curtailed or interrupted for any reason.

1.3.33 Spot Market Energy.

“Spot Market Energy” shall mean energy bought or sold by Market Participants through the PJM Interchange Energy Market at System Energy Prices determined as specified in Section 2 of this Schedule.

1.3.33A State Estimator.

“State Estimator” shall mean the computer model of power flows specified in Section 2.3 of this Schedule.

1.3.33B Station Power.

“Station Power” shall mean energy used for operating the electric equipment on the site of a generation facility located in the PJM Region or for the heating, lighting, air-conditioning and office equipment needs of buildings on the site of such a generation facility that are used in the operation, maintenance, or repair of the facility. Station Power does not include any energy (i) used to power synchronous condensers; (ii) used for pumping at a pumped storage facility; (iii) used for compressors at a compressed air energy storage facility; (iv) used for charging an Energy Storage Resource; or (v) used in association with restoration or black start service.

1.3.33B.001 Sub-meter.

“Sub-meter” shall mean a metering point for electricity consumption that does not include all electricity consumption for the end-use customer as defined by the electric distribution company account number. PJM shall only accept sub-meter load data from end-use customers for measurement and verification of Regulation service as set forth in the Economic Load Response rules and PJM Manuals.

1.3.33B.01 Synchronized Reserve.

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

1.3.33B.02 Synchronized Reserve Event.

“Synchronized Reserve Event” shall mean a request from the Office of the Interconnection to generation resources and/or Demand Resources able, assigned or self-scheduled to provide Synchronized Reserve, within ten minutes, to increase the energy output or reduce load by the amount of assigned or self-scheduled Synchronized Reserve capability.

1.3.33B.03 System Energy Price.

“System Energy Price” shall mean the energy component of the Locational Marginal Price, which is the price at which the Market Seller has offered to supply an additional increment of energy from a resource, calculated as specified in Section 2 of Schedule 1 of this Agreement.

1.3.33C Target Allocation.

“Target Allocation” shall mean the allocation of Transmission Congestion Credits as set forth in Section 5.2.3 of this Schedule or the allocation of Auction Revenue Rights Credits as set forth in Section 7.4.3 of this Schedule.

1.3.34 Transmission Congestion Charge.

“Transmission Congestion Charge” shall mean a charge attributable to the increased cost of energy delivered at a given load bus when the transmission system serving that load bus is operating under constrained conditions, or as necessary to provide energy for third-party transmission losses in accordance with Section 9.3, which shall be calculated and allocated as specified in Section 5.1 of this Schedule.

1.3.35 Transmission Congestion Credit.

“Transmission Congestion Credit” shall mean the allocated share of total Transmission Congestion Charges credited to each holder of Financial Transmission Rights, calculated and allocated as specified in Section 5.2 of this Schedule.

1.3.36 Transmission Customer.

“Transmission Customer” shall mean an entity using Point-to-Point Transmission Service.

1.3.37 Transmission Forced Outage.

“Transmission Forced Outage” shall mean an immediate removal from service of a transmission facility by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the transmission facility, as specified in the relevant portions of the PJM Manuals. A removal from service of a transmission facility at the request of the Office of the Interconnection to improve transmission capability shall not constitute a Forced Transmission Outage.

1.3.37A Transmission Loading Relief.

“Transmission Loading Relief” shall mean NERC’s procedures for preventing operating security limit violations, as implemented by PJM as the security coordinator responsible for maintaining transmission security for the PJM Region.

1.3.37B Transmission Loading Relief Customer.

“Transmission Loading Relief Customer” shall mean an entity that, in accordance with Section 1.10.6A, has elected to pay Transmission Congestion Charges during Transmission Loading Relief in order to continue energy schedules over contract paths outside the PJM Region that are increasing the cost of energy in the PJM Region.

1.3.37C Transmission Loss Charge.

“Transmission Loss Charge” shall mean the charges to each Market Participant, Network Customer, or Transmission Customer for the cost of energy lost in the transmission of electricity from a generation resource to load as specified in Section 5 of this Schedule.

1.3.38 Transmission Planned Outage.

“Transmission Planned Outage” shall mean any transmission outage scheduled in advance for a pre-determined duration and which meets the notification requirements for such outages specified in this Agreement or the PJM Manuals.

1.3.38A Variable Loads.

“Variable Loads” shall have the meaning specified in section 1.5A.6 of this Schedule.

1.3.39 Zonal Base Load.

“Zonal Base Load” shall mean the lowest daily zonal peak load from the twelve month period ending October 21 of the calendar year immediately preceding the calendar year in which an annual Auction Revenue Right allocation is conducted, increased by the projected load growth rate for the relevant Zone.

1.6 Office of the Interconnection.

1.6.1 Operation of the PJM Interchange Energy Market.

The Office of the Interconnection shall operate the PJM Interchange Energy Market in accordance with this Agreement.

1.6.2 Scope of Services.

The Office of the Interconnection shall perform the services pertaining to the PJM Interchange Energy Market specified in this Agreement, including but not limited to the following:

- i) Administer the PJM Interchange Energy Market as part of the PJM Region, including scheduling and dispatching of generation resources, accounting for transactions, maintaining appropriate records, and monitoring the compliance of Market Participants with the provisions of this Agreement, all in accordance with applicable provisions of the Operating Agreement, and the Schedules to this Agreement;
- ii) Review and evaluate the qualification of entities to be Market Buyers, Market Sellers, or Economic Load Response Participants under applicable provisions of this Agreement;
- iii) Coordinate, in accordance with applicable provisions of this Agreement, the Reliability Assurance Agreement, and the Consolidated Transmission Owners Agreement, maintenance schedules for generation and transmission resources operated as part of the PJM Region;
- iv) Provide or coordinate the provision of ancillary services necessary for the operation of the PJM Region or the PJM Interchange Energy Market;
- v) Determine and declare that an Emergency is expected to exist, exists, or has ceased to exist, in all or any part of the PJM Region, or in another directly or indirectly interconnected Control Area and serve as a primary point of contact for interested state or federal agencies;
- vi) Administer (a) agreements for the transfer of energy in conditions constituting an Emergency in the PJM Region or in an interconnected Control Area, and the mutual provision of other support in such Emergency conditions with other interconnected Control Areas, and (b) purchases of Emergency energy offered by Members from resources that are not Capacity Resources in conditions constituting an Emergency in the PJM Region;
- vii) Coordinate the curtailment or shedding of load, or other measures appropriate to alleviate an Emergency, in order to preserve reliability in accordance with NERC, or Applicable Regional ~~Reliability Council~~Entity principles, guidelines and standards, and to ensure the operation of the PJM Region in accordance with Good Utility Practice and this Agreement;
- viii) Protect confidential information as specified in this Agreement; and

ix) Send a representative to meetings of the Members Committee or other Committees, subcommittees, or working groups specified in this Agreement or formed by the Members Committee when requested to do so by the chair or other head of such committee or other group.

1.6.3 Records and Reports.

The Office of the Interconnection shall prepare and maintain such records and prepare such reports, including, but not limited to quarterly budget reports, as are required to document the performance of its obligations to the Market Participants hereunder in a form adopted by the Office of the Interconnection upon consideration of the advice and recommendations of the Members Committee. The Office of the Interconnection shall also produce special reports reasonably requested by the Members Committee and consistent with FERC's standards of conduct; provided, however, the Market Participants shall reimburse the Office of the Interconnection for the costs of producing any such report. Notwithstanding the foregoing, the Office of the Interconnection shall not be required to disclose confidential or commercially sensitive information in any such report.

1.6.4 PJM Manuals.

The Office of the Interconnection shall prepare, maintain and update the PJM Manuals consistent with this Agreement. The PJM Manuals shall be available for inspection by the Market Participants, regulatory authorities with jurisdiction over the LLC or any Member, and the public.

1.7 General.

1.7.1 Market Sellers.

Only Market Sellers shall be eligible to submit offers to the Office of the Interconnection for the sale of electric energy or related services in the PJM Interchange Energy Market. Market Sellers shall comply with the prices, terms, and operating characteristics of all Offer Data submitted to and accepted by the PJM Interchange Energy Market.

1.7.2 Market Buyers.

Only Market Buyers shall be eligible to purchase energy or related services in the PJM Interchange Energy Market. Market Buyers shall comply with all requirements for making purchases from the PJM Interchange Energy Market.

1.7.2A Economic Load Response Participants.

Only Economic Load Response Participants shall be eligible to participate in the Real-time Energy Market and the Day-ahead Energy Market by submitting offers to the Office of the Interconnection to reduce demand.

1.7.3 Agents.

A Market Participant may participate in the PJM Interchange Energy Market through an agent, provided that the Market Participant informs the Office of the Interconnection in advance in writing of the appointment of such agent. A Market Participant participating in the PJM Interchange Energy Market through an agent shall be bound by all of the acts or representations of such agent with respect to transactions in the PJM Interchange Energy Market, and shall ensure that any such agent complies with the requirements of this Agreement.

1.7.4 General Obligations of the Market Participants.

(a) In performing its obligations to the Office of the Interconnection hereunder, each Market Participant shall at all times (i) follow Good Utility Practice, (ii) comply with all applicable laws and regulations, (iii) comply with the applicable principles, guidelines, standards and requirements of FERC, NERC and [each Applicable Regional Reliability Councils Entity](#), (iv) comply with the procedures established for operation of the PJM Interchange Energy Market and PJM Region and (v) cooperate with the Office of the Interconnection as necessary for the operation of the PJM Region in a safe, reliable manner consistent with Good Utility Practice.

(b) Market Participants shall undertake all operations in or affecting the PJM Interchange Energy Market and the PJM Region including but not limited to compliance with all Emergency procedures, in accordance with the power and authority of the Office of the Interconnection with respect to the operation of the PJM Interchange Energy Market and the PJM Region as established in this Agreement, and as specified in the Schedules to this Agreement and the PJM Manuals. Failure to comply with the foregoing operational requirements shall subject a Market

Participant to such reasonable charges or other remedies or sanctions for non-compliance as may be established by the PJM Board, including legal or regulatory proceedings as authorized by the PJM Board to enforce the obligations of this Agreement.

(c) The Office of the Interconnection may establish such committees with a representative of each Market Participant, and the Market Participants agree to provide appropriately qualified personnel for such committees, as may be necessary for the Office of the Interconnection and PJMSettlement to perform its obligations hereunder.

(d) All Market Participants shall provide to the Office of the Interconnection the scheduling and other information specified in the Schedules to this Agreement, and such other information as the Office of the Interconnection may reasonably require for the reliable and efficient operation of the PJM Region and PJM Interchange Energy Market, and for compliance with applicable regulatory requirements for posting market and related information. Such information shall be provided as much in advance as possible, but in no event later than the deadlines established by the Schedules to this Agreement, or by the Office of the Interconnection in conformance with such Schedules. Such information shall include, but not be limited to, maintenance and other anticipated outages of generation or transmission facilities, scheduling and related information on bilateral transactions and self-scheduled resources, and implementation of active load management, interruption of load, Price Responsive Demand, and other load reduction measures. The Office of the Interconnection shall abide by appropriate requirements for the non-disclosure and protection of any confidential or proprietary information given to the Office of the Interconnection by a Market Participant. Each Market Participant shall maintain or cause to be maintained compatible information and communications systems, as specified by the Office of the Interconnection, required to transmit scheduling, dispatch, or other time-sensitive information to the Office of the Interconnection in a timely manner.

(e) Subject to the requirements for Economic Load Response participants in section 1.5A above, each Market Participant shall install and operate, or shall otherwise arrange for, metering and related equipment capable of recording and transmitting all voice and data communications reasonably necessary for the Office of the Interconnection and PJMSettlement to perform the services specified in this Agreement. A Market Participant that elects to be separately billed for its PJM Interchange shall, to the extent necessary, be individually metered in accordance with Section 14 of this Agreement, or shall agree upon an allocation of PJM Interchange between it and the Market Participant through whose meters the unmetered Market Participant's PJM Interchange is delivered. The Office of the Interconnection shall be notified of the allocation by the foregoing Market Participants.

(f) Each Market Participant shall operate, or shall cause to be operated, any generating resources owned or controlled by such Market Participant that are within the PJM Region or otherwise supplying energy to or through the PJM Region in a manner that is consistent with the standards, requirements or directions of the Office of the Interconnection and that will permit the Office of the Interconnection to perform its obligations under this Agreement; provided, however, no Market Participant shall be required to take any action that is inconsistent with Good Utility Practice or applicable law.

(g) Each Market Participant shall follow the directions of the Office of the Interconnection to take actions to prevent, manage, alleviate or end an Emergency in a manner consistent with this Agreement and the procedures of the PJM Region as specified in the PJM Manuals.

(h) Each Market Participant shall obtain and maintain all permits, licenses or approvals required for the Market Participant to participate in the PJM Interchange Energy Market in the manner contemplated by this Agreement.

(i) Consistent with Section 36.1.1 of the PJM Tariff, to the extent its generating facility is dispatchable, a Market Participant shall submit an Economic Minimum in the Real-time Energy Market that is no greater than the higher of its physical operating minimum or its Capacity Interconnection Rights, as that term is defined in the PJM Tariff, associated with such generating facility under its Interconnection Service Agreement under Attachment O of the PJM Tariff or a wholesale market participation agreement.

1.7.5 Market Operations Center.

Each Market Participant shall maintain a Market Operations Center, or shall make appropriate arrangements for the performance of such services on its behalf. A Market Operations Center shall meet the performance, equipment, communications, staffing and training standards and requirements specified in this Agreement for the scheduling and completion of transactions in the PJM Interchange Energy Market and the maintenance of the reliable operation of the PJM Region, and shall be sufficient to enable (i) a Market Seller or an Economic Load Response Participant to perform all terms and conditions of its offers to the PJM Interchange Energy Market, and (ii) a Market Buyer or an Economic Load Response Participant to conform to the requirements for purchasing from the PJM Interchange Energy Market.

1.7.6 Scheduling and Dispatching.

(a) The Office of the Interconnection shall schedule and dispatch in real-time generation resources and/or Demand Resources economically on the basis of least-cost, security-constrained dispatch and the prices and operating characteristics offered by Market Sellers, continuing until sufficient generation resources and/or Demand Resources are dispatched to serve the PJM Interchange Energy Market energy purchase requirements under normal system conditions of the Market Buyers (taking into account any reductions to such requirements in accordance with PRD Curves properly submitted by PRD Providers), as well as the requirements of the PJM Region for ancillary services provided by generation resources and/or Demand Resources, in accordance with this Agreement. Such scheduling and dispatch shall recognize transmission constraints on coordinated flowgates external to the Transmission System in accordance with Appendix A to the Joint Operating Agreement between the Midwest Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. (PJM Rate Schedule FERC No. 38) and on other such flowgates that are coordinated in accordance with agreements between the LLC and other entities. Scheduling and dispatch shall be conducted in accordance with this Agreement.

(b) The Office of the Interconnection shall undertake to identify any conflict or incompatibility between the scheduling or other deadlines or specifications applicable to the PJM

Interchange Energy Market, and any relevant procedures of another Control Area, or any tariff (including the PJM Tariff). Upon determining that any such conflict or incompatibility exists, the Office of the Interconnection shall propose tariff or procedural changes, and undertake such other efforts as may be appropriate, to resolve any such conflict or incompatibility.

(c) To protect its generation or distribution facilities, or local Transmission Facilities not under the monitoring responsibility and dispatch control of the Office of the Interconnection, an entity may request that the Office of the Interconnection schedule and dispatch generation or reductions in demand to meet a limit on Transmission Facilities different from that which the Office of the Interconnection has determined to be required for reliable operation of the Transmission System. To the extent consistent with its other obligations under this Agreement, the Office of the Interconnection shall schedule and dispatch generation and reductions in demand in accordance with such request. An entity that makes a request pursuant to this section 1.7.6(c) shall be responsible for all generation and other costs resulting from its request that would not have been incurred by operating the Transmission System and scheduling and dispatching generation in the manner that the Office of the Interconnection otherwise has determined to be required for reliable operation of the Transmission System.

1.7.7 Pricing.

The price paid for energy bought and sold in the PJM Interchange Energy Market and for demand reductions will reflect the hourly Locational Marginal Price at each load and generation bus, determined by the Office of the Interconnection in accordance with this Agreement. Transmission Congestion Charges and Transmission Loss Charges, which shall be determined by differences in Congestion Prices and Loss Prices in an hour, shall be calculated by the Office of the Interconnection, and collected by PJMSettlement, and the revenues therefrom shall be disbursed by PJMSettlement in accordance with this Schedule.

1.7.8 Generating Market Buyer Resources.

A Generating Market Buyer may elect to self-schedule its generation resources up to that Generating Market Buyer's Equivalent Load, in accordance with and subject to the procedures specified in this Schedule, and the accounting and billing requirements specified in Section 3 to this Schedule. PJMSettlement shall not be a contracting party with respect to such self-scheduled or self-supplied transactions.

1.7.9 Delivery to an External Market Buyer.

A purchase of Spot Market Energy by an External Market Buyer shall be delivered to a bus or buses at the electrical boundaries of the PJM Region specified by the Office of the Interconnection, or to load in such area that is not served by Network Transmission Service, using Point-to-Point Transmission Service paid for by the External Market Buyer. Further delivery of such energy shall be the responsibility of the External Market Buyer.

1.7.10 Other Transactions.

(a) Bilateral Transactions.

- (i) In addition to transactions in the PJM Interchange Energy Market, Market Participants may enter into bilateral contracts for the purchase or sale of electric energy to or from each other or any other entity, subject to the obligations of Market Participants to make Generation Capacity Resources available for dispatch by the Office of the Interconnection. Such bilateral contracts shall be for the physical transfer of energy to or from a Market Participant and shall be reported to and coordinated with the Office of the Interconnection in accordance with this Schedule and pursuant to the LLC's rules relating to its eSchedules and Enhanced Energy Scheduler tools.
- (ii) For purposes of clarity, with respect to all bilateral contracts for the physical transfer of energy to a Market Participant inside the PJM Region, title to the energy that is the subject of the bilateral contract shall pass to the buyer at the source specified for the bilateral contract, and the further transmission of the energy or further sale of the energy into the PJM Interchange Energy Market shall be transacted by the buyer under the bilateral contract. With respect to all bilateral contracts for the physical transfer of energy to an entity outside the PJM Region, title to the energy shall pass to the buyer at the border of the PJM Region and shall be delivered to the border using transmission service. In no event shall the purchase and sale of energy between Market Participants under a bilateral contract constitute a transaction in the PJM Interchange Energy Market or be construed to define PJMSettlement as a contracting party to any bilateral transactions between Market Participants.
- (iii) Market Participants that are parties to bilateral contracts for the purchase and sale and physical transfer of energy reported to and coordinated with the Office of the Interconnection under this Schedule shall use all reasonable efforts, consistent with Good Utility Practice, to limit the megawatt hours of such reported transactions to amounts reflecting the expected load and other physical delivery obligations of the buyer under the bilateral contract.
- (iv) All payments and related charges for the energy associated with a bilateral contract shall be arranged between the parties to the bilateral contract and shall not be billed or settled by the Office of the Interconnection or PJMSettlement. The LLC, PJMSettlement, and the Members will not assume financial responsibility for the failure of a party to perform obligations owed to the other party under a bilateral contract reported and coordinated with the Office of the Interconnection under this Schedule.
- (v) A buyer under a bilateral contract shall guarantee and indemnify the LLC, PJMSettlement, and the Members for the costs of any Spot Market Backup

used to meet the bilateral contract seller's obligation to deliver energy under the bilateral contract and for which payment is not made to PJMSettlement by the seller under the bilateral contract, as determined by the Office of the Interconnection. Upon any default in obligations to the LLC or PJMSettlement by a Market Participant, the Office of the Interconnection shall (i) not accept any new eSchedules or Enhanced Energy Scheduler reporting by the Market Participant and (ii) terminate all of the Market Participant's eSchedules and Enhanced Energy Schedules associated with its bilateral contracts previously reported to the Office of the Interconnection for all days where delivery has not yet occurred. All claims regarding a buyer's default to a seller under a bilateral contract shall be resolved solely between the buyer and the seller. In such circumstances, the seller may instruct the Office of the Interconnection to terminate all of the eSchedules and Enhanced Energy Schedules associated with bilateral contracts between buyer and seller previously reported to the Office of the Interconnection. PJMSettlement shall assign its claims against a seller with respect to a seller's nonpayment for Spot Market Backup to a buyer the extent that the buyer has made an indemnification payment to PJMSettlement with respect to the seller's nonpayment.

- (vi) Bilateral contracts that do not contemplate the physical transfer of energy to or from a Market Participant are not subject to this Schedule, shall not be reported to and coordinated with the Office of the Interconnection, and shall not in any way constitute a transaction in the PJM Interchange Energy Market.

(b) Market Participants shall have Spot Market Backup with respect to all bilateral transactions that contemplate the physical transfer of energy to or from a Market Participant, that are not dynamically scheduled pursuant to Section 1.12 and that are curtailed or interrupted for any reason (except for curtailments or interruptions through active load management for load located within the PJM Region).

(c) To the extent the Office of the Interconnection dispatches a Generating Market Buyer's generation resources, such Generating Market Buyer may elect to net the output of such resources against its hourly Equivalent Load. Such a Generating Market Buyer shall be deemed a buyer from the PJM Interchange Energy Market to the extent of its PJM Interchange Imports, and shall be deemed a seller to the PJM Interchange Energy Market to the extent of its PJM Interchange Exports.

(d) A Market Seller may self-supply Station Power for its generation facility in accordance with the following provisions:

- (i) A Market Seller may self-supply Station Power for its generation facility during any month (1) when the net output of such facility is positive, or (2) when the net output of such facility is negative and the Market Seller

during the same month has available at other of its generation facilities positive net output in an amount at least sufficient to offset fully such negative net output. For purposes of this subsection (d), “net output” of a generation facility during any month means the facility’s gross energy output, less the Station Power requirements of such facility, during that month. The determination of a generation facility’s or a Market Seller’s monthly net output under this subsection (d) will apply only to determine whether the Market Seller self-supplied Station Power during the month and will not affect the price of energy sold or consumed by the Market Seller at any bus during any hour during the month. For each hour when a Market Seller has positive net output and delivers energy into the Transmission System, it will be paid the LMP at its bus for that hour for all of the energy delivered. Conversely, for each hour when a Market Seller has negative net output and has received Station Power from the Transmission System, it will pay the LMP at its bus for that hour for all of the energy consumed.

- (ii) Transmission Provider will determine the extent to which each affected Market Seller during the month self-supplied its Station Power requirements or obtained Station Power from third-party providers (including affiliates) and will incorporate that determination in its accounting and billing for the month. In the event that a Market Seller self-supplies Station Power during any month in the manner described in subsection (1) of subsection (d)(i) above, Market Seller will not use, and will not incur any charges for, transmission service. In the event, and to the extent, that a Market Seller self-supplies Station Power during any month in the manner described in subsection (2) of subsection (d)(i) above (hereafter referred to as “remote self-supply of Station Power”), Market Seller shall use and pay for transmission service for the transmission of energy in an amount equal to the facility’s negative net output from Market Seller’s generation facility(ies) having positive net output. Unless the Market Seller makes other arrangements with Transmission Provider in advance, such transmission service shall be provided under Part II of the PJM Tariff and shall be charged the hourly rate under Schedule 8 of the PJM Tariff for Non-Firm Point-to-Point Transmission Service with an election to pay congestion charges, provided, however, that no reservation shall be necessary for such transmission service and the terms and charges under Schedules 1, 1A, 2 through 6, 9 and 10 of the PJM Tariff shall not apply to such service. The amount of energy that a Market Seller transmits in conjunction with remote self-supply of Station Power will not be affected by any other sales, purchases, or transmission of capacity or energy by or for such Market Seller under any other provisions of the PJM Tariff.
- (iii) A Market Seller may self-supply Station Power from its generation facilities located outside of the PJM Region during any month only if such

generation facilities in fact run during such month and Market Seller separately has reserved transmission service and scheduled delivery of the energy from such resource in advance into the PJM Region.

1.7.11 Emergencies.

(a) The Office of the Interconnection, with the assistance of the Members' dispatchers as it may request, shall be responsible for monitoring the operation of the PJM Region, for declaring the existence of an Emergency, and for directing the operations of Market Participants as necessary to manage, alleviate or end an Emergency. The standards, policies and procedures of the Office of the Interconnection for declaring the existence of an Emergency, including but not limited to a Minimum Generation Emergency, and for managing, alleviating or ending an Emergency, shall apply to all Members on a non-discriminatory basis. Actions by the Office of the Interconnection and the Market Participants shall be carried out in accordance with this Agreement, the NERC Operating Policies, Applicable Regional [Reliability Council Entity](#) reliability principles and standards, Good Utility Practice, and the PJM Manuals. A declaration that an Emergency exists or is likely to exist by the Office of the Interconnection shall be binding on all Market Participants until the Office of the Interconnection announces that the actual or threatened Emergency no longer exists. Consistent with existing contracts, all Market Participants shall comply with all directions from the Office of the Interconnection for the purpose of managing, alleviating or ending an Emergency. The Market Participants shall authorize the Office of the Interconnection and PJM Settlement to purchase or sell energy on their behalf to meet an Emergency, and otherwise to implement agreements with other Control Areas interconnected with the PJM Region for the mutual provision of service to meet an Emergency, in accordance with this Agreement.

(b) To the extent load must be shed to alleviate an Emergency in a Control Zone, the Office of the Interconnection shall, to the maximum extent practicable, direct the shedding of load within such Control Zone. The Office of the Interconnection may shed load in one Control Zone to alleviate an Emergency in another Control Zone under its control only as necessary after having first shed load to the maximum extent practicable in the Control Zone experiencing the Emergency and only to the extent that PJM supports other control areas (not under its control) in those situations where load shedding would be necessary, such as to prevent isolation of facilities within the Eastern Interconnection, to prevent voltage collapse, or to restore system frequency following a system collapse; provided, however, that the Office of the Interconnection may not order a manual load dump in a Control Zone solely to address capacity deficiencies in another Control Zone. This subsection shall be implemented consistent with North American Electric Reliability Council and applicable reliability council standards.

1.7.12 Fees and Charges.

Each Market Participant, except for Special Members, shall pay all fees and charges of the Office of the Interconnection for operation of the PJM Interchange Energy Market as determined by and allocated to the Market Participant by the Office of the Interconnection in accordance with Schedule 3.

1.7.13 Relationship to the PJM Region.

The PJM Interchange Energy Market operates within and subject to the requirements for the operation of the PJM Region.

1.7.14 PJM Manuals.

The Office of the Interconnection shall be responsible for maintaining, updating, and promulgating the PJM Manuals as they relate to the operation of the PJM Interchange Energy Market. The PJM Manuals, as they relate to the operation of the PJM Interchange Energy Market, shall conform and comply with this Agreement, NERC operating policies, and Applicable Regional [Reliability Council Entity](#) reliability principles, guidelines and standards, and shall be designed to facilitate administration of an efficient energy market within industry reliability standards and the physical capabilities of the PJM Region.

1.7.15 Corrective Action.

Consistent with Good Utility Practice, the Office of the Interconnection shall be authorized to direct or coordinate corrective action, whether or not specified in the PJM Manuals, as necessary to alleviate unusual conditions that threaten the integrity or reliability of the PJM Region, or the regional power system.

1.7.16 Recording.

Subject to the requirements of applicable State or federal law, all voice communications with the Office of the Interconnection Control Center may be recorded by the Office of the Interconnection and any Market Participant communicating with the Office of the Interconnection Control Center, and each Market Participant hereby consents to such recording.

1.7.17 Operating Reserves.

(a) The following procedures shall apply to any generation unit subject to the dispatch of the Office of the Interconnection for which construction commenced before July 9, 1996, or any Demand Resource subject to the dispatch of the Office of the Interconnection.

(b) The Office of the Interconnection shall schedule to the Operating Reserve and load-following objectives of the Control Zones of the PJM Region and the PJM Interchange Energy Market in scheduling generation resources and/or Demand Resources pursuant to this Schedule. A table of Operating Reserve objectives for each Control Zone is calculated and published annually in the PJM Manuals. Reserve levels are probabilistically determined based on the season's historical load forecasting error and forced outage rates.

(c) Nuclear generation resources shall not be eligible for Operating Reserve payments unless: 1) the Office of the Interconnection directs such resources to reduce output, in which case, such units shall be compensated in accordance with section 3.2.3(f) of this Schedule; or 2) the resource submits a request for a risk premium to the Market Monitoring Unit under the

procedures specified in Section II.B of Attachment M - Appendix. A nuclear generation resource (i) must submit a risk premium consistent with its agreement under such process, or, (ii) if it has not agreed with the Market Monitoring Unit on an appropriate risk premium, may submit its own determination of an appropriate risk premium to the Office of the Interconnection, subject to acceptance by the Office of the Interconnection, with or without prior approval from the Commission.

(d) PJMSettlement shall be the Counterparty to the purchases and sales of Operating Reserve in the PJM Interchange Energy Market.

1.7.18 Regulation.

(a) Regulation to meet the Regulation objective of each Regulation Zone shall be supplied from generation resources and/or *demand resources* located within the metered electrical boundaries of such Regulation Zone. Generating Market Buyers, and Market Sellers offering Regulation, shall comply with applicable standards and requirements for Regulation capability and dispatch specified in the PJM Manuals.

(b) The Office of the Interconnection shall obtain and maintain for each Regulation Zone an amount of Regulation equal to the Regulation objective for such Regulation Zone as specified in the PJM Manuals.

(c) The Regulation range of a generation unit or *demand resource* shall be at least twice the amount of Regulation assigned.

(d) A generation unit capable of automatic energy dispatch that is also providing Regulation shall have its energy dispatch range reduced by twice the amount of the Regulation provided. The amount of Regulation provided by a generation unit shall serve to redefine the Normal Minimum Generation and Normal Maximum Generation energy limits of that generation unit, in that the amount of Regulation shall be added to the generation unit's Normal Minimum Generation energy limit, and subtracted from its Normal Maximum Generation energy limit.

(e) Qualified Regulation must satisfy the verification tests described in the PJM Manuals.

1.7.19 Ramping.

A generator dispatched by the Office of the Interconnection pursuant to a control signal appropriate to increase or decrease the generator's megawatt output level shall be able to change output at the ramping rate specified in the Offer Data submitted to the Office of the Interconnection for that generator.

1.7.19A Synchronized Reserve.

(a) Synchronized Reserve shall be supplied from generation resources and/or Demand Resources located within the metered boundaries of the PJM Region. Generating Market Buyers, and Market Sellers offering Synchronized Reserve shall comply with applicable

standards and requirements for Synchronized Reserve capability and dispatch specified in the PJM Manuals.

(b) The Office of the Interconnection shall obtain and maintain for each Synchronized Reserve Zone an amount of Synchronized Reserve equal to the Synchronized Reserve objective for such Synchronized Reserve Zone, as specified in the PJM Manuals.

(c) The Synchronized Reserve capability of a generation resource and Demand Resource shall be the increase in energy output or load reduction achievable by the generation resource and Demand Resource within a continuous 10-minute period.

(d) A generation unit capable of automatic energy dispatch that also is providing Synchronized Reserve shall have its energy dispatch range reduced by the amount of the Synchronized Reserve provided. The amount of Synchronized Reserve provided by a generation unit shall serve to redefine the Normal Maximum Generation energy limit of that generation unit in that the amount of Synchronized Reserve provided shall be subtracted from its Normal Maximum Generation energy limit.

1.7.19B Bilateral Transactions Regarding Regulation, Synchronized Reserve and Day-ahead Scheduling Reserves.

(a) In addition to transactions in the Regulation market, Synchronized Reserve market, and Day-ahead Scheduling Reserves Market, Market Participants may enter into bilateral contracts for the purchase or sale of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to or from each other or any other entity. Such bilateral contracts shall be for the physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to or from a Market Participant and shall be reported to and coordinated with the Office of the Interconnection in accordance with this Schedule and pursuant to the LLC's rules relating to its eMarket tools.

(b) For purposes of clarity, with respect to all bilateral contracts for the physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to a Market Participant in the PJM Region, title to the product that is the subject of the bilateral contract shall pass to the buyer at the source specified for the bilateral contract, and any further transactions associated with such products or further sale of such Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves in the markets for Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves, respectively, shall be transacted by the buyer under the bilateral contract. In no event shall the purchase and sale of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves between Market Participants under a bilateral contract constitute a transaction in PJM's markets for Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves, or otherwise construed to define PJMSettlement as a contracting party to any bilateral transactions between Market Participants.

(c) Market Participants that are parties to bilateral contracts for the purchase and sale and physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves reported to and coordinated with the Office of the Interconnection under this Schedule shall use

all reasonable efforts, consistent with Good Utility Practice, to limit the amounts of such reported transactions to amounts reflecting the expected requirements for Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves of the buyer pursuant to such bilateral contracts.

(d) All payments and related charges for the Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves associated with a bilateral contract shall be arranged between the parties to the bilateral contract and shall not be billed or settled by the Office of the Interconnection. The LLC, PJM Settlement, and the Members will not assume financial responsibility for the failure of a party to perform obligations owed to the other party under a bilateral contract reported and coordinated with the Office of the Interconnection under this Schedule.

(e) A buyer under a bilateral contract shall guarantee and indemnify the LLC, PJMSettlement, and the Members for the costs of any purchases by the seller under the bilateral contract in the markets for Regulations, Synchronized Reserve, or Day-ahead Scheduling Reserves used to meet the bilateral contract seller's obligation to deliver Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves under the bilateral contract and for which payment is not made to PJMSettlement by the seller under the bilateral contract, as determined by the Office of the Interconnection. Upon any default in obligations to the LLC or PJMSettlement by a Market Participant, the Office of the Interconnection shall (i) not accept any new eMarket reporting by the Market Participant and (ii) terminate all of the Market Participant's reporting of eMarkets schedules associated with its bilateral contracts previously reported to the Office of the Interconnection for all days where delivery has not yet occurred. All claims regarding a buyer's default to a seller under a bilateral contract shall be resolved solely between the buyer and the seller. In such circumstances, the seller may instruct the Office of the Interconnection to terminate all of the reported eMarkets schedules associated with bilateral contracts between buyer and seller previously reported to the Office of the Interconnection.

(f) Market Participants shall purchase Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves from PJM's markets for Regulation, Synchronized Reserve, Day-ahead Scheduling Reserves, in quantities sufficient to complete the delivery or receipt obligations of a bilateral contract that has been curtailed or interrupted for any reason, with respect to all bilateral transactions that contemplate the physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to or from a Market Participant.

1.7.20 Communication and Operating Requirements.

(a) Market Participants. Each Market Participant shall have, or shall arrange to have, its transactions in the PJM Interchange Energy Market subject to control by a Market Operations Center, with staffing and communications systems capable of real-time communication with the Office of the Interconnection during normal and Emergency conditions and of control of the Market Participant's relevant load or facilities sufficient to meet the requirements of the Market Participant's transactions with the PJM Interchange Energy Market, including but not limited to the following requirements as applicable.

- (b) Market Sellers selling from generation resources and/or Demand Resources within the PJM Region shall: report to the Office of the Interconnection sources of energy and Demand Resources available for operation; supply to the Office of the Interconnection all applicable Offer Data; report to the Office of the Interconnection generation resources and Demand Resources that are self-scheduled; with respect to generation resources, report to the Office of the Interconnection bilateral sales transactions to buyers not within the PJM Region; confirm to the Office of the Interconnection bilateral sales to Market Buyers within the PJM Region; respond to the Office of the Interconnection's directives to start, shutdown or change output levels of generation units, or change scheduled voltages or reactive output levels of generation units, or reduce load from Demand Resources; continuously maintain all Offer Data concurrent with on-line operating information; and ensure that, where so equipped, generating equipment and Demand Resources are operated with control equipment functioning as specified in the PJM Manuals.
- (c) Market Sellers selling from generation resources outside the PJM Region shall: provide to the Office of the Interconnection all applicable Offer Data, including offers specifying amounts of energy available, hours of availability and prices of energy and other services; respond to Office of the Interconnection directives to schedule delivery or change delivery schedules; and communicate delivery schedules to the Market Seller's Control Area.
- (d) Market Participants that are Load Serving Entities or purchasing on behalf of Load Serving Entities shall: respond to Office of the Interconnection directives for load management steps; report to the Office of the Interconnection Generation Capacity Resources to satisfy capacity obligations that are available for pool operation; report to the Office of the Interconnection all bilateral purchase transactions; respond to other Office of the Interconnection directives such as those required during Emergency operation.
- (e) Market Participants that are not Load Serving Entities or purchasing on behalf of Load Serving Entities shall: provide to the Office of the Interconnection requests to purchase specified amounts of energy for each hour of the Operating Day during which it intends to purchase from the PJM Interchange Energy Market, along with Dispatch Rate levels above which it does not desire to purchase; respond to other Office of the Interconnection directives such as those required during Emergency operation.
- (f) Economic Load Response Participants are responsible for maintaining demand reduction information, including the amount and price at which demand may be reduced. The Economic Load Response Participant shall provide this information to the Office of the Interconnection by posting it on the Load Response Program Registration link of the PJM website as required by the PJM Manuals. The Economic Load Response Participant shall notify the Office of the Interconnection of a demand reduction concurrent with, or prior to, the beginning of such demand reduction in accordance with the PJM Manuals. In the event that an Economic Load Response Participant chooses to measure load reductions using a Customer Baseline Load, the Economic Load Response Participant shall inform the Office of the Interconnection of a change in its operations or the operations of the end-use customer that would affect a relevant Customer Baseline Load as required by the PJM Manuals.

(g) PRD Providers shall be responsible for ensuring automated reductions to their Price Responsive Demand in response to price in accordance with their PRD Curves submitted to the Office of the Interconnection.

2.2 Interpretation.

To the extent permitted by applicable law, the PJM Dispute Resolution Procedures are to be interpreted to effectuate the objectives set forth in Section 2.1. To the extent permitted by these PJM Dispute Resolution Procedures, the Alternate Dispute Resolution Coordinator shall coordinate with the established dispute resolution committee of an Applicable Regional ~~Reliability Council~~[Entity](#), where appropriate, in order to conserve administrative resources and to avoid duplication of dispute resolution staffing.

3.2 Procedures.

3.2.1 Initiation.

If a dispute that is subject to the mediation procedures specified herein has not been resolved through good-faith negotiation, a party to the dispute shall notify the Alternate Dispute Resolution Coordinator in writing of the existence and nature of the dispute prior to commencing any other form of proceeding for resolution of the dispute. The Alternate Dispute Resolution Coordinator shall have ten calendar days from the date it first receives notification of the existence of a dispute from any of the parties to the dispute in which to distribute to the parties a list of mediators.

3.2.2 Selection of Mediator.

The Alternate Dispute Resolution Coordinator shall distribute to the parties by facsimile or other electronic means a list containing the names of seven mediators with mediation experience, or with technical or business experience in the electric power industry, or both, as it shall deem appropriate to the dispute. The Alternate Dispute Resolution Coordinator may draw from the lists of mediators maintained by the established dispute resolution committee of an Applicable Regional [Reliability Council Entity](#), as the Alternate Dispute Resolution Coordinator shall deem appropriate. In the event the Office of the Interconnection is one of the parties to the dispute, the Alternate Dispute Resolution Coordinator shall distribute the names of all qualified mediators on the Alternate Dispute Resolution Coordinator's list. The persons on the proposed list of mediators shall have no official, financial, or personal conflict of interest with respect to the issues in controversy, unless the interest is fully disclosed in writing to all participants in the mediation process and all such participants waive in writing any objection to the interest. The parties shall then alternate in striking names from the list with the last name on the list becoming the mediator. The determination of which party shall have the first strike off the list shall be determined by lot. The parties shall have ten calendar days to complete the mediator selection process, unless the time is extended by mutual agreement.

3.2.3 Advisory Mediator.

If the Alternate Dispute Resolution Coordinator deems it appropriate, it shall distribute two lists, one containing the names of seven mediators with mediation experience (or a list containing the names of all current mediators in the event of a dispute involving the Office of the Interconnection), and one containing the names of seven mediators with technical or business experience in the electric power industry. In connection with circulating the foregoing lists, the Alternate Dispute Resolution Coordinator shall specify one of the lists as containing the proposed mediators, and the other as a list of proposed advisors to assist the mediator in resolving the dispute. The parties shall then utilize the alternative strike procedure set forth above until one name remains on each list, with the last named persons serving as the mediator and advisor.

3.2.4 Mediation Process.

The disputing parties shall attempt in good faith to resolve their dispute in accordance with procedures and a timetable established by the mediator. In furtherance of the mediation efforts, the mediator may:

- (a) Require the parties to meet for face-to-face discussions, with or without the mediator;
- (b) Act as an intermediary between the disputing parties;
- (c) Require the disputing parties to submit written statements of issues and positions;
- (d) If requested by the disputing parties at any time in the mediation process, provide a written recommendation on resolution of the dispute including, if requested, the assessment by the mediator of the merits of the principal positions being advanced by each of the disputing parties; and
- (e) Adopt, when appropriate, the Center for Public Resources Model ADR Procedures for the Mediation of Business Disputes (as revised from time to time) to the extent such Procedures are not inconsistent with any rule, standard, or procedure adopted by the Office of the Interconnection or with any provision of this Agreement.

3.2.5 Mediator's Assessment.

(a) If a resolution of the dispute is not reached by the thirtieth day after the appointment of the mediator or such later date as may be agreed to by the parties, if not previously requested to do so the mediator shall promptly provide the disputing parties with a written, confidential, non-binding recommendation on resolution of the dispute, including the assessment by the mediator of the merits of the principal positions being advanced by each of the disputing parties. The recommendation may incorporate or append, if and as the mediator may deem appropriate, any recommendations or any assessment of the positions of the parties by the advisor, if any. Upon request, the mediator shall provide any additional recommendations or assessments the mediator shall deem appropriate.

(b) At a time and place specified by the mediator after delivery of the foregoing recommendation, the disputing parties shall meet in a good faith attempt to resolve the dispute in light of the recommendation of the mediator. Each disputing party shall be represented at the meeting by a person with authority to settle the dispute, along with such other persons as each disputing party shall deem appropriate. If the disputing parties are unable to resolve the dispute at or in connection with this meeting, then: (i) any disputing party may commence such arbitral, judicial, regulatory or other proceedings as may be appropriate as provided in the PJM Dispute Resolution Procedures; and (ii) the recommendation of the mediator, and any statements made by any party in the mediation process, shall have no further force or effect, and shall not be admissible for any purpose, in any subsequent arbitral, administrative, judicial, or other proceeding.

4.4 Selection of Arbitrator(s).

The parties to a dispute for which arbitration has been demanded may agree on any person to serve as a single arbitrator, or shall endeavor in good faith to agree on a single arbitrator from a list of arbitrators prepared for the dispute by the Alternate Dispute Resolution Coordinator and delivered to the parties by facsimile or other electronic means promptly after receipt by the Alternate Dispute Resolution Coordinator of a demand for arbitration. The Alternate Dispute Resolution Coordinator may draw from the lists of arbitrators maintained by the established dispute resolution committee of an Applicable Regional [Reliability Council Entity](#), as the Alternate Dispute Resolution Coordinator deems appropriate. In the event the Office of the Interconnection is one of the parties to the dispute, the Alternate Dispute Resolution Coordinator shall distribute the names of all qualified arbitrators on the Alternate Dispute Resolution Coordinator's list. If the parties are unable to agree on a single arbitrator by the fourteenth day following delivery of the foregoing list of arbitrators or such other date as agreed to by the parties, then not later than the end of the seventh business day thereafter the party or parties demanding arbitration on the one hand, and the party or parties responding to the demand for arbitration on the other, shall each designate an arbitrator from a list for the dispute prepared by the Alternate Dispute Resolution Coordinator. The arbitrators so chosen shall then choose a third arbitrator.

1.2 Conformity with NERC *Reliability Standards* and Other Applicable Reliability Criteria.

(a) NERC establishes Reliability Standards to promote the reliability, adequacy and security of the North American bulk power supply as related to the operation and planning of electric systems.

(b) Reliability-First Corporation is responsible for ensuring the reliability, adequacy and security of the bulk electric supply systems in the geographic region ~~encompassing the former MAAC, ECAR and MAIN regions described in the applicable agreements between NERC and Reliability-First Corporation, as approved by the FERC,~~ through coordinated operations and planning of generation and transmission facilities. Toward that end, it has adopted the NERC Reliability Standards and has established detailed Reliability Principles and Standards for Planning the Bulk Electric Supply System of the Reliability-First Corporation.

(c) [Reserved]

(c.01) [Reserved]

(c.02) SERC is responsible for ensuring the reliability, adequacy and security of the bulk electric supply systems in the VACAR subregion of SERC. Toward that end, it has adopted the NERC Reliability Standards and has established detailed Reliability Principles and Standards for Planning the Bulk Electric Supply System for SERC.

(d) The Regional Transmission Expansion Plan shall conform at a minimum to the applicable reliability principles, guidelines and standards of NERC, Reliability-First Corporation and SERC, and other ~~Applicable Regional Reliability Councils~~ Applicable Regional Entities in accordance with the planning and operating criteria and other procedures detailed in the PJM Manuals.

(e) The Regional Transmission Expansion Plan planning criteria shall include, Office of the Interconnection planning procedures, NERC Reliability Standards, Regional Entity reliability principles and standards, and the individual Transmission Owner FERC filed planning criteria as filed in FERC Form No. 715, and posted on the PJM website. FERC Form No. 715 material will be posted to the PJM website, subject to applicable Critical Energy Infrastructure Information (CEII) requirements.

(f) The Office of the Interconnection will also provide access through the PJM website, to the planning criteria and assumptions used by the Transmission Owners for the development of the current Local Plan.

1.2 Obligations.

(a) Each Electric Distributor in the ~~MAAC Control Zone~~[PJM Mid-Atlantic Region](#) shall install or contractually arrange for underfrequency relays to interrupt at least 30 percent of its peak load with 10 percent of the load interrupted at each of three frequency levels: 59.3 Hz, 58.9 Hz and 58.5 Hz. Upon the request of the Members Committee, each Electric Distributor in the ~~MAAC Control Zone~~[PJM Mid-Atlantic Region](#) shall document that it has complied with the requirement for underfrequency load shedding relays.

(b) Each Electric Distributor in the PJM West Region shall install or contractually arrange for underfrequency relays to interrupt at least 25 percent of its peak load with 5 percent of the load interrupted at each of five frequency levels: 59.5 Hz, 59.3 Hz, 59.1 Hz, 58.9 Hz, and 58.7 Hz; provided, however, that each Electric Distributor in the ~~MAIN Control Zone~~[Commonwealth Edison Company Zone](#) shall install or contractually arrange for underfrequency relays to interrupt at least 30 percent of its peak load with 10 percent of the load interrupted at each of three frequency levels: 59.3 Hz, 59.0 Hz, and 58.7 Hz. Upon the request of the [Markets and Reliability Committee](#) established by the Reliability Assurance Agreement-~~West~~, each Electric Distributor in the PJM West Region shall document that it has complied with the requirement for underfrequency load shedding relays.

(c) Each Electric Distributor in the PJM South Region shall install or contractually arrange for underfrequency relays to interrupt at least 30 percent of its peak load with 10 percent of the load interrupted at each of 3 frequency levels: 59.3 Hz, 59.0 Hz, 58.5 Hz. Upon the request of the [Markets and Reliability Committee](#) established by the Reliability Assurance Agreement-~~South~~, each Electric Distributor in the PJM South Region shall document that it has complied with the requirement for underfrequency load shedding relays.

**Section(s) of the
PJM Reliability Assurance Agreement
(Redline Version)**

RELIABILITY ASSURANCE AGREEMENT

RELIABILITY ASSURANCE AGREEMENT, dated as of this 1st day of June, 2007 by and among the entities set forth in Schedule 17 hereto, hereinafter referred to collectively as the "Parties" and individually as a "Party."

WITNESSETH:

WHEREAS, each Party to this Agreement is a Load Serving Entity within the PJM Region;

WHEREAS, each Party is committing to share its Capacity Resources with the other Parties to reduce the overall reserve requirements for the Parties while maintaining reliable service; and

WHEREAS, each Party is committing to provide mutual assistance to the other Parties during Emergencies;

WHEREAS, each Party is committing to coordinate its planning of Capacity Resources to satisfy the Reliability Principles and Standards;

~~**WHEREAS**, the Parties previously have entered into similar commitments related to sub-regions of the PJM Region through the East RAA, the West RAA, or the South RAA;~~

~~**WHEREAS**, the Parties desire, on a phased basis, to replace the East RAA, West RAA, and South RAA with a single reliability assurance agreement among all Load Serving Entities in the PJM Region; and~~

NOW THEREFORE, for and in consideration of the covenants and mutual agreements set forth herein and intending to be legally bound hereby, the Parties agree as follows:

ARTICLE 1 -- DEFINITIONS

ARTICLE 1 -- DEFINITIONS

Unless the context otherwise specifies or requires, capitalized terms used herein shall have the respective meanings assigned herein or in the Schedules hereto for all purposes of this Agreement (such definitions to be equally applicable to both the singular and the plural forms of the terms defined). Unless otherwise specified, all references herein to Articles, Sections or Schedules, are to Articles, Sections or Schedules of this Agreement. As used in this Agreement:

1.1 Agreement

Agreement shall mean this Reliability Assurance Agreement, together with all Schedules hereto, as amended from time to time.

1.1A Annual Demand Resource

Annual Demand Resource shall mean a resource that is placed under the direction of the Office of the Interconnection during the Delivery Year, and will be available for an unlimited number of interruptions during such Delivery Year by the Office of the Interconnection, and will be capable of maintaining each such interruption for at least a 10-hour duration between the hours of 10:00AM to 10:00PM Eastern Prevailing Time for the months of June through October and the following May, and 6:00AM through 9:00PM Eastern Prevailing Time for the months of November through April unless there is an Office of the Interconnection approved maintenance outage during October through April. The Annual Demand Resource must be available in the corresponding Delivery year to be offered for sale or Self-Supplied in an RPM Auction, or included as an Annual Demand Resource in an FRR Capacity Plan for the corresponding Delivery Year.

1.2 Applicable Regional ~~Reliability Council~~Entity

Applicable Regional ~~Reliability Council~~Entity shall have the same meaning as in the PJM Tariff.

1.3 Base Residual Auction

Base Residual Auction shall have the same meaning as in Attachment DD to the PJM Tariff.

1.4 Behind The Meter Generation

Behind The Meter Generation shall mean a generating unit that delivers energy to load without using the Transmission System or any distribution facilities (unless the entity that owns or leases the distribution facilities consented to such use of the distribution facilities and such consent has been demonstrated to the satisfaction of the Office of the Interconnection; provided, however, that Behind The Meter Generation does not include (i) at any time, any portion of such

generating unit's capacity that is designated as a Capacity Resource or (ii) in any hour, any portion of the output of such generating unit that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market.

1.5 Black Start Capability

Black Start Capability shall mean the ability of a generating unit or station to go from a shutdown condition to an operating condition and start delivering power without assistance from the power system.

1.6 Capacity Emergency Transfer Objective ("CETO")

Capacity Emergency Transfer Objective ("CETO") shall mean the amount of electric energy that a given area must be able to import in order to remain within a loss of load expectation of one event in 25 years when the area is experiencing a localized capacity emergency, as determined in accordance with the PJM Manuals. Without limiting the foregoing, CETO shall be calculated based in part on EFORD determined in accordance with Paragraph C of Schedule 5.

1.7 Capacity Emergency Transmission Limit ("CETL")

Capacity Emergency Transmission Limit ("CETL") shall mean the capability of the transmission system to support deliveries of electric energy to a given area experiencing a localized capacity emergency as determined in accordance with the PJM Manuals.

1.8 Capacity Resources

Capacity Resources shall mean megawatts of (i) net capacity from existing or Planned Generation Capacity Resources meeting the requirements of Schedules 9 and 10 that are or will be owned by or contracted to a Party and that are or will be committed to satisfy that Party's obligations under this Agreement, or to satisfy the reliability requirements of the PJM Region, for a Delivery Year; (ii) net capacity from existing or Planned Generation Capacity Resources within the PJM Region not owned or contracted for by a Party which are accredited to the PJM Region pursuant to the procedures set forth in Schedules 9 and 10; and (iii) load reduction capability provided by Demand Resources, Energy Efficiency Resources, or ILR that are accredited to the PJM Region pursuant to the procedures set forth in Schedule 6.

1.9 Capacity Transfer Right

Capacity Transfer Right shall have the meaning specified in Attachment DD to the PJM Tariff.

1.10 Control Area

Control Area shall mean an electric power system or combination of electric power systems bounded by interconnection metering and telemetry to which a common generation control scheme is applied in order to:

(a) match the power output of the generators within the electric power system(s) and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s);

(b) maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice;

(c) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice and the criteria of NERC and ~~Applicable Regional Reliability Council~~ each Applicable Regional Entity;

(d) maintain power flows on transmission facilities within appropriate limits to preserve reliability; and

(e) provide sufficient generating capacity to maintain operating reserves in accordance with Good Utility Practice.

1.11 Daily Unforced Capacity Obligation

Daily Unforced Capacity Obligation shall have the meaning set forth in Schedule 8 or, as to an FRR Entity, in Schedule 8.1.

1.12 Delivery Year

Delivery Year shall mean a Planning Period for which a Capacity Resource is committed pursuant to the auction procedures specified in Attachment DD to the Tariff or pursuant to an FRR Capacity Plan.

1.13 Demand Resource

Demand Resource or “DR” shall mean a Limited Demand Resource, Extended Summer Demand Resource, or Annual Demand Resource with a demonstrated capability to provide a reduction in demand or otherwise control load in accordance with the requirements of Schedule 6 that offers and that clears load reduction capability in a Base Residual Auction or Incremental Auction or that is committed through an FRR Capacity Plan. As set forth in Schedule 6, a Limited Demand Resource, Extended Summer Demand Resource or Annual Demand Resource may be an existing demand response resource or a Planned Demand Resource.

1.14 Demand Resource Provider

Demand Resource Provider shall have the meaning specified in Attachment DD to the PJM Tariff.

1.15 DR Factor

DR Factor shall mean that factor approved from time to time by the PJM Board used to determine the unforced capacity value of a Demand Resource or ILR in accordance with Schedule 6.

1.16 [Reserved for Future Use]~~East RAA~~

~~East RAA shall mean that certain Reliability Assurance Agreement among Load Serving Entities in the PJM Region, PJM Rate Schedule FERC No. 27.~~

1.17 Electric Cooperative

Electric Cooperative shall mean an entity owned in cooperative form by its customers that is engaged in the generation, transmission, and/or distribution of electric energy.

1.18 Electric Distributor

Electric Distributor shall mean an entity that owns or leases with rights equivalent to ownership electric distribution facilities that are providing electric distribution service to electric load within the PJM Region.

1.19 Emergency

Emergency shall mean (i) an abnormal system condition requiring manual or automatic action to maintain system frequency, or to prevent loss of firm load, equipment damage, or tripping of system elements that could adversely affect the reliability of an electric system or the safety of persons or property; or (ii) a fuel shortage requiring departure from normal operating procedures in order to minimize the use of such scarce fuel; or (iii) a condition that requires implementation of emergency procedures as defined in the PJM Manuals.

1.20 End-Use Customer

End-Use Customer shall mean a Member that is a retail end-user of electricity within the PJM Region.

1.20A Energy Efficiency Resource

Energy Efficiency Resource shall mean a project, including installation of more efficient devices or equipment or implementation of more efficient processes or systems, meeting the requirements of Schedule 6 of this Agreement and exceeding then-current building codes, appliance standards, or other relevant standards, designed to achieve a continuous (during peak periods as described in Schedule 6 and the PJM Manuals) reduction in electric energy consumption that is not reflected in the peak load forecast prepared for the Delivery Year for

which the Energy Efficiency Resource is proposed, and that is fully implemented at all times during such Delivery Year, without any requirement of notice, dispatch, or operator intervention.

1.20B Existing Generation Capacity Resource

Existing Generation Capacity Resource shall mean, for purposes of the must-offer requirement and mitigation of offers for any RPM Auction for a Delivery Year, a Generation Capacity Resource that, as of the date on which bidding commences for such auction: (a) is in service; or (b) is not yet in service, but has cleared any RPM Auction for any prior Delivery Year. Notwithstanding the foregoing, a Generation Capacity Resource for which construction has not commenced and which would otherwise have been treated as a Planned Generation Capacity Resource but for the fact that it was bid into RPM Auctions for at least two consecutive Delivery Years, and cleared the last such auction only because it was considered existing and its mitigated offer cap was accepted when its price offer would not have otherwise been accepted, shall be deemed to be a Planned Generation Capacity Resource. A Generation Capacity Resource shall be deemed to be in service if interconnection service has ever commenced (for resources located in the PJM Region), or if it is physically and electrically interconnected to an external Control Area and is in full commercial operation (for resources not located in the PJM Region). The additional megawatts of a Generation Capacity Resource that is being, or has been, modified to increase the number of megawatts of available installed capacity thereof shall not be deemed to be an Existing Generation Capacity Resource until such time as those megawatts (a) are in service; or (b) are not yet in service, but have cleared any RPM Auction for any prior Delivery Year.

1.20C Extended Summer Demand Resource

Extended Summer Demand Resource shall mean a resource that is placed under the direction of the Office of the Interconnection and that will be available June through October and the following May, and will be available for an unlimited number of interruptions during such months by the Office of the Interconnection, and will be capable of maintaining each such interruption for at least a 10-hour duration between the hours of 10:00AM to 10:00PM Eastern Prevailing Time. The Extended Summer Demand Resource must be available June through October and the following May in the corresponding Delivery Year to be offered for sale or Self-Supplied in an RPM Auction, or included as an Extended Summer Demand Resource in an FRR Capacity Plan for the corresponding Delivery Year.

1.21 Facilities Study Agreement

Facilities Study Agreement shall have the same meaning as in the PJM Tariff

1.22 FERC

FERC shall mean the Federal Energy Regulatory Commission or any successor federal agency, commission or department.

1.23 Firm Point-To-Point Transmission Service

Firm Point-To-Point Transmission Service shall mean Firm Transmission Service provided pursuant to the rates, terms and conditions set forth in Part II of the PJM Tariff.

1.24 Firm Transmission Service

Firm Transmission Service shall mean transmission service that is intended to be available at all times to the maximum extent practicable, subject to an Emergency, an unanticipated failure of a facility, or other event beyond the control of the owner or operator of the facility or the Office of the Interconnection.

1.25 Fixed Resource Requirement Alternative or FRR Alternative

Fixed Resource Requirement Alternative or FRR Alternative shall mean an alternative method for a Party to satisfy its obligation to provide Unforced Capacity hereunder, as set forth in Schedule 8.1 to this Agreement.

1.26 Forecast Pool Requirement

Forecast Pool Requirement or FPR shall mean the amount equal to one plus the unforced reserve margin (stated as a decimal number) for the PJM Region required pursuant to this Agreement, as approved by the PJM Board pursuant to Schedule 4.1.

1.27 Forecast RTO ILR Obligation

Forecast RTO ILR Obligation shall have the same meaning as in the PJM Tariff.

1.28 Forecast Zonal ILR Obligation

Forecast Zonal ILR Obligation shall have the same meaning as in the PJM Tariff.

1.29 FRR Capacity Plan

FRR Capacity Plan shall mean a long-term plan for the commitment of Capacity Resources to satisfy the capacity obligations of a Party that has elected the FRR Alternative, as more fully set forth in Schedule 8.1 to this Agreement.

1.30 FRR Entity

FRR Entity shall mean, for the duration of such election, a Party that has elected the FRR Alternative hereunder.

1.31 FRR Service Area

FRR Service Area shall mean (a) the service territory of an IOU as recognized by state law, rule or order; (b) the service area of a Public Power Entity or Electric Cooperative as

recognized by franchise or other state law, rule, or order; or (c) a separately identifiable geographic area that is: (i) bounded by wholesale metering, or similar appropriate multi-site aggregate metering, that is visible to, and regularly reported to, the Office of the Interconnection, or that is visible to, and regularly reported to an Electric Distributor and such Electric Distributor agrees to aggregate the load data from such meters for such FRR Service Area and regularly report such aggregated information, by FRR Service Area, to the Office of the Interconnection; and (ii) for which the FRR Entity has or assumes the obligation to provide capacity for all load (including load growth) within such area. In the event that the service obligations of an Electric Cooperative or Public Power Entity are not defined by geographic boundaries but by physical connections to a defined set of customers, the FRR Service Area in such circumstances shall be defined as all customers physically connected to transmission or distribution facilities of such Electric Cooperative or Public Power Entity within an area bounded by appropriate wholesale aggregate metering as described above.

1.32 Full Requirements Service

Full Requirements Service shall mean wholesale service to supply all of the power needs of a Load Serving Entity to serve end-users within the PJM Region that are not satisfied by its own generating facilities.

1.33 Generation Capacity Resource

Generation Capacity Resource shall mean a generation unit, or the right to capacity from a specified generation unit, that meets the requirements of Schedules 9 and 10 of this Agreement. A Generation Capacity Resource may be an *Existing* Generation Capacity Resource or a *Planned* Generation Capacity Resource.

1.34 Generation Owner

Generation Owner shall mean a Member that owns or leases with rights equivalent to ownership facilities for the generation of electric energy that are located within the PJM Region. Purchasing all or a portion of the output of a generation facility shall not be sufficient to qualify a Member as a Generation Owner.

1.35 Generator Forced Outage

Generator Forced Outage shall mean an immediate reduction in output or capacity or removal from service, in whole or in part, of a generating unit by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the facility, as specified in the relevant portions of the PJM Manuals. A reduction in output or removal from service of a generating unit in response to changes in market conditions shall not constitute a Generator Forced Outage.

1.36 Generator Maintenance Outage

Generator Maintenance Outage shall mean the scheduled removal from service, in whole or in part, of a generating unit in order to perform repairs on specific components of the facility, if removal of the facility qualifies as a maintenance outage pursuant to the PJM Manuals.

1.37 Generator Planned Outage

Generator Planned Outage shall mean the scheduled removal from service, in whole or in part, of a generating unit for inspection, maintenance or repair with the approval of the Office of the Interconnection in accordance with the PJM Manuals.

1.38 Good Utility Practice

Good Utility Practice shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather is intended to include acceptable practices, methods, or acts generally accepted in the region.

1.39 ILR Provider

ILR Provider shall have the meaning specified in Attachment DD to the PJM Tariff.

1.40 Incremental Auction

Incremental Auction shall mean the First Incremental Auction, the Second Incremental Auction, the Third Incremental Auction, or the Conditional Incremental Auction, each as defined in Attachment DD to the PJM Tariff.

1.41 Interconnection Agreement

Interconnection Agreement shall have the same meaning as in the PJM Tariff.

1.42 Interruptible Load for Reliability, or ILR

Interruptible Load for Reliability, or ILR, shall mean a resource with a demonstrated capability to provide a reduction in demand or otherwise control load in accordance with the requirements of Schedule 6 that is certified by PJM no later than three months prior to a Delivery Year. At a minimum, ILR shall be available for interruption for at least 10 times during the summer period of June through September in the Delivery Year, and will be capable of maintaining each such interruption for at least a 6-hour duration. At a minimum, the ILR shall be available for such interruptions on weekdays, other than NERC holidays, from 12:00PM (noon) to 8:00PM Eastern Prevailing Time in the corresponding Delivery Year.

1.43 IOU

IOU shall mean an investor-owned utility with substantial business interest in owning and/or operating electric facilities in any two or more of the following three asset categories: generation, transmission, distribution.

1.43A Limited Demand Resource

Limited Demand Resource shall mean a resource that is placed under the direction of the Office of the Interconnection and that will, at a minimum, be available for interruption for at least 10 times during the summer period of June through September in the Delivery Year, and will be capable of maintaining each such interruption for at least a 6-hour duration. At a minimum, the Limited Demand Resource shall be available for such interruptions on weekdays, other than NERC holidays, from 12:00PM (noon) to 8:00PM Eastern Prevailing Time. The Limited Demand Resource must be available during the summer period of June through September in the corresponding Delivery Year to be offered for sale or Self-Supplied in an RPM Auction, or included as a Limited Demand Resource in an FRR Capacity Plan for the corresponding Delivery Year.

1.44 Load Serving Entity or LSE

Load Serving Entity or LSE shall mean any entity (or the duly designated agent of such an entity), including a load aggregator or power marketer, (i) serving end-users within the PJM Region, and (ii) that has been granted the authority or has an obligation pursuant to state or local law, regulation or franchise to sell electric energy to end-users located within the PJM Region. Load Serving Entity shall include any end-use customer that qualifies under state rules or a utility retail tariff to manage directly its own supply of electric power and energy and use of transmission and ancillary services.

1.45 Locational Reliability Charge

Locational Reliability Charge shall mean the charge determined pursuant to Schedule 8.

1.46 Markets and Reliability Committee

Markets and Reliability Committee shall mean the committee established pursuant to the Operating Agreement as a Standing Committee of the Members Committee.

1.46A Maximum Emergency Service Level

Maximum Emergency Service Level or MESL of Price Responsive Demand shall mean the level, determined at a PRD Substation level, to which Price Responsive Demand shall be reduced during the Delivery Year when a Maximum Generation Emergency is declared and the Locational Marginal Price exceeds the price associated with such Price Responsive Demand identified by the PRD Provider in its PRD Plan.

1.47 Member

Member shall mean an entity that satisfies the requirements of Sections 1.24 and 11.6 of the PJM Operating Agreement. In accordance with Article 4 of this Agreement, each Party to this Agreement also is a Member.

1.48 Members Committee

Members Committee shall mean the committee specified in Section 8 of the PJM Operating Agreement composed of the representatives of all the Members.

1.49 NERC

NERC shall mean the North American Electric Reliability Council or any successor thereto.

1.50 Network Resources

Network Resources shall have the meaning set forth in the PJM Tariff.

1.51 Network Transmission Service

Network Transmission Service shall mean transmission service provided pursuant to the rates, terms and conditions set forth in Part III of the PJM Tariff or transmission service comparable to such service that is provided to a Load Serving Entity that is also a Transmission Owner (as that term is defined in the PJM Tariff).

1.51A Nominal PRD Value

Nominal PRD Value shall mean, as to any PRD Provider, an adjustment, determined in accordance with Schedule 6.1 of this Agreement, to the peak-load forecast used to determine the quantity of capacity sought through an RPM Auction, reflecting the aggregate effect of Price Responsive Demand on peak load resulting from the Price Responsive Demand to be provided by such PRD Provider.

1.52 Nominated Demand Resource Value

Nominated Demand Resource Value shall have the meaning specified in Attachment DD to the PJM Tariff.

1.53 Nominated ILR Value

Nominated ILR Value shall have the meaning specified in Attachment DD to the PJM Tariff.

1.54 Non-Retail Behind the Meter Generation

Non-Retail Behind the Meter Generation shall mean Behind the Meter Generation that is used by municipal electric systems, electric cooperatives, and electric distribution companies to serve load.

1.55 Obligation Peak Load

Obligation Peak Load shall have the meaning specified in Schedule 8 of this Agreement.

1.56 Office of the Interconnection

Office of the Interconnection shall mean the employees and agents of PJM Interconnection, L.L.C., subject to the supervision and oversight of the PJM Board, acting pursuant to the Operating Agreement.

1.57 Operating Agreement of PJM Interconnection, L.L.C. or Operating Agreement

Operating Agreement of PJM Interconnection, L.L.C. or Operating Agreement shall mean that certain agreement, dated April 1, 1997 and as amended and restated June 2, 1997 and as amended from time to time thereafter, among the members of the PJM Interconnection, L.L.C.

1.58 Operating Reserve

Operating Reserve shall mean the amount of generating capacity scheduled to be available for a specified period of an operating day to ensure the reliable operation of the PJM Region, as specified in the PJM Manuals.

1.59 Other Supplier

Other Supplier shall mean a Member that is (i) a seller, buyer or transmitter of electric capacity or energy in, from or through the PJM Region, and (ii) is not a Generation Owner, Electric Distributor, Transmission Owner or End-Use Customer.

1.60 Partial Requirements Service

Partial Requirements Service shall mean wholesale service to supply a specified portion, but not all, of the power needs of a Load Serving Entity to serve end-users within the PJM Region that are not satisfied by its own generating facilities.

1.61 Percentage Internal Resources Required

Percentage Internal Resources Required shall mean, for purposes of an FRR Capacity Plan, the percentage of the LDA Reliability Requirement for an LDA that must be satisfied with Capacity Resources located in such LDA.

1.62 Party

Party shall mean an entity bound by the terms of this Agreement.

1.63 PJM

PJM shall mean the PJM Board and the Office of the Interconnection.

1.64 PJM Board

PJM Board shall mean the Board of Managers of the PJM Interconnection, L.L.C., acting pursuant to the Operating Agreement.

1.65 PJM Manuals

PJM Manuals shall mean the instructions, rules, procedures and guidelines established by the Office of the Interconnection for the operation, planning and accounting requirements of the PJM Region.

1.66 PJM Open Access Transmission Tariff or PJM Tariff

PJM Open Access Transmission Tariff or PJM Tariff shall mean the tariff for transmission service within the PJM Region, as in effect from time to time, including any schedules, appendices, or exhibits attached thereto.

1.67 PJM Region

PJM Region shall have the same meaning as provided in the Operating Agreement.

1.68 PJM Region Installed Reserve Margin

PJM Region Installed Reserve Margin shall mean the percent installed reserve margin for the PJM Region required pursuant to this Agreement, as approved by the PJM Board pursuant to Schedule 4.1.

1.69 Planned Demand Resource

Planned Demand Resource shall mean a Demand Resource that does not currently have the capability to provide a reduction in demand or to otherwise control load, but that is scheduled to be capable of providing such reduction or control on or before the start of the Delivery Year for which such resource is to be committed, as determined in accordance with the requirements of Schedule 6.

1.69A Planned External Generation Capacity Resource

Planned External Generation Capacity Resource shall mean a proposed Generation Capacity Resource, or a proposed increase in the capability of a Generation Capacity Resource, that (a) is to be located outside the PJM Region, (b) participates in the generation interconnection process of a Control Area external to PJM, (c) is scheduled to be physically and electrically interconnected to the transmission facilities of such Control Area on or before the first day of the Delivery Year for which such resource is to be committed to satisfy the reliability requirements of the PJM Region, and (d) is in full commercial operation prior to the first day of such Delivery Year, such that it is sufficient to provide the Installed Capacity set forth in the Sell Offer forming the basis of such resource's commitment to the PJM Region. Prior to participation in any Reliability Pricing Model Auction for such Delivery Year, the Capacity Market Seller must demonstrate that it has executed an interconnection agreement (functionally equivalent to a System Impact Study Agreement under the PJM Tariff for Base Residual Auction and an Interconnection Service Agreement under the PJM Tariff for Incremental Auction) with the transmission owner to whose transmission facilities or distribution facilities the resource is being directly connected, and if applicable the transmission provider. A Planned External Generation Capacity Resource must provide evidence to PJM that it has been studied as a Network Resource, or such other similar interconnection product in such external Control Area, must provide contractual evidence that it has applied for or purchased transmission service to be deliverable to the PJM border, and must provide contractual evidence that it has applied for transmission service to be deliverable to the bus at which energy is to be delivered, the agreements for which must have been executed prior to participation in any Reliability Pricing Model Auction for such Delivery Year. An External Generation Capacity Resource shall cease to be considered a Planned External Generation Capacity Resource as of the earlier of (i) the date that interconnection service commences as to such resource; or (ii) the resource has cleared an RPM Auction, in which case it shall become an Existing Generation Capacity Resource for purposes of the mitigation of offers for any RPM Auction for all subsequent Delivery Years.

1.70 Planned Generation Capacity Resource

Planned Generation Capacity Resource shall mean a Generation Capacity Resource participating in the generation interconnection process under Part IV, Subpart A of the PJM Tariff, for which: (i) Interconnection Service is scheduled to commence on or before the first day of the Delivery Year for which such resource is to be committed to RPM or to an FRR Plan; (ii) a System Impact Study Agreement has been executed prior to the Base Residual Auction for such Delivery Year; (iii) an Interconnection Service Agreement has been executed prior to any Incremental Auction for such Delivery Year in which such resource plans to participate; and (iv) no megawatts of capacity have cleared an RPM Auction for any prior Delivery Year. For purposes of the must-offer requirement and mitigation of offers for any RPM Auction for a Delivery Year, a Generation Capacity Resource shall cease to be considered a Planned Generation Capacity Resource as of the earlier of (i) the date that Interconnection Service commences as to such resource; or (ii) the resource has cleared an RPM Auction for any Delivery Year, in which case it shall become an Existing Generation Capacity Resource for any RPM Auction for all subsequent Delivery Years. Notwithstanding the foregoing, a Generation Capacity Resource for which construction has not commenced and which would otherwise have been treated as a Planned Generation Capacity Resource but for the fact that it was bid into RPM Auctions for at least two consecutive Delivery Years, and cleared the last such auction only

because it was considered existing and its mitigated offer cap was accepted when its price offer would not have otherwise been accepted, shall be deemed to be a Planned Generation Capacity Resource.

1.71 Planning Period

Planning Period shall mean the 12 months beginning June 1 and extending through May 31 of the following year, or such other period approved by the Members Committee.

1.71A PRD Curve

PRD Curve shall mean a price-consumption curve at a PRD Substation level, if available, and otherwise at a Zonal (or sub-Zonal LDA, if applicable) level, that details the base consumption level of Price Responsive Demand and the decreasing consumption levels at increasing prices.

1.71B PRD Provider

PRD Provider shall mean (i) a Load Serving Entity that provides PRD; or (ii) an entity without direct load serving responsibilities that has entered contractual arrangements with end-use customers served by a Load Serving Entity that satisfy the eligibility criteria for Price Responsive Demand.

1.71C PRD Provider's Zonal Expected Peak Load Value of PRD

PRD Provider's Zonal Expected Peak Load Value of PRD shall mean the expected contribution to Delivery Year peak load of a PRD Provider's Price Responsive Demand, were such demand not to be reduced in response to price, based on the contribution of the end-use customers comprising such Price Responsive Demand to the most recent prior Delivery Year's peak demand, escalated to the Delivery Year in question, as determined in a manner consistent with the Office of the Interconnection's load forecasts used for purposes of the RPM Auctions.

1.71D PRD Reservation Price

PRD Reservation Price shall mean an RPM Auction clearing price identified in a PRD Plan for Price Responsive Demand load below which the PRD Provider desires not to commit the identified load as Price Responsive Demand.

1.71E PRD Substation

PRD Substation shall mean an electrical substation that is located in the same Zone or in the same sub-Zonal LDA as the end-use customers identified in a PRD Plan or PRD registration and that, in terms of the electrical topography of the Transmission Facilities comprising the PJM Region, is as close as practicable to such loads.

1.71F Price Responsive Demand

Price Responsive Demand or PRD shall mean end-use customer load registered by a PRD Provider pursuant to Schedule 6.1 of the PJM Reliability Assurance Agreement that have, as set forth in more detail in the PJM Manuals, the metering capability to record electricity consumption at an interval of one hour or less, supervisory control capable of curtailing such load (consistent with applicable RERRA requirements) at each PRD Substation identified in the relevant PRD Plan or PRD registration in response to a Maximum Generation Emergency declared by the Office of the Interconnection, and a retail rate structure, or equivalent contractual arrangement, capable of changing retail rates as frequently as an hourly basis, that is linked to or based upon changes in real-time Locational Marginal Prices at a PRD Substation level and that results in a predictable automated response to varying wholesale electricity prices.

1.71G Price Responsive Demand Credit

Price Responsive Demand Credit shall mean a credit, based on committed Price Responsive Demand, as determined under Schedule 6.1 of this Agreement.

1.71H Price Responsive Demand Plan or PRD Plan

Price Responsive Demand Plan or PRD Plan shall mean a plan, submitted by a PRD Provider and received by the Office of the Interconnection in accordance with Schedule 6.1 of this Agreement and procedures specified in the PJM Manuals, claiming a peak demand limitation due to Price Responsive Demand to support the determination of such PRD Provider's Nominal PRD Value.

1.72 Public Power Entity

Public Power Entity shall mean any agency, authority, or instrumentality of a state or of a political subdivision of a state, or any corporation wholly owned by any one or more of the foregoing, that is engaged in the generation, transmission, and/or distribution of electric energy.

1.73 Qualifying Transmission Upgrades

Qualifying Transmission Upgrades shall have the meaning specified in Attachment DD to the PJM Tariff.

1.74 [Reserved for Future Use]

1.74A Relevant Electric Retail Regulatory Authority

Relevant Electric Retail Regulatory Authority or RERRA shall have the meaning specified in the PJM Operating Agreement.

1.75 Reliability Principles and Standards

Reliability Principles and Standards shall mean the principles and standards established by NERC or an Applicable Regional ~~Reliability Council~~Entity to define, among other things, an acceptable probability of loss of load due to inadequate generation or transmission capability, as amended from time to time.

1.76 Required Approvals

Required Approvals shall mean all of the approvals required for this Agreement to be modified or to be terminated, in whole or in part, including the acceptance for filing by FERC and every other regulatory authority with jurisdiction over all or any part of this Agreement.

1.77 Self-Supply

Self Supply shall have the meaning provided in Attachment DD to the PJM Tariff.

1.78 [Reserved for Future Use]

1.79 [Reserved for Future Use]~~South RAA~~

~~South RAA shall mean that certain Reliability Assurance Agreement among Load-Serving Entities in the PJM South Region, on file with FERC as PJM Rate Schedule FERC No. 40.~~

1.80 State Consumer Advocate

State Consumer Advocate shall mean a legislatively created office from any State, all or any part of the territory of which is within the PJM Region, and the District of Columbia established, inter alia, for the purpose of representing the interests of energy consumers before the utility regulatory commissions of such states and the District of Columbia and the FERC.

1.81 State Regulatory Structural Change

State Regulatory Structural Change shall mean as to any Party, a state law, rule, or order that, after September 30, 2006, initiates a program that allows retail electric consumers served by such Party to choose from among alternative suppliers on a competitive basis, terminates such a program, expands such a program to include classes of customers or localities served by such Party that were not previously permitted to participate in such a program, or that modifies retail electric market structure or market design rules in a manner that materially increases the likelihood that a substantial proportion of the customers of such Party that are eligible for retail choice under such a program (a) that have not exercised such choice will exercise such choice; or (b) that have exercised such choice will no longer exercise such choice, including for example, without limitation, mandating divestiture of utility-owned generation or structural changes to such Party's default service rules that materially affect whether retail choice is economically viable.

1.82 Threshold Quantity

Threshold Quantity shall mean, as to any FRR Entity for any Delivery Year, the sum of (a) the Unforced Capacity equivalent (determined using the Pool-Wide Average EFORD) of the Installed Reserve Margin for such Delivery Year multiplied by the Preliminary Forecast Peak Load for which such FRR Entity is responsible under its FRR Capacity Plan for such Delivery Year, plus (b) the lesser of (i) 3% of the Unforced Capacity amount determined in (a) above or (ii) 450 MW. If the FRR Entity is not responsible for all load within a Zone, the Preliminary Forecast Peak Load for such entity shall be the FRR Entity's Obligation Peak Load last determined prior to the Base Residual Auction for such Delivery Year, times the Base FRR Scaling Factor (as determined in accordance with Schedule 8.1).

1.83 Transmission Facilities

Transmission Facilities shall mean facilities that: (i) are within the PJM Region; (ii) meet the definition of transmission facilities pursuant to FERC's Uniform System of Accounts or have been classified as transmission facilities in a ruling by FERC addressing such facilities; and (iii) have been demonstrated to the satisfaction of the Office of the Interconnection to be integrated with the PJM Region transmission system and integrated into the planning and operation of the PJM Region to serve all of the power and transmission customers within the PJM Region.

1.84 Transmission Owner

Transmission Owner shall mean a Member that owns or leases with rights equivalent to ownership Transmission Facilities. Taking transmission service shall not be sufficient to qualify a Member as a Transmission Owner.

1.85 Transmission Owners Agreement

Transmission Owners Agreement shall mean that certain Consolidated Transmission Owners Agreement, dated as of December 15, 2005 and as amended from time to time, among transmission owners within the PJM Region.

1.86 Unforced Capacity

Unforced Capacity shall mean installed capacity rated at summer conditions that is not on average experiencing a forced outage or forced derating, calculated for each Capacity Resource on the 12-month period from October to September without regard to the ownership of or the contractual rights to the capacity of the unit.

1.87 [Reserved for Future Use]~~West RAA~~

~~West RAA shall mean the "PJM West Reliability Assurance Agreement among the Load Serving Entities in the PJM West Region," on file with FERC as PJM Rate Schedule FERC No. 32.~~

| —————

1.88 Zonal Capacity Price

Zonal Capacity Price shall mean the price of Unforced Capacity in a Zone that an LSE that has not elected the FRR Alternative is obligated to pay for a Delivery Year as determined pursuant to Attachment DD to the PJM Tariff.

1.89 Zone or Zonal

Zone or Zonal shall refer to an area within the PJM Region, as set forth in Schedule 15, or as such areas may be (i) combined as a result of mergers or acquisitions or (ii) added as a result of the expansion of the boundaries of the PJM Region. A Zone shall include any Non-Zone Network Load (as defined in the PJM Tariff) located outside the PJM Region that is served from such Zone under Schedule H-A of the PJM Tariff.

3.2 [Reserved for Future Use]~~Transition Provisions.~~

~~———— The East RAA, West RAA, and South RAA shall govern, in accordance with their terms now in effect or as hereafter validly amended, capacity requirements for each Planning Period through the end of the Planning Period ending May 31, 2007. Subject to the termination provisions in each such agreement, the East RAA, West RAA, and South RAA shall terminate effective 11:59:59 p.m. on May 31, 2007.~~

9.1 Overall Coordination.

Each Party shall cooperate with the other Parties in the coordinated planning and operation of their owned or contracted for Capacity Resources to obtain a degree of reliability consistent with the Reliability Principles and Standards. In furtherance of such cooperation each Party shall:

(a) cooperate with the members and associate members of such Party's Applicable Regional ~~Reliability Council~~Entity to ensure the reliability of the region;

(b) make available its Capacity Resources to the other Parties through the Office of the Interconnection for coordinated operation and to supply the needs of the PJM Region for Operating Reserves;

(c) provide or arrange for Network Transmission Service or Firm Point-to-Point Transmission Service for service to the projected load of the Party and include all Capacity Resources as Network Resources designated pursuant to the PJM Tariff or Points of Receipt for Firm Point-to-Point Transmission Service;

(d) provide or arrange for sufficient reactive capability and voltage control facilities to meet Good Utility Practice and to be consistent with the Reliability Principles and Standards;

(e) implement emergency procedures and take such other coordination actions as may be necessary in accordance with the directions of the Office of the Interconnection in times of Emergencies; and

(f) maintain or arrange for Black Start Capability for a portion of its Capacity Resources at least equal to that established from time-to-time by the Office of the Interconnection.

SCHEDULE 10.1

LOCATIONAL DELIVERABILITY AREAS AND REQUIREMENTS

The capacity obligations imposed under this Agreement recognize the locational value of Capacity Resources. To ensure that such locational value is properly recognized and quantified, the Office of the Interconnection shall follow the procedures in this Schedule.

A. The Locational Deliverability Areas for the purposes of determining locational capacity obligations hereunder, but not necessarily for the purposes of the Regional Transmission Expansion Planning Protocol, shall consist of the following Zones (as defined in Schedule 15), combinations of such Zones, and portions of such Zones:

- ATSI
- DEOK
- Dominion
- Penelec
- ComEd
- AEP
- Dayton
- Duquesne
- APS
- AE
- BGE
- DPL
- PECO
- PEPCO
- PSEG
- JCPL
- MetEd
- PPL
- Mid-Atlantic ~~Area Council (MAAC)~~ Region ([MAR](#)) (consisting of all the zones listed below for Eastern [MAACMAR \(EMAR\)](#), Western [MAACMAR \(WMAR\)](#), and Southwestern [MAACMAR \(SWMAR\)](#))
- ComEd, AEP, Dayton, APS, Duquesne, ATSI, and DEOK
- [Eastern MAAC EMAR](#) (PSE&G, JCP&L, PECO, AE, DPL & RE)
- [Southwestern MAAC SWMAR](#) (PEPCO & BG&E)
- [Western MAAC WMAR](#) (Penelec, MetEd, PPL)
- PSEG northern region (north of Linden substation); and
- DPL southern region (south of Chesapeake and Delaware Canal)

The Locational Deliverability Areas for the purposes of determining locational capacity obligations hereunder, but not necessarily for the purposes for the Regional Transmission Expansion Planning Protocol, shall also include any new Zones expected to be integrated into

PJM prior to the commencement of the Base Residual Auction for the Delivery Year for which the locational capacity obligation is being determined.

B. For purposes of evaluating the need for any changes to the foregoing list, Locational Deliverability Areas shall be those areas, identified by the load deliverability analyses conducted pursuant to the Regional Transmission Expansion Planning Protocol and the PJM Manuals that have a limited ability to import capacity due to physical limitations of the transmission system, voltage limitations or stability limitations. Such limits on import capability shall not reflect the effect of Qualifying Transmission Upgrades offered in the Base Residual Auction. The Locational Deliverability Areas identified in Paragraph A above (as it may be amended from time to time) for a Delivery Year shall be modeled in the Base Residual Auction and any Incremental Auction conducted for such Delivery Year. If the Office of the Interconnection includes a new Locational Deliverability Area in the Regional Transmission Expansion Planning Protocol, it shall make a filing with FERC to amend this Schedule to add a new Locational Deliverability Area (including a new aggregate LDA), if such new Locational Deliverability Area is projected to have a capacity emergency transfer limit less than 1.15 times the capacity emergency transfer objective of such area, or if warranted by other reliability concerns consistent with the Reliability Principles and Standards. In addition, any Party may propose, and the Office of the Interconnection shall evaluate, consistent with the same CETO/CETO comparison or other reliability concerns, possible new Locational Deliverability Areas (including aggregate LDAs) for inclusion under the Regional Transmission Expansion Planning Protocol and for purposes of determining locational capacity obligations hereunder.

C. For each Locational Deliverability Area for which a separate VRR Curve was established for a Delivery Year, the Office of the Interconnection shall determine, pursuant to procedures set forth in the PJM Manuals, the Percentage of Internal Resources Required, that must be committed during such Delivery Year from Capacity Resources physically located in such Locational Deliverability Area.

SCHEDULE 14

DELEGATION TO THE OFFICE OF THE INTERCONNECTION

The following responsibilities shall be delegated by the Parties to the Office of the Interconnection:

1. New Parties. With regard to the addition, withdrawal or removal of a Party the Office of the Interconnection shall:
 - (a) Receive and evaluate the information submitted by entities that plan to serve loads within the PJM Region, including entities whose participation in the Agreement will expand the boundaries of the PJM Region. Such evaluation shall be conducted in accordance with the requirements of the Agreement.
 - (b) Evaluate the effects of the withdrawal or removal of a Party from this Agreement.
2. Implementation of Reliability Assurance Agreement. With regard to the implementation of the provisions of this Agreement the Office of the Interconnection shall:
 - (a) Receive all required data and forecasts from the Parties and other owners or providers of Capacity Resources;
 - (b) Perform all calculations and analyses necessary to determine the Forecast Pool Requirement and the capacity obligations imposed under the Reliability Assurance Agreement, including periodic reviews of the capacity benefit margin for consistency with the Reliability Principles and Standards;
 - (c) Monitor the compliance of each Party with its obligations under the Agreement;
 - (d) Keep cost records, and bill and collect any costs or charges due from the Parties and distribute those charges in accordance with the terms of the Agreement;
 - (e) Assist with the development of rules and procedures for determining and demonstrating the capability of Capacity Resources;
 - (f) Establish the capability and deliverability of Generation Capacity Resources consistent with the requirements of the Reliability Assurance Agreement;

- (g) Establish standards and procedures for Planned Demand Resources;
- (h) Collect and maintain generator availability data;
- (i) Perform any other forecasts, studies or analyses required to administer the Agreement;
- (j) Coordinate maintenance schedules for generation resources operated as part of the PJM Region;
- (k) Determine and declare that an Emergency exists or has ceased to exist in all or any part of the PJM Region or announce that an Emergency exists or ceases to exist in a Control Area interconnected with the PJM Region;
- (l) Enter into agreements for (i) the transfer of energy in Emergencies in the PJM Region or in a Control Area interconnected with the PJM Region and (ii) mutual support in such Emergencies with other Control Areas interconnected with the PJM Region; and
- (m) Coordinate the curtailment or shedding of load, or other measures appropriate to alleviate an Emergency, to preserve reliability in accordance with FERC, NERC or Applicable Regional [Reliability Council Entity](#) principles, guidelines, standards, requirements and the PJM Manuals, and to ensure the operation of the PJM Region in accordance with Good Utility Practice.

Attachment C

**Sections of the
PJM Open Access Transmission Tariff,
PJM Operating Agreement and
PJM Reliability Assurance Agreement**

(Clean Version)

**Section(s) of the
PJM Open Access Transmission Tariff
(Clean Version)**

Definitions – A - B

1.01 Abnormal Condition:

Any condition on the Interconnection Facilities which, determined in accordance with Good Utility Practice, is: (i) outside normal operating parameters such that facilities are operating outside their normal ratings or that reasonable operating limits have been exceeded; and (ii) could reasonably be expected to materially and adversely affect the safe and reliable operation of the Interconnection Facilities; but which, in any case, could reasonably be expected to result in an Emergency Condition. Any condition or situation that results from lack of sufficient generating capacity to meet load requirements or that results solely from economic conditions shall not, standing alone, constitute an Abnormal Condition.

1.0A Affected System:

An electric system other than the Transmission Provider's Transmission System that may be affected by a proposed interconnection or on which a proposed interconnection or addition of facilities or upgrades may require modifications or upgrades to the Transmission System.

1.0A.01 Affiliate:

With respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

1.0B Affected System Operator:

An entity that operates an Affected System or, if the Affected System is under the operational control of an independent system operator or a regional transmission organization, such independent entity.

1.1 Ancillary Services:

Those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

1.2 Annual Transmission Costs:

The total annual cost of the Transmission System for purposes of Network Integration Transmission Service shall be the amount specified in Attachment H for each Zone until amended by the applicable Transmission Owner or modified by the Commission.

1.2.01 Applicable Laws and Regulations:

All duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority having jurisdiction over the relevant parties, their respective facilities, and/or the respective services they provide.

1.2A Applicable Regional Entity:

The Regional Entity for the region in which a Network Customer, Transmission Customer, Interconnection Customer, or Transmission Owner operates.

1.2B Applicable Standards:

The requirements and guidelines of NERC, the Applicable Regional Entity, and the Control Area in which the Customer Facility is electrically located; the PJM Manuals; and Applicable Technical Requirements and Standards.

1.2C Applicable Technical Requirements and Standards:

Those certain technical requirements and standards applicable to interconnections of generation and/or transmission facilities with the facilities of an Interconnected Transmission Owner or, as the case may be and to the extent applicable, of an Electric Distributor (as defined in Section 1.8 of the Operating Agreement), as published by Transmission Provider in a PJM Manual provided, however, that, with respect to any generation facilities with maximum generating capacity of 2 MW or less for which the Interconnection Customer executes a Construction Service Agreement or Interconnection Service Agreement on or after March 19, 2005, "Applicable Technical Requirements and Standards" shall refer to the "PJM Small Generator Interconnection Applicable Technical Requirements and Standards." All Applicable Technical Requirements and Standards shall be publicly available through postings on Transmission Provider's internet website.

1.3 Application:

A request by an Eligible Customer for transmission service pursuant to the provisions of the Tariff.

1.3A Attachment Facilities:

The facilities necessary to physically connect a Customer Facility to the Transmission System or interconnected distribution facilities.

1.3AA Attachment H

Attachment H shall refer collectively to the Attachments to the PJM Tariff with the prefix "H-" that set forth, among other things, the Annual Transmission Rates for Network Integration Transmission Service in the PJM Zones.

1.3B Behind The Meter Generation:

Behind The Meter Generation refers to a generation unit that delivers energy to load without using the Transmission System or any distribution facilities (unless the entity that owns or leases the distribution facilities has consented to such use of the distribution facilities and such consent has been demonstrated to the satisfaction of the Office of the Interconnection); provided, however, that Behind The Meter Generation does not include (i) at any time, any portion of such generating unit's capacity that is designated as a Generation Capacity Resource; or (ii) in an hour, any portion of the output of such generating unit[s] that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market.

1.3BB Black Start Service:

Black Start Service is the capability of generating units to start without an outside electrical supply or the demonstrated ability of a generating unit with a high operating factor (subject to Transmission Provider concurrence) to automatically remain operating at reduced levels when disconnected from the grid.

1.3BB.01 Breach:

The failure of a party to perform or observe any material term or condition of Part IV or Part VI of the Tariff, or any agreement entered into thereunder as described in the relevant provisions of such agreement.

1.3BB.02 Breaching Party:

A party that is in Breach of Part IV or Part VI and/or an agreement entered into thereunder.

Definitions – E - F

1.10A [RESERVED]

1.10B Economic Minimum:

The lowest incremental MW output level a unit can achieve while following economic dispatch.

1.11 Eligible Customer:

(i) Any electric utility (including any Transmission Owner and any power marketer), Federal power marketing agency, or any person generating electric energy for sale for resale is an Eligible Customer under the Tariff. Electric energy sold or produced by such entity may be electric energy produced in the United States, Canada or Mexico. However, with respect to transmission service that the Commission is prohibited from ordering by Section 212(h) of the Federal Power Act, such entity is eligible only if the service is provided pursuant to a state requirement that the Transmission Provider or Transmission Owner offer the unbundled transmission service, or pursuant to a voluntary offer of such service by a Transmission Owner.

(ii) Any retail customer taking unbundled transmission service pursuant to a state requirement that the Transmission Provider or a Transmission Owner offer the transmission service, or pursuant to a voluntary offer of such service by a Transmission Owner, is an Eligible Customer under the Tariff. As used in Part VI, Eligible Customer shall mean only those Eligible Customers that have submitted a Completed Application.

1.11.01 Emergency Condition:

A condition or situation (i) that in the judgment of any Interconnection Party is imminently likely to endanger life or property; or (ii) that in the judgment of the Interconnected Transmission Owner or Transmission Provider is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Transmission System, the Interconnection Facilities, or the transmission systems or distribution systems to which the Transmission System is directly or indirectly connected; or (iii) that in the judgment of Interconnection Customer is imminently likely (as determined in a non-discriminatory manner) to cause damage to the Customer Facility or to the Customer Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions, provided that a Generation Interconnection Customer is not obligated by an Interconnection Service Agreement to possess black start capability. Any condition or situation that results from lack of sufficient generating capacity to meet load requirements or that results solely from economic conditions shall not constitute an Emergency Condition, unless one or more of the enumerated conditions or situations identified in this definition also exists.

1.11A Energy Resource:

A generating facility that is not a Capacity Resource.

1.11A.01 Energy Settlement Area:

The bus or distribution of busses that represents the physical location of Network Load and by which the obligations of the Network Customer to PJM are settled.

1.11B Energy Transmission Injection Rights:

The rights to schedule energy deliveries at a specified point on the Transmission System. Energy Transmission Injection Rights may be awarded only to a Merchant D.C. Transmission Facility that connects the Transmission System to another control area. Deliveries scheduled using Energy Transmission Injection Rights have rights similar to those under Non-Firm Point-to-Point Transmission Service.

1.11C Environmental Laws:

Applicable Laws or Regulations relating to pollution or protection of the environment, natural resources or human health and safety.

1.12 Facilities Study:

An engineering study conducted by the Transmission Provider (in coordination with the affected Transmission Owner(s)) to determine the required modifications to the Transmission Provider's Transmission System, including the cost and scheduled completion date for such modifications, that will be required to provide the requested transmission service or to accommodate an Interconnection Request or Upgrade Request. As used in the Interconnection Service Agreement or Construction Service Agreement, Facilities Study shall mean that certain Facilities Study conducted by Transmission Provider (or at its direction) to determine the design and specification of the Interconnection Facilities necessary to accommodate the New Service Customer's New Service Request in accordance with Section 207 of Part VI of the Tariff.

1.12A Federal Power Act:

The Federal Power Act, as amended, 16 U.S.C. §§ 791a, et seq.

1.12B FERC:

The Federal Energy Regulatory Commission or its successor.

1.13 Firm Point-To-Point Transmission Service:

Transmission Service under this Tariff that is reserved and/or scheduled between specified Points of Receipt and Delivery pursuant to Part II of this Tariff.

1.13A Firm Transmission Withdrawal Rights:

The rights to schedule energy and capacity withdrawals from a Point of Interconnection (as defined in Section 1.33A) of a Merchant Transmission Facility with the Transmission System. Firm Transmission Withdrawal Rights may be awarded only to a Merchant D.C. Transmission Facility that connects the Transmission System with another control area. Withdrawals scheduled using Firm Transmission Withdrawal Rights have rights similar to those under Firm Point-to-Point Transmission Service.

1.13A.01 Force Majeure:

Any cause beyond the control of the affected Interconnection Party or Construction Party, including but not restricted to, acts of God, flood, drought, earthquake, storm, fire, lightning, epidemic, war, riot, civil disturbance or disobedience, labor dispute, labor or material shortage, sabotage, acts of public enemy, explosions, orders, regulations or restrictions imposed by governmental, military, or lawfully established civilian authorities, which, in any of the foregoing cases, by exercise of due diligence such party could not reasonably have been expected to avoid, and which, by the exercise of due diligence, it has been unable to overcome. Force Majeure does not include (i) a failure of performance that is due to an affected party's own negligence or intentional wrongdoing; (ii) any removable or remediable causes (other than settlement of a strike or labor dispute) which an affected party fails to remove or remedy within a reasonable time; or (iii) economic hardship of an affected party.

Definitions – L – M - N

1.15A List of Approved Contractors:

A list developed by each Transmission Owner and published in a PJM Manual of (a) contractors that the Transmission Owner considers to be qualified to install or construct new facilities and/or upgrades or modifications to existing facilities on the Transmission Owner's system, provided that such contractors may include, but need not be limited to, contractors that, in addition to providing construction services, also provide design and/or other construction-related services, and (b) manufacturers or vendors of major transmission-related equipment (e.g., high-voltage transformers, transmission line, circuit breakers) whose products the Transmission Owner considers acceptable for installation and use on its system.

1.16 Load Ratio Share:

Ratio of a Transmission Customer's Network Load to the Transmission Provider's total load.

1.17 Load Shedding:

The systematic reduction of system demand by temporarily decreasing load in response to transmission system or area capacity shortages, system instability, or voltage control considerations under Part II or Part III of the Tariff.

1.17A Local Upgrades:

Modifications or additions of facilities to abate any local thermal loading, voltage, short circuit, stability or similar engineering problem caused by the interconnection and delivery of generation to the Transmission System. Local Upgrades shall include:

(i) Direct Connection Local Upgrades which are Local Upgrades that only serve the Customer Interconnection Facility and have no impact or potential impact on the Transmission System until the final tie-in is complete; and

(ii) Non-Direct Connection Local Upgrades which are parallel flow Local Upgrades that are not Direct Connection Local Upgrades.

1.18 Long-Term Firm Point-To-Point Transmission Service:

Firm Point-To-Point Transmission Service under Part II of the Tariff with a term of one year or more.

1.18A [RESERVED]

1.18A.01 [RESERVED]

1.18A.02 Material Modification:

Any modification to an Interconnection Request that has a material adverse effect on the cost or timing of Interconnection Studies related to, or any Network Upgrades or Local Upgrades needed to accommodate, any Interconnection Request with a later Queue Position.

1.18A.03 Maximum Facility Output:

The maximum (not nominal) net electrical power output in megawatts, specified in the Interconnection Service Agreement, after supply of any parasitic or host facility loads, that a Generation Interconnection Customer's Customer Facility is expected to produce, provided that the specified Maximum Facility Output shall not exceed the output of the proposed Customer Facility that Transmission Provider utilized in the System Impact Study.

1.18B Merchant A.C. Transmission Facilities:

Merchant Transmission Facilities that are alternating current (A.C.) transmission facilities, other than those that are Controllable A.C. Merchant Transmission Facilities.

1.18C Merchant D.C. Transmission Facilities:

Direct current (D.C.) transmission facilities that are interconnected with the Transmission System pursuant to Part IV and Part VI of the Tariff.

1.18D Merchant Network Upgrades:

Merchant A.C. Transmission Facilities that are additions to, or modifications or replacements of, physical facilities of the Interconnected Transmission Owner that, on the date of the pertinent Transmission Interconnection Customer's Interconnection Request, are part of the Transmission System or are included in the Regional Transmission Expansion Plan.

1.18E Merchant Transmission Facilities:

A.C. or D.C. transmission facilities that are interconnected with or added to the Transmission System pursuant to Part IV and Part VI of the Tariff and that are so identified on Attachment T to the Tariff, provided, however, that Merchant Transmission Facilities shall not include (i) any Customer Interconnection Facilities, (ii) any physical facilities of the Transmission System that were in existence on or before March 20, 2003 ; (iii) any expansions or enhancements of the Transmission System that are not identified as Merchant Transmission Facilities in the Regional Transmission Expansion Plan and Attachment T to the Tariff, or (iv) any transmission facilities that are included in the rate base of a public utility and on which a regulated return is earned.

1.18F Merchant Transmission Provider:

An Interconnection Customer that (1) owns, controls, or controls the rights to use the transmission capability of, Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities that connect the Transmission System with another control

area, (2) has elected to receive Transmission Injection Rights and Transmission Withdrawal Rights associated with such facility pursuant to Section 36 of the Tariff, and (3) makes (or will make) the transmission capability of such facilities available for use by third parties under terms and conditions approved by the Commission and stated in the Tariff, consistent with Section 38 below.

1.18G Metering Equipment:

All metering equipment installed at the metering points designated in the appropriate appendix to an Interconnection Service Agreement.

1.19 Native Load Customers:

The wholesale and retail power customers of a Transmission Owner on whose behalf the Transmission Owner, by statute, franchise, regulatory requirement, or contract, has undertaken an obligation to construct and operate the Transmission Owner's system to meet the reliable electric needs of such customers.

1.19A NERC:

The North American Electric Reliability Council or any successor thereto.

1.19B Neutral Party

Shall have the meaning provided in Section 9.3(v).

1.20 Network Customer:

An entity receiving transmission service pursuant to the terms of the Transmission Provider's Network Integration Transmission Service under Part III of the Tariff.

1.21 Network Integration Transmission Service:

The transmission service provided under Part III of the Tariff.

1.22 Network Load:

The load that a Network Customer designates for Network Integration Transmission Service under Part III of the Tariff. The Network Customer's Network Load shall include all load (including losses) served by the output of any Network Resources designated by the Network Customer. A Network Customer may elect to designate less than its total load as Network Load but may not designate only part of the load at a discrete Point of Delivery. Where an Eligible Customer has elected not to designate a particular load at discrete points of delivery as Network Load, the Eligible Customer is responsible for making separate arrangements under Part II of the Tariff for any Point-To-Point Transmission Service that may be necessary for such non-designated load.

1.23 Network Operating Agreement:

An executed agreement that contains the terms and conditions under which the Network Customer shall operate its facilities and the technical and operational matters associated with the implementation of Network Integration Transmission Service under Part III of the Tariff.

1.24 Network Operating Committee:

A group made up of representatives from the Network Customer(s) and the Transmission Provider established to coordinate operating criteria and other technical considerations required for implementation of Network Integration Transmission Service under Part III of this Tariff.

1.25 Network Resource:

Any designated generating resource owned, purchased, or leased by a Network Customer under the Network Integration Transmission Service Tariff. Network Resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis, except for purposes of fulfilling obligations under a reserve sharing program.

1.26 Network Upgrades:

Modifications or additions to transmission-related facilities that are integrated with and support the Transmission Provider's overall Transmission System for the general benefit of all users of such Transmission System. Network Upgrades shall include:

(i) **Direct Connection Network Upgrades** which are Network Upgrades that only serve the Customer Interconnection Facility and have no impact or potential impact on the Transmission System until the final tie-in is complete; and

(ii) **Non-Direct Connection Network Upgrades** which are parallel flow Network Upgrades that are not Direct Connection Network Upgrades.

1.26A New PJM Zone(s):

The Zone included in this Tariff, along with applicable Schedules and Attachments, for Commonwealth Edison Company, The Dayton Power and Light Company and the AEP East Operating Companies (Appalachian Power Company, Columbus Southern Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company and Wheeling Power Company).

1.26B New Service Customers:

All customers that submit an Interconnection Request, a Completed Application, or an Upgrade Request that is pending in the New Services Queue.

1.26C New Service Request:

An Interconnection Request, a Completed Application, or an Upgrade Request.

1.26D New Services Queue:

All Interconnection Requests, Completed Applications, and Upgrade Requests that are received within each three-month period ending on January 31, April 30, July 31, and October 31 of each year shall collectively comprise a New Services Queue.

1.26E New Services Queue Closing Date:

Each January 31, April 30, July 31, and October 31 shall be the Queue Closing Date for the New Services Queue comprised of Interconnection Requests, Completed Applications, and Upgrade Requests received during the three-month period ending on such date.

1.26F Nominal Rated Capability:

The nominal maximum rated capability in megawatts of a Transmission Interconnection Customer's Customer Facility or the nominal increase in transmission capability in megawatts of the Transmission System resulting from the interconnection or addition of a Transmission Interconnection Customer's Customer Facility, as determined in accordance with pertinent Applicable Standards and specified in the Interconnection Service Agreement.

1.27 Non-Firm Point-To-Point Transmission Service:

Point-To-Point Transmission Service under the Tariff that is reserved and scheduled on an as-available basis and is subject to Curtailment or Interruption as set forth in Section 14.7 under Part II of this Tariff. Non-Firm Point-To-Point Transmission Service is available on a stand-alone basis for periods ranging from one hour to one month.

1.27.01 Non-Firm Sale:

An energy sale for which receipt or delivery may be interrupted for any reason or no reason, without liability on the part of either the buyer or seller.

1.27A Non-Firm Transmission Withdrawal Rights:

The rights to schedule energy withdrawals from a specified point on the Transmission System. Non-Firm Transmission Withdrawal Rights may be awarded only to a Merchant D.C. Transmission Facility that connects the Transmission System to another control area. Withdrawals scheduled using Non-Firm Transmission Withdrawal Rights have rights similar to those under Non-Firm Point-to-Point Transmission Service.

1.27AA Non-Retail Behind The Meter Generation:

Behind the Meter Generation that is used by municipal electric systems, electric cooperatives, or electric distribution companies to serve load.

1.27B Non-Zone Network Load:

Network Load that is located outside of the PJM Region.

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1.27C Office of the Interconnection:

Office of the Interconnection shall have the meaning set forth in the Operating Agreement.

1.28 Open Access Same-Time Information System (OASIS):

The information system and standards of conduct contained in Part 37 and Part 38 of the Commission's regulations and all additional requirements implemented by subsequent Commission orders dealing with OASIS.

1.28A Operating Agreement of the PJM Interconnection, L.L.C. or Operating Agreement:

That agreement dated as of April 1, 1997 and as amended and restated as of June 2, 1997 and as amended from time to time thereafter, among the members of the PJM Interconnection, L.L.C.

1.28A.01 Option to Build:

The option of the New Service Customer to build certain Customer-Funded Upgrades, as set forth in, and subject to the terms of, the Construction Service Agreement.

1.28B Optional Interconnection Study:

A sensitivity analysis of an Interconnection Request based on assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement.

1.28C Optional Interconnection Study Agreement:

The form of agreement for preparation of an Optional Interconnection Study, as set forth in Attachment N-3 of the Tariff.

1.29 Part I:

Tariff Definitions and Common Service Provisions contained in Sections 2 through 12.

1.30 Part II:

Tariff Sections 13 through 27 pertaining to Point-To-Point Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.31 Part III:

Tariff Sections 28 through 35 pertaining to Network Integration Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.31A Part IV:

Tariff Sections 36 through 112 pertaining to generation or merchant transmission interconnection to the Transmission System in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.31B Part V:

Tariff Sections 113 through 122 pertaining to the deactivation of generating units in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.31C Part VI:

Tariff Sections 200 through 237 pertaining to the queuing, study, and agreements relating to New Service Requests, and the rights associated with Customer-Funded Upgrades in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.32 Parties:

The Transmission Provider, as administrator of the Tariff, and the Transmission Customer receiving service under the Tariff. PJMSettlement shall be the Counterparty to Transmission Customers.

1.32.01 PJM:

PJM Interconnection, L.L.C.

1.32A PJM Administrative Service:

The services provided by PJM pursuant to Schedule 9 of this Tariff.

1.32B PJM Control Area:

The Control Area that is recognized by NERC as the PJM Control Area.

1.32C PJM Interchange Energy Market:

The regional competitive market administered by the Transmission Provider for the purchase and sale of spot electric energy at wholesale interstate commerce and related services, as more fully set forth in Attachment K – Appendix to the Tariff and Schedule 1 to the Operating Agreement.

1.32D PJM Manuals:

The instructions, rules, procedures and guidelines established by the Transmission Provider for the operation, planning, and accounting requirements of the PJM Region and the PJM Interchange Energy Market.

1.32E PJM Region:

Shall have the meaning specified in the Operating Agreement.

1.32F [RESERVED]

1.32.F.01 PJMSettlement:

PJM Settlement, Inc. (or its successor).

1.32G [RESERVED]

1.33 Point(s) of Delivery:

Point(s) on the Transmission Provider's Transmission System where capacity and energy transmitted by the Transmission Provider will be made available to the Receiving Party under Part II of the Tariff. The Point(s) of Delivery shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

1.33A Point of Interconnection:

The point or points, shown in the appropriate appendix to the Interconnection Service Agreement and the Interconnection Construction Service Agreement, where the Customer Interconnection Facilities interconnect with the Transmission Owner Interconnection Facilities or the Transmission System.

1.34 Point(s) of Receipt:

Point(s) of interconnection on the Transmission Provider's Transmission System where capacity and energy will be made available to the Transmission Provider by the Delivering Party under Part II of the Tariff. The Point(s) of Receipt shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

1.35 Point-To-Point Transmission Service:

The reservation and transmission of capacity and energy on either a firm or non-firm basis from the Point(s) of Receipt to the Point(s) of Delivery under Part II of the Tariff.

1.36 Power Purchaser:

The entity that is purchasing the capacity and energy to be transmitted under the Tariff.

1.36.01 PRD Curve

PRD Curve shall have the meaning provided in the Reliability Assurance Agreement.

1.36.02 PRD Provider

PRD Provider shall have the meaning provided in the Reliability Assurance Agreement.

1.36.03 PRD Reservation Price

PRD Reservation Price shall have the meaning provided in the Reliability Assurance Agreement.

1.36.04 PRD Substation:

PRD Substation shall have the meaning provided in the Reliability Assurance Agreement.

1.36.05 Pre-Confirmed Application:

An Application that commits the Eligible Customer to execute a Service Agreement upon receipt of notification that the Transmission Provider can provide the requested Transmission Service.

1.36A Pre-Expansion PJM Zones:

Zones included in this Tariff, along with applicable Schedules and Attachments, for certain Transmission Owners – Atlantic City Electric Company, Baltimore Gas and Electric Company, Delmarva Power and Light Company, Jersey Central Power and Light Company, Metropolitan Edison Company, PECO Energy Company, Pennsylvania Electric Company, Pennsylvania Power & Light Group, Potomac Electric Power Company, Public Service Electric and Gas Company, Allegheny Power, and Rockland Electric Company.

1.36A.01 Price Responsive Demand

Price Responsive Demand shall have the meaning provided in the Reliability Assurance Agreement.

1.36A.02 Project Financing:

Shall mean: (a) one or more loans, leases, equity and/or debt financings, together with all modifications, renewals, supplements, substitutions and replacements thereof, the proceeds of which are used to finance or refinance the costs of the Customer Facility, any alteration, expansion or improvement to the Customer Facility, the purchase and sale of the Customer Facility or the operation of the Customer Facility; (b) a power purchase agreement pursuant to

which Interconnection Customer's obligations are secured by a mortgage or other lien on the Customer Facility; or (c) loans and/or debt issues secured by the Customer Facility.

1.36A.03 Project Finance Entity:

Shall mean: (a) a holder, trustee or agent for holders, of any component of Project Financing; or (b) any purchaser of capacity and/or energy produced by the Customer Facility to which Interconnection Customer has granted a mortgage or other lien as security for some or all of Interconnection Customer's obligations under the corresponding power purchase agreement.

1.36B Queue Position:

The priority assigned to an Interconnection Request, a Completed Application, or an Upgrade Request pursuant to applicable provisions of Part VI.

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1.36C Reasonable Efforts:

With respect to any action required to be made, attempted, or taken by an Interconnection Party or by a Construction Party under Part IV or Part VI of the Tariff, an Interconnection Service Agreement, or a Construction Service Agreement, such efforts as are timely and consistent with Good Utility Practice and with efforts that such party would undertake for the protection of its own interests.

1.37 Receiving Party:

The entity receiving the capacity and energy transmitted by the Transmission Provider to Point(s) of Delivery.

1.37A.01 Regional Entity

Shall have the same meaning specified in the Operating Agreement.

1.37A Regional Transmission Expansion Plan:

The plan prepared by the Office of the Interconnection pursuant to Schedule 6 of the Operating Agreement for the enhancement and expansion of the Transmission System in order to meet the demands for firm transmission service in the PJM Region.

1.38 Regional Transmission Group (RTG):

A voluntary organization of transmission owners, transmission users and other entities approved by the Commission to efficiently coordinate transmission planning (and expansion), operation and use on a regional (and interregional) basis.

1.38.01 Regulation Zone:

Any of those one or more geographic areas, each consisting of a combination of one or more Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, regulation service.

1.38.01A Relevant Electric Retail Regulatory Authority:

An entity that has jurisdiction over and establishes prices and policies for competition for providers of retail electric service to end-customers, such as the city council for a municipal utility, the governing board of a cooperative utility, the state public utility commission or any other such entity.

1.38A Reliability Assurance Agreement:

The Reliability Assurance Agreement Among Load Serving Entities in the PJM Region, Rate Schedule No. 44, dated as of May 28, 2009, and as amended from time to time thereafter.

1.38B [RESERVED]

1.38C Required Transmission Enhancements:

Enhancements and expansions of the Transmission System that (1) a Regional Transmission Expansion Plan developed pursuant to Schedule 6 of the Operating Agreement or (2) the Coordinated System Plan periodically developed pursuant to the Joint Operating Agreement Between the Midwest Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. designates one or more of the Transmission Owner(s) or the transmission owners within the Midwest Independent System Operator to construct and own or finance.

1.39 Reserved Capacity:

The maximum amount of capacity and energy that the Transmission Provider agrees to transmit for the Transmission Customer over the Transmission Provider's Transmission System between the Point(s) of Receipt and the Point(s) of Delivery under Part II of the Tariff. Reserved Capacity shall be expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis.

1.39A Schedule of Work:

Shall mean that schedule attached to the Interconnection Construction Service Agreement setting forth the timing of work to be performed by the Constructing Entity pursuant to the Interconnection Construction Service Agreement, based upon the Facilities Study and subject to modification, as required, in accordance with Transmission Provider's scope change process for interconnection projects set forth in the PJM Manuals.

1.39B Scope of Work:

Shall mean that scope of the work attached as a schedule to the Interconnection Construction Service Agreement and to be performed by the Constructing Entity(ies) pursuant to the Interconnection Construction Service Agreement, provided that such Scope of Work may be modified, as required, in accordance with Transmission Provider's scope change process for interconnection projects set forth in the PJM Manuals.

1.39C Secondary Systems:

Control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers.

1.39D Security:

The security provided by the New Service Customer pursuant to Section 212.4 or Section 213.4 of the Tariff to secure the New Service Customer's responsibility for Costs under the Interconnection Service Agreement or Upgrade Construction Service Agreement and Section 217 of the Tariff.

1.40 Service Agreement:

The initial agreement and any amendments or supplements thereto entered into by the Transmission Customer and the Transmission Provider for service under the Tariff.

1.41 Service Commencement Date:

The date the Transmission Provider begins to provide service pursuant to the terms of an executed Service Agreement, or the date the Transmission Provider begins to provide service in accordance with Section 15.3 or Section 29.1 under the Tariff.

1.42 Short-Term Firm Point-To-Point Transmission Service:

Firm Point-To-Point Transmission Service under Part II of the Tariff with a term of less than one year.

1.42a Site:

All of the real property, including but not limited to any leased real property and easements, on which the Customer Facility is situated and/or on which the Customer Interconnection Facilities are to be located.

1.42.01 Small Inverter Facility:

An Energy Resource that is a certified small inverter-based facility no larger than 10 kW.

1.42.02 Small Inverter ISA:

An agreement among Transmission Provider, Interconnection Customer, and Interconnected Transmission Owner regarding interconnection of a Small Inverter Facility under section 112B of Part IV of the Tariff.

1.42A [RESERVED]

1.42B [RESERVED]

1.42C [RESERVED]

1.42D State:

The term "state" shall mean a state of the United States or the District of Columbia.

1.42D.01 Switching and Tagging Rules:

The switching and tagging procedures of Interconnected Transmission Owners and Interconnection Customer as they may be amended from time to time.

1.42E Synchronized Reserve Zone:

Any of those geographic areas consisting of a combination of one or more of the Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, Synchronized Reserve service.

1.42F System Condition:

A specified condition on the Transmission Provider's system or on a neighboring system, such as a constrained transmission element or flowgate, that may trigger Curtailment of Long-Term Firm Point-to-Point Transmission Service using the curtailment priority pursuant to Section 13.6. Such conditions must be identified in the Transmission Customer's Service Agreement.

1.43 System Impact Study:

An assessment by the Transmission Provider of (i) the adequacy of the Transmission System to accommodate a Completed Application, an Interconnection Request or an Upgrade Request, (ii) whether any additional costs may be incurred in order to provide such transmission service or to accommodate an Interconnection Request, and (iii) with respect to an Interconnection Request, an estimated date that an Interconnection Customer's Customer Facility can be interconnected with the Transmission System and an estimate of the Interconnection Customer's cost responsibility for the interconnection; and (iv) with respect to an Upgrade Request, the estimated cost of the requested system upgrades or expansion, or of the cost of the system upgrades or expansion, necessary to provide the requested incremental rights.

1.43.01 System Protection Facilities:

The equipment required to protect (i) the Transmission System, other delivery systems and/or other generating systems connected to the Transmission System from faults or other electrical disturbance occurring at or on the Customer Facility, and (ii) the Customer Facility from faults or other electrical system disturbance occurring on the Transmission System or on other delivery systems and/or other generating systems to which the Transmission System is directly or indirectly connected. System Protection Facilities shall include such protective and regulating devices as are identified in the Applicable Technical Requirements and Standards or that are required by Applicable Laws and Regulations or other Applicable Standards, or as are otherwise necessary to protect personnel and equipment and to minimize deleterious effects to the Transmission System arising from the Customer Facility.

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1.43A Tariff:

This document, the “PJM Open Access Transmission Tariff.”

1.44 Third-Party Sale:

Any sale for resale in interstate commerce to a Power Purchaser that is not designated as part of Network Load under the Network Integration Transmission Service but not including a sale of energy through the PJM Interchange Energy Market established under the PJM Operating Agreement.

1.45 Transmission Customer:

Any Eligible Customer (or its Designated Agent) that (i) executes a Service Agreement, or (ii) requests in writing that the Transmission Provider file with the Commission, a proposed unexecuted Service Agreement to receive transmission service under Part II of the Tariff. This term is used in the Part I Common Service Provisions and in Part VI to include customers receiving transmission service under Part II and Part III of this Tariff.

1.45A Transmission Injection Rights:

Capacity Transmission Injection Rights and Energy Transmission Injection Rights.

1.45B Transmission Interconnection Customer:

An entity that submits an Interconnection Request to interconnect or add Merchant Transmission Facilities to the Transmission System or to increase the capacity of Merchant Transmission Facilities interconnected with the Transmission System in the PJM Region.

1.45C Transmission Interconnection Facilities Study:

A Facilities Study related to a Transmission Interconnection Request.

1.45D Transmission Interconnection Feasibility Study:

A study conducted by the Transmission Provider in accordance with Section 36.2 of the Tariff.

1.45E Transmission Interconnection Request:

A request by a Transmission Interconnection Customer pursuant to Part IV of the Tariff to interconnect or add Merchant Transmission Facilities to the Transmission System or to increase the capacity of existing Merchant Transmission Facilities interconnected with the Transmission System in the PJM Region.

1.45F Transmission Owner:

Each entity that owns, leases or otherwise has a possessory interest in facilities used for the transmission of electric energy in interstate commerce under the Tariff. The Transmission Owners are listed in Attachment L.

1.45G Transmission Owner Attachment Facilities:

That portion of the Transmission Owner Interconnection Facilities comprised of all Attachment Facilities on the Interconnected Transmission Owner's side of the Point of Interconnection.

1.45H Transmission Owner Interconnection Facilities:

All Interconnection Facilities that are not Customer Interconnection Facilities and that, after the transfer under Section 5.5 of Appendix 2 to Attachment P of the PJM Tariff to the Interconnected Transmission Owner of title to any Transmission Owner Interconnection Facilities that the Interconnection Customer constructed, are owned, controlled, operated and maintained by the Interconnected Transmission Owner on the Interconnected Transmission Owner's side of the Point of Interconnection identified in appendices to the Interconnection Service Agreement and to the Interconnection Construction Service Agreement, including any modifications, additions or upgrades made to such facilities and equipment, that are necessary to physically and electrically interconnect the Customer Facility with the Transmission System or interconnected distribution facilities.

1.46 Transmission Provider:

The Transmission Provider shall be the Office of the Interconnection for all purposes, provided that the Transmission Owners will have the responsibility for the following specified activities:

- (a) The Office of the Interconnection shall direct the operation and coordinate the maintenance of the Transmission System, except that the Transmission Owners will continue to direct the operation and maintenance of those transmission facilities that are not listed in the PJM Designated Facilities List contained in the PJM Manual on Transmission Operations;
- (b) Each Transmission Owner shall physically operate and maintain all of the facilities that it owns; and
- (c) When studies conducted by the Office of the Interconnection indicate that enhancements or modifications to the Transmission System are necessary, the Transmission Owners shall have the responsibility, in accordance with the applicable terms of the Tariff, Operating Agreement and/or the Consolidated Transmission Owners Agreement to construct, own, and finance the needed facilities or enhancements or modifications to facilities.

1.47 Transmission Provider's Monthly Transmission System Peak:

The maximum firm usage of the Transmission Provider's Transmission System in a calendar month.

1.48 Transmission Service:

Point-To-Point Transmission Service provided under Part II of the Tariff on a firm and non-firm basis.

1.48A Transmission Service Request:

A request for Firm Point-To-Point Transmission Service or a request for Network Integration Transmission Service.

1.49 Transmission System:

The facilities controlled or operated by the Transmission Provider within the PJM Region that are used to provide transmission service under Part II and Part III of the Tariff.

1.49A Transmission Withdrawal Rights:

Firm Transmission Withdrawal Rights and Non-Firm Transmission Withdrawal Rights.

1.49A.01 Upgrade Construction Service Agreement:

That agreement entered into by a New Service Customer (other than an Interconnection Customer whose project includes generation capability or Merchant Transmission Facilities other than Merchant Network Upgrades), a Transmission Owner, and the Transmission Provider, pursuant to Subpart B of Part VI of the Tariff, and in the form set forth in Attachment GG of the Tariff.

1.49A.02 Upgrade Customer:

A customer that submits an Upgrade Request.

1.49A.03 Upgrade-Related Rights:

Incremental Auction Revenue Rights, Incremental Available Transfer Capability Revenue Rights, Incremental Deliverability Rights, and Incremental Capacity Transfer Rights (as defined in Section 2.35 of Attachment DD of the Tariff).

1.49A.04 Upgrade Request:

A request pursuant to Section 7.8 of Schedule 1 of the Operating Agreement, submitted in the form prescribed in Attachment EE of the Tariff, for evaluation by the Transmission Provider of the feasibility and estimated costs of, (a) a particular proposed Customer-Funded Upgrade or (b)

the Customer-Funded Upgrades that would be needed to provide the Incremented Auction Revenue Rights specified in the request.

1.49B [RESERVED]

1.49C [RESERVED]

1.49D [RESERVED]

1.49E [RESERVED]

1.49F [RESERVED]

3C [RESERVED]

17.2 Completed Application:

A Completed Application shall provide all of the information included in 18 C.F.R. § 2.20 including but not limited to the following:

- (i) The identity, address, telephone number and facsimile number of the entity requesting service;
- (ii) A statement that the entity requesting service is, or will be upon commencement of service, an Eligible Customer under the Tariff;
- (iii) The location of the Point(s) of Receipt and Point(s) of Delivery and the identities of the Delivering Parties and the Receiving Parties;
- (iv) The location of the generating facility(ies) supplying the capacity and energy and the location of the load ultimately served by the capacity and energy transmitted. The Transmission Provider will treat this information as confidential except to the extent that disclosure of this information is required by this Tariff, by regulatory or judicial order, for reliability purposes pursuant to Good Utility Practice or pursuant to Applicable Regional Entity transmission information sharing agreements. The Transmission Provider shall treat this information consistent with the standards of conduct contained in Part 37 of the Commission's regulations;
- (v) A description of the supply characteristics of the capacity and energy to be delivered;
- (vi) An estimate of the capacity and energy expected to be delivered to the Receiving Party;
- (vii) The Service Commencement Date and the term of the requested Transmission Service;
- (viii) The transmission capacity requested for each Point of Receipt and each Point of Delivery on the Transmission Provider's Transmission System; customers may combine their requests for service in order to satisfy the minimum transmission capacity requirement;
- (ix) A statement indicating that, if the Eligible Customer submits a Pre-Confirmed Application, the Eligible Customer will execute a Service Agreement upon receipt of notification that Transmission Provider can provide the requested Transmission Service; and
- (x) Any additional information required by the Transmission Provider's planning process established in Schedule 6 of the Operating Agreement.

The Transmission Provider shall treat this information consistent with the standards of conduct contained in Part 37 of the Commission's regulations.

18.2 Completed Application:

A Completed Application shall provide all of the information included in 18 C.F.R. § 2.20 including but not limited to the following:

- (i) The identity, address, telephone number and facsimile number of the entity requesting service;
- (ii) A statement that the entity requesting service is, or will be upon commencement of service, an Eligible Customer under the Tariff;
- (iii) The Point(s) of Receipt and the Point(s) of Delivery;
- (iv) The maximum amount of capacity requested at each Point of Receipt and Point of Delivery; and
- (v) The proposed dates and hours for initiating and terminating transmission service hereunder.

In addition to the information specified above, when required to properly evaluate system conditions, the Transmission Provider also may ask the Transmission Customer to provide the following:

- (vi) The electrical location of the initial source of the power to be transmitted pursuant to the Transmission Customer's request for service; and
- (vii) The electrical location of the ultimate load.

The Transmission Provider will treat this information in (vi) and (vii) as confidential at the request of the Transmission Customer except to the extent that disclosure of this information is required by this Tariff, by regulatory or judicial order, for reliability purposes pursuant to Good Utility Practice, or pursuant to Applicable Regional Entity transmission information sharing agreements. The Transmission Provider shall treat this information consistent with the standards of conduct contained in Part 37 of the Commission's regulations.

- (viii) A statement indicating that, if the Eligible Customer submits a Pre-Confirmed Application, the Eligible Customer will execute a Service Agreement upon receipt of notification that the Transmission Provider can provide the requested Transmission Service.

36.1 General:

Generation Interconnection Requests and Transmission Interconnection Requests shall be governed by this Section 36.

36.1.01 Generation Interconnection Request:

Except as otherwise provided in this Subpart A with respect to Behind The Meter Generation, an Interconnection Customer that seeks to interconnect new generation in, or to increase the capacity of generation already interconnected in, the PJM Region shall submit to the Transmission Provider a Generation Interconnection Request. A Generation Interconnection Request shall include: (i) the location of the proposed generating unit site or existing generating unit; (ii) evidence of an ownership interest in, or right to acquire or control the generating unit site, such as a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider; (iii) the size of the proposed generating unit or the amount of increase in capacity of an existing generating unit; (iv) a description of the equipment configuration and if the generating unit is a wind generation facility, a set of preliminary electrical design specifications depicting the wind plant as a single equivalent generator; (v) the planned date the proposed generating unit or increase in capacity of an existing generating unit will be in service, such date to be no more than seven years from the date the request is received by the Transmission Provider unless the Generation Interconnection Customer demonstrates that engineering, permitting, and construction of the generating unit or increase in capacity will take more than seven years; and (vi) any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; (vii) an executed Generation Interconnection Feasibility Study Agreement, a form of which is contained in Attachment N, pursuant to which the Generation Interconnection Customer agrees to reimburse the Transmission Provider for the cost of the Generation Interconnection Feasibility Study; (viii) an initial deposit of \$100 for each MW requested if the Generation Interconnection Request is received in the first four calendar months of the current New Services Queue; an initial deposit in the amount of \$150 for each MW requested if the Generation Interconnection Request is received in the fifth calendar month of the current New Services Queue; or an initial deposit in the amount of \$200 for each MW requested, if the Generation Interconnection Request is received in the sixth calendar month of the current New Services Queue; provided, however, that the maximum initial deposit for a Generation Interconnection Request will be \$100,000 regardless of both the size and timing of such request; and (ix) a base non-refundable deposit of \$10,000, if the Generation Interconnection Request is received in the first four calendar months of the current New Services Queue; a base non-refundable deposit of \$20,000 if the Generation Interconnection Request is received in the fifth calendar month of the current New Services Queue; or a base non-refundable deposit of \$30,000, if the Generation Interconnection Request is received in the sixth calendar month of the current New Services Queue.

The base and initial deposit will be credited toward the amount of the Generation Interconnection Customer's cost responsibility for the Generation Interconnection Feasibility Study. Upon completion of the Feasibility Study, the Transmission Provider will return any unused refundable deposit monies to Interconnection Customer. Any remaining non-refundable deposit monies will be credited toward the Interconnection Customer's cost responsibility for any other studies

conducted for that Interconnection Request under Part VI of the Tariff, which will be applied prior to the deposit monies collected for that other study. If any non-refundable deposit monies remain after all studies are complete, such monies will be returned to a Generation Interconnection Customer upon Initial Operation, or to a Transmission Interconnection Customer upon energization of completed facilities as provided in Attachment GG, Appendix III, Section 20 of the Tariff. The Transmission Provider shall maintain on the Transmission Provider's website a list of all Generation Interconnection Requests that identifies (A) the proposed maximum summer and winter megawatt electrical output; (B) the location of the generation by county and state; (C) the station or transmission line or lines where the interconnection will be made; (D) the facility's projected date of Initial Operation; (E) the status of the Generation Interconnection Request, including its Queue Position; (F) the type of Generation Interconnection Service requested; (G) the availability of any studies related to the Interconnection Request; (H) the date of the Generation Interconnection Request; (I) the type of Generating Facility to be constructed (combined cycle, base load or combustion turbine and fuel type); and (J) for each Generation Interconnection Request that has not resulted in a completed interconnection, an explanation of why it was not completed. This list will not disclose the identity of the Generation Interconnection Customer, except as otherwise provided in Part IV of the Tariff. The list and the priority of Generation Interconnection Requests shall be included on the website as part of the New Services Queue.

36.1.02 Generation Interconnection Requests of 20 Megawatts or Less:

The Transmission Provider has developed streamlined processes for Generation Interconnection Requests involving new generation resources of 20 MW or less and increases in the capacity of a generating unit by 20 MW or less over any consecutive 24-month period. The processes for Generation Interconnection Requests involving increases in capacity by 20 MW or less are set forth in Subpart G of Part IV of the Tariff and the PJM Manuals.

36.1.03 Transmission Interconnection Request:

An Interconnection Customer that seeks to interconnect or add Merchant Transmission Facilities to the Transmission System, or to increase the capacity of existing Merchant Transmission Facilities interconnected with the Transmission System, or to advance the construction of any transmission enhancement or expansion other than Merchant Transmission Facilities that is included in the Regional Transmission Expansion Plan prepared pursuant to Schedule 6 of the Operating Agreement, shall submit to the Transmission Provider a Transmission Interconnection Request. A Transmission Interconnection Request shall include: (i) the location of the proposed Merchant Transmission

Facilities and of the substation(s) or other location(s) where the Transmission Interconnection Customer proposes to interconnect or add its Merchant Transmission Facilities to the Transmission System; (ii) a description of the proposed Merchant Transmission Facilities; (iii) the nominal capability or increase in capability (in megawatts) of the proposed Merchant Transmission Facilities or planned increase in the capability of the existing facilities on which any proposed Merchant Network Upgrades would be installed; (iv) the planned date the proposed Merchant Transmission Facilities will be in service, such date to be no more than seven

years from the date the request is received by the Transmission Provider, unless the Transmission Interconnection Customer demonstrates that engineering, permitting, and construction of the Merchant Transmission Facilities will take more than seven years; (v) if the request relates to proposed Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities that will interconnect with the Transmission System and with another control area outside the PJM Region, the Transmission Interconnection Customer's election to receive either (a) Transmission Injection Rights and/or Transmission Withdrawal Rights, or (b) Incremental Deliverability Rights, Incremental Auction Revenue Rights, Incremental Capacity Transfer Rights, and Incremental Available Transfer Capability Revenue Rights, associated with the capability of the proposed Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities; (vi) if the Transmission Interconnection Customer will be eligible to receive Incremental Deliverability Rights under Section 235 of the Tariff, identification of the point on the Transmission System where the Transmission Interconnection Customer wishes to receive Incremental Deliverability Rights created by the construction or installation of its proposed Merchant Transmission Facilities; (vii) any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; (viii) an executed Transmission Interconnection Feasibility Study Agreement, a form of which is contained in Attachment S, pursuant to which the Transmission Interconnection Customer agrees to reimburse the Transmission Provider for the cost of the Transmission Interconnection Feasibility Study; and (ix) an initial deposit in the amount of \$100 for each MW requested if the Transmission Interconnection Request is received in the first four calendar months of the current New Services Queue; an initial deposit in the amount of \$150 for each MW requested if the Transmission Interconnection Request is received within the fifth calendar month of the current New Services Queue; or an initial deposit in the amount of \$200 for each MW requested, if the Transmission Interconnection Request is received within the sixth calendar month of the current New Services Queue; provided, however, that the maximum initial deposit for a Transmission Interconnection Request will be \$100,000 regardless of both size and timing of such request; and (x) a base non-refundable deposit in the amount of \$10,000, if the Transmission Interconnection Request is received within the first four calendar months of the date of the beginning of the current New Services Queue; a base non-refundable deposit in the amount of \$20,000 if the Transmission Interconnection Request is received within the fifth calendar month of the current New Services Queue; or a base non-refundable deposit in the amount of \$30,000, if the Transmission Interconnection Request is received within the sixth calendar month of the current New Services Queue.

The base and initial deposit will be credited toward the amount of the Transmission Interconnection Customer's cost responsibility for the Transmission Interconnection Feasibility Study and other studies conducted under Part IV or Part VI of the Tariff. The Transmission Provider shall maintain on the Transmission Provider's OASIS a list of all Transmission Interconnection Requests that identifies (A) in megawatts the potential nominal capability or increase in capability; (B) the location of the Merchant Transmission Facilities by county and state; (C) the station or transmission line or lines where the interconnection will be made; (D) the facility's projected date of Initial Operation; (E) the status of the Transmission Interconnection Request, including its Queue Position; (F) the availability of any studies related to the Interconnection Request; (G) the date of the Transmission Interconnection Request; (H) the type of Merchant Transmission Facilities to be constructed; and (I) for each Transmission

Interconnection Request that has not resulted in a completed interconnection, an explanation of why it was not completed. This list will not disclose the identity of the Transmission Interconnection Customer, except as otherwise provided in Part IV or Part VI of the Tariff. The list and the priority of Transmission Interconnection Requests shall be included on the OASIS as a part of the New Services Queue.

Within 30 days of submitting its Interconnection Request, Transmission Interconnection Customer shall provide evidence that it has submitted a valid interconnection request with the adjacent Control Area(s) in which it is interconnecting, if applicable. Transmission Interconnection Customer shall maintain its queue position(s) with such adjacent Control Area(s) throughout the entire PJM interconnection process.

36.1.1 Interconnection Services for Generation:

Generation Interconnection Customers may request either of two forms of Interconnection Service, i.e., interconnection as a Capacity Resource or as an Energy Resource. Energy Resource status allows the generator to participate in the PJM Interchange Energy Market pursuant to the PJM Operating Agreement. Capacity Resource status allows the generator to participate in the PJM Interchange Energy Market to be utilized by load-serving entities in the PJM Region to meet capacity obligations imposed under the Reliability Assurance Agreement and/or to be designated as a Network Resource under Part III. Capacity Resources also may participate in Reliability Pricing Model Auctions and in Ancillary Services markets pursuant to the PJM Tariff or the Operating Agreement. Capacity Resource status is based on providing sufficient transmission capability to ensure deliverability of generator output to the aggregate PJM Network Load and to satisfy the contingency criteria in the Applicable Standards. Specific tests performed during the Generation Interconnection Feasibility Study and later System Impact Study will identify those upgrades required to satisfy the contingency criteria applicable at the generator's location.

Consistent with Section 1.7.4(i) of Schedule 1 to the Operating Agreement, to the extent its generating facility is dispatchable, an Interconnection Customer shall submit an Economic Minimum in the real-time market that is no greater than the higher of its physical operating minimum or its Capacity Interconnection Rights.

36.1.2 No Applicability to Transmission Service:

Nothing in this Part IV shall constitute a request for transmission service, or confer upon an Interconnection Customer any right to receive transmission service, under Part II or Part III.

36.1.3 Acknowledgement of Interconnection Request:

The Transmission Provider shall acknowledge receipt of the Interconnection Request (electronically when available to all parties, otherwise written) within five (5) business days after receipt of the request and shall attach a copy of the received Interconnection Request to the acknowledgement.

36.1.4 Deficiencies in Interconnection Request:

An Interconnection Request will not be considered a valid request if Interconnection Customer has failed to pay any outstanding invoices related to prior Interconnection Requests by the Interconnection Customer and until all information required under Section 36.1 has been received by the Transmission Provider. If an Interconnection Request fails to meet the requirements set forth in Section 36.1, except as provided below regarding the deposit, or is in arrears as described above, the Transmission Provider shall so notify the Interconnection Customer (electronically when available to all parties, otherwise written) within five (5) business days of receipt of the initial Interconnection Request. Such notice shall explain that the Interconnection Request does not constitute a valid request and the reasons for such failure to meet the applicable requirements. Interconnection Customer shall provide the additional information that Transmission Provider's notice identifies as needed to constitute a valid request and shall make any payments on any outstanding invoices within ten (10) business days after receipt of such notice. Upon timely correction of the deficiency, the Interconnection Request shall be assigned a Queue Position under Section 201 as of the date that Transmission Provider first received the request. In the event the Interconnection Customer fails to provide the further information and make payments on any outstanding invoices required by Transmission Provider's deficiency notice under this Section 36.1.4, its Interconnection Request shall be deemed to be terminated and withdrawn. Notwithstanding the above, the Interconnection Customer must submit its deposit at the time it submits its Interconnection Request. Failure to do so will result in rejection of the Interconnection Request.

36.1.5 Scoping Meeting:

The following provision shall apply to Interconnection Requests submitted prior to May 1, 2012:

Transmission Provider shall provide each Interconnection Customer with an opportunity for a scoping meeting among the Transmission Provider, the prospective Interconnected Transmission Owner and the Interconnection Customer. The purpose of the scoping meeting will be to identify one alternative Point(s) of Interconnection and configurations to evaluate in the Interconnection Studies and to attempt to select the best alternatives in a reasonable fashion given resources and information available. The Interconnection Customer may select a maximum of two Point(s) of Interconnection to be studied during the Interconnection Feasibility Study, a primary and secondary Point of Interconnection may be selected by the Interconnection Customer. After receipt of a valid Interconnection Request, Transmission Provider shall offer to arrange, within seven business days, for the scoping meeting, and shall provide a minimum of three suggested meeting dates and times for the scoping meeting. The scoping meeting shall be held, or waived by mutual agreement of the parties within 45 days after receipt of a valid Interconnection Request, if the Interconnection Request is received in the first calendar month of the current New Services Queue; or within 30 days if the Interconnection Request is received within the second calendar month of the current New Services Queue; or in 20 days if the Interconnection Request is received in the third calendar month of the date of the beginning of the current New Services Queue. The Interconnection Customer may choose to divide the scoping meeting into two sessions, one between the Transmission Provider and Interconnection Customer and one among Transmission Provider, the Interconnection Customer and the prospective Interconnected

Transmission Owner. Such meetings may be held consecutively on the same day. Scoping meetings may be held in person or by telephone or video conference. In the event the Interconnection Customer fails to waive or complete the scoping meeting requirement, its Interconnection Request shall be deemed to be terminated and withdrawn.

The following provision shall apply to Interconnection Requests submitted on or after May 1, 2012:

Transmission Provider shall provide each Interconnection Customer with an opportunity for a scoping meeting among the Transmission Provider, the prospective Interconnected Transmission Owner and the Interconnection Customer. The purpose of the scoping meeting will be to identify one alternative Point(s) of Interconnection and configurations to evaluate in the Interconnection Studies and to attempt to select the best alternatives in a reasonable fashion given resources and information available. The Interconnection Customer may select a maximum of two Point(s) of Interconnection to be studied during the Interconnection Feasibility Study, a primary and secondary Point of Interconnection may be selected by the Interconnection Customer. After receipt of a valid Interconnection Request, Transmission Provider shall offer to arrange, within seven business days, for the scoping meeting, and shall provide a minimum of three suggested meeting dates and times for the scoping meeting. The scoping meeting shall be held, or waived by mutual agreement of the parties within 45 days after receipt of a valid Interconnection Request, if the Interconnection Request is received in the first four calendar months of the current New Services Queue; or within 30 days if the Interconnection Request is received within the fifth calendar month of the current New Services Queue; or in 20 days if the Interconnection Request is received in the sixth calendar month of the date of the beginning of the current New Services Queue. The Interconnection Customer may choose to divide the scoping meeting into two sessions, one between the Transmission Provider and Interconnection Customer and one among Transmission Provider, the Interconnection Customer and the prospective Interconnected Transmission Owner. Such meetings may be held consecutively on the same day. Scoping meetings may be held in person or by telephone or video conference. In the event the Interconnection Customer fails to waive or complete the scoping meeting requirement, its Interconnection Request shall be deemed to be terminated and withdrawn.

36.1.6 Coordination with Affected Systems:

The Transmission Provider will coordinate with Affected System Operators the conduct of any required studies in accordance with Section 202.

36.1.7 Base Case Data:

Transmission Provider shall provide Interconnection Customer with base power flow, short circuit and stability databases, including all underlying assumptions, and contingency list upon request and subject to the confidentiality provisions of Section 223 of the Tariff. Transmission Provider may require Interconnection Customer to sign a confidentiality agreement before the release of commercially sensitive information or Critical Energy Infrastructure Information in the Base Case data. Such databases and lists, hereinafter referred to as Base Cases, shall include

all (1) generation projects and (ii) transmission projects, including merchant transmission projects, that are included in the then-current, approved Regional Transmission Expansion Plan.

110.2 Feasibility Study

Feasibility Study analyses can generally be expedited by examining a limited contingency set that focuses on the impact of the small capacity addition on contingency limits in the vicinity of the Generation Capacity Resource. Linear analysis tools are used to evaluate the impact of a small capacity addition with respect to compliance with the contingency criteria in the Applicable Standards. Generally, small capacity additions will have very limited and isolated impacts on system facilities. If criteria violations are observed, further AC testing is required.

Short circuit calculations are performed for small resource additions to ensure that circuit breaker capabilities are not exceeded.

Once the Feasibility Study is completed, a Feasibility Study report will be prepared and transmitted to the Interconnection Customer along with a System Impact Study Agreement. In order to remain in the New Services Queue, the Interconnection Customer must return the executed System Impact Study Agreement within 30 days, along with documents demonstrating that an initial air permit application has been filed, if required, and the deposit contained in Section 204.3A of the Tariff. In some cases, where no network impacts are identified and there are no other projects in the vicinity of the small resource addition, the System Impact Study may not be required and the project will proceed directly to the Facilities Study.

111.2 Feasibility Study

Feasibility Study analyses can generally be expedited by examining a limited contingency set that focuses on the impact of the small Energy Resource addition on contingency limits in the vicinity of the resource. Linear analysis tools are used to evaluate the impact of a small Energy Resource addition with respect to compliance with the contingency criteria in the Applicable Standards. Generally, small resource additions will have very limited and isolated impacts on system facilities. If criteria violations are observed, further AC testing is required.

Short circuit calculations are performed for small resource additions to ensure that circuit breaker capabilities are not exceeded.

Once the Feasibility Study is completed, a Feasibility Study report will be prepared and transmitted to the Interconnection Customer along with a System Impact Study Agreement. In order to remain in the New Services Queue, the Interconnection Customer must return the executed System Impact Study Agreement within 30 days, along with documents demonstrating that an initial air permit application has been filed, if required, and the deposit contained in Section 204.3A of the Tariff. In some cases, where no network impacts are identified and there are no other projects in the vicinity of the small resource addition, the System Impact Study may not be required and the project will proceed directly to the Facilities Study.

230.3 Loss of Capacity Interconnection Rights:

230.3.1 Operational Standards:

To retain Capacity Interconnection Rights, the Generation Capacity Resource associated with the rights must operate or be capable of operating at the capacity level associated with the rights. Operational capability shall be established consistent with Schedule 9 of the Reliability Assurance Agreement Among Load Serving Entities in the PJM Region and the PJM Manuals. Generation Capacity Resources that meet these operational standards shall retain their Capacity Interconnection Rights regardless of whether they are available as a Generation Capacity Resource or are making sales outside the PJM Region.

230.3.2 Failure to Meet Operational Standards:

This Section 230.3.2 shall apply only in circumstances other than Deactivation of a Generation Capacity Resource. In the event a Generation Capacity Resource fails to meet the operational standards set forth in Section 230.3.1 of the Tariff for any consecutive three-year period (with the first such period commencing on the date the Interconnection Customer must demonstrate commercial operation of the generating unit(s) as specified in the Interconnection Service Agreement), the holder of the Capacity Interconnection Rights associated with such Generation Capacity Resource will lose its Capacity Interconnection Rights in an amount commensurate with the loss of generating capability. Any period during which the Generation Capacity Resource fails to meet the standards set forth in Section 230.3.1 as a result of an event that would constitute a Force Majeure event under Section 10 of the Tariff shall be excluded from such consecutive three-year period, provided that the holder of the Capacity Interconnection Rights exercises due diligence to remedy the event. A Generation Capacity Resource that loses Capacity Interconnection Rights pursuant to this section may continue Interconnection Service, to the extent of such lost rights, as an Energy Resource in accordance with (and for the remaining term of) its Interconnection Service Agreement and/or applicable terms of the Tariff.

230.3.3 Replacement of Generation:

In the event of the Deactivation of a Generation Capacity Resource (in accordance with Part V and any Applicable Standards), any Capacity Interconnection Rights associated with such facility shall terminate one year from the Deactivation Date unless the holder of such rights (including any holder that acquired the rights after Deactivation) has submitted a new Generation Interconnection Request up to one year after the Deactivation Date which contemplates use of the same Capacity Interconnection Rights. The Interconnection Customer must provide notification to the Transmission Provider that it intends to utilize such Capacity Interconnection Rights on or before the date the Interconnection Customer executes the System Impact Study Agreement associated with the Generation Interconnection Request for which it intends to utilize such Capacity Interconnection Rights. Notwithstanding the previous sentence, Interconnection Customers in the New Services Queue prior to May 1, 2012 must provide notice of intent to utilize such Capacity Interconnection Rights when it executes its Facilities Study Agreement or, if it has already executed its Facilities Study Agreement, then by November 1, 2012. Such new Generation Interconnection Request may include a request to increase Capacity Interconnection

Rights in addition to the replacement of the previously deactivated amount as a single Generation Interconnection Request. Transmission Provider may perform studies, as necessary, due to any changes in the electrical characteristics of any newly proposed equipment, or where there is a change in Point of Interconnection, which may result in the loss of a portion or all of the Capacity Interconnection Rights as determined by such studies.

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Upon execution of an Interconnection Service Agreement reflecting its new Interconnection Request, the holder of the Capacity Interconnection Rights will retain only such rights that are commensurate with the size in megawatts of the replacement generation, not to exceed the amount of the holder's Capacity Interconnection Rights associated with the facility upon Deactivation. Any desired increase in Capacity Interconnection Rights must be requested in the new Generation Interconnection Request and be accredited through the applicable procedures in Part IV and Part VI of the Tariff. In the event the new Interconnection Request to which this section refers is or is deemed to be terminated and/or withdrawn for any reason at any time, the pertinent Capacity Interconnection Rights shall not terminate until the end of the one year period from the Deactivation Date.

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 Transmission Provider and Transmission Owners 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. For the purposes of this Schedule 6A, the expected life of the Black Start Unit shall take into consideration expectations regarding both the enabling equipment and the generation unit itself.

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, in conjunction with the Transmission Owners, are 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 more than three Black Start Units at a Black Start Plant will be eligible for compensation under this Schedule 6A, unless specifically approved by the Transmission Provider as an exception. 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 or 6 below.

5. Owners of Black Start Units selected to provide Black Start Service in accordance with 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 Owner, with the consent of the Transmission Provider, or the Transmission Provider, with the consent of the Transmission Owner, provides written, one-year advance notice of its intention to terminate the commitment.

6. Owners of Black Start Units selected to provide Black Start Service in accordance with 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 a term based upon the age of the Black Start Unit or the longest expected life of the Incremental Black Start Capital Cost, as set forth in the applicable CRF Tables in Paragraph 18. For those Black Start Units that elect to recover new or additional Black Start Capital Costs in addition to a prior, FERC-approved cost recovery rate, the applicable commitment period shall be the longer of the FERC-approved recovery period or the applicable term of commitment as set forth in the CRF Tables in Paragraph 18. Either the Transmission Provider, with the consent of the Transmission Owner, or the Transmission Owner, with the consent of the Transmission Provider, may terminate the commitment with one year advance notice of its intention to the Black Start Unit owner, but the Transmission Owner shall reimburse the Black Start Unit owner for 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 (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)) in excess of the amount that would have been recovered pursuant to section 18 during the same period. At the conclusion of the term of commitment established under this section 6, a Black Start Unit shall commence a new term of commitment under either section 5 or 6, as applicable.

6A. 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)) in excess of the amount that would have been recovered pursuant to section 18 during the same period, but such unit remains eligible to establish a new commitment under section 5 or 6.

Performance Standards and Outage Restrictions

7. 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 90 minutes of a request from the Transmission Owner or the Transmission Provider.
- 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.

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 planned maintenance at any one time. This restriction excludes outages on common plant equipment that may make all units unavailable. A Black Start Unit not currently designated as critical and on the same voltage level may be substituted for a Black Start Unit that is subject to a planned outage to permit a concurrent planned outage of another critical Black Start Unit at the Black Start Plant to begin. The Black Start Unit used as a substitute must have had a valid annual test within the previous 12 months.

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 designated as critical shall be tested annually in accordance with the PJM manuals. The Black Start Unit owner shall determine the time of the annual test.

13. Compensation 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. To receive Black Start Service revenues, a Black Start Unit must have a successful annual test on record with the Transmission Provider within the preceding 13 months.

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 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 determines not to make the necessary repairs to enable the Black Start Unit to pass the annual test, the Black Start Unit owner will have failed to fulfill its commitment pursuant to section 5 or section 6, whichever is applicable, of this Schedule 6A and will be subject to the additional forfeiture of revenues set forth in section 6A.

Revenue Requirements

16. The 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, as applicable, or (ii) the formula rates set forth in section 18 of this Schedule 6A for the commitment term set forth in Paragraph 5 or 6 as applicable. Each generator's Black Start Service revenue requirements shall be an annual calculation. Requests 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 section III of Attachment M – Appendix and the PJM Manuals. The Market Monitoring Unit and the generator owner shall attempt to come to agreement on the level of each component included in the Black Start Service revenue requirements. The Black Start Service generator owner may submit Black Start Service revenue requirements that it chooses, provided that (i) it has participated in good faith with the process described in this section and in section III of Attachment M - Appendix, (ii) the Black Start Service revenue requirements are no higher than the level defined in any agreement reached by the Black Start Service generator 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.

In the event that the Black Start Service generator owner and Market Monitoring Unit cannot agree on the level of each component included in the calculation of the Black Start Service

revenue requirements, and the Black Start Service generator owner submits its own values to the Office of the Interconnection that are inconsistent with the Market Monitoring Unit's determination, the Office of the Interconnection shall determine whether to accept such values subject to the requirements of the Tariff and the PJM Manuals. If the Office of the Interconnection does not accept the values submitted by the Black Start Service generator owner in such case, the Black Start Service generator owner may file its proposed values with the Commission for approval. Pursuant to section III of Attachment M - Appendix, if the Office of the Interconnection accepts the Black Start Service revenue requirements submitted by the Black Start Service generator owner in such case, the Market Monitoring Unit may petition the Commission for an order that would require the Black Start Service generator to utilize the values determined by the Market Monitoring Unit or such other values as determined by the Commission. 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.

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 Paragraph 5 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 the Black Start Unit's installed capacity, expressed in MW.

“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 Black Start Units with a commitment established under section 5, X shall be .01 for Hydro units, .02 for Diesel or CT units.

Black Start Units with a commitment established under Paragraph 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

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

Where:

“Net Cone” is the then current installed capacity (“ICAP”) net Cost of New Entry (expressed in \$/MW year) for the CONE area where the Black Start Unit is located.

“Black Start NERC-CIP Unit Capacity” is the Black Start Unit’s installed capacity, expressed in MW, but, for purposes of this calculation, capped at 100 MW for Hydro units, or 50 MW for Diesel or 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).

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

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

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

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 paragraph 18. However, under no circumstances will PJM or the Black Start Unit owner restructure or modify that existing FERC-approved rate without FERC approval.

“Incremental Black Start Capital Costs” are 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 Owner in order to meet NERC Reliability Standards that apply to Black Start Units solely on the basis of the provision of Black Start Service by such unit. However, Incremental Black Start Capital Costs shall not include any capital costs that the Black Start Unit owner is recovering for that unit pursuant to a FERC-approved recovery rate.

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

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

Or:

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

Capital Improvement Lifespan (Years)	Levelized CRF
16-20	0.125
11-15	0.146
6-10	0.198
1-5	0.363

In those circumstances where a Black Start Unit owner has elected to recover Incremental Black Start Capital Costs, in addition to a FERC-approved recovery rate, its applicable term of commitment shall be the greater of: (i) the FERC-approved recovery period, or; (ii) the applicable term of commitment as established by the CRF Tables above.

After a Black Start Unit has recovered its allowable Incremental Black Start Capital Costs or Incremental Black Start NERC-CIP Capital Costs, as provided by the applicable Capital Cost Recovery Rate, and has satisfied its applicable commitment period required under Paragraph 6, the Black Start Unit shall be committed to providing black start in accordance with Paragraph 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.

Training Costs:

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

50 staff hours/year/plant*75/hour

Fuel Storage Costs:

Black Start Units that cannot use oil for fuel shall calculate Fuel Storage Costs or “FSC” as zero. Black Start Units that can use oil for fuel shall calculate Fuel Storage Costs in accordance with the following formula:

$$\{ \text{MTSL} + [(\# \text{ Run Hours}) * (\text{Fuel Burn Rate})] \} * \\ (12 \text{ Month Forward Strip} + \text{Basis}) * (\text{Bond Rate})$$

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.

“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.

“MTSL” is the “minimum tank suction level” and shall apply where no direct current pumps are available for the Black Start Unit.

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 those Black Start Units that elect to recover new or additional Black Start Capital Costs under section 6 above, the incentive factor, Z, shall be equal to zero.

At least every two years, PJM shall review the formula and its costs components set forth in this section, 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 Paragraph 18 no later than thirty (30) days prior to the effective date of the recovery. At the written request of any 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 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. Monthly credits are provided to generators that submit to the Transmission Provider their annual revenue requirements established pursuant to section 17 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.

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 of generation units nominated by each transmission zone and allocated to network service customers and point-to-point reservations.

26. Revenue requirements for Black Start Units nominated by a Transmission Owner as critical (regardless of zonal location) will be allocated to the nominating Transmission Owner's zone.

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 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 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.

SCHEDULE 8
Non-Firm Point-To-Point Transmission Service

1) The Transmission Customer shall pay for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth below for the Point of Delivery:

Summary of Charges

Point of Delivery	Monthly Charge (\$/kW)	Weekly Charge (\$/kW)	Daily On-Peak ^{1/} Charge (\$/kW)	Daily Off-Peak ^{2/} Charge (\$/kW)	Hourly On-Peak ^{3/} Charge (\$/MWh)	Hourly Off-Peak ^{4/} Charge (\$/MWh)
Border of PJM	1.574	0.3632	0.0726	0.0519	4.54	2.16
AE Zone	1.984	0.4580	0.0920	0.0650	5.7	2.72
BG&E Zone	1.306	0.3010	0.0600	0.0430	3.8	1.80
Delmarva Zone	1.615	0.3730	0.0750	0.0530	4.6	2.21
JCPL Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
MetEd Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
Penelec Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
PECO Zone	2.189	0.5051	0.1010	0.0722	6.3	3.01
PPL Zone: Total charge is the sum of the components	PPL: * AEC: 0.039 UGI: *	PPL: * AEC: 0.0089 UGI: *	PPL: * AEC: 0.0018 UGI: *	PPL: * AEC: 0.0013 UGI: *	PPL: * AEC: 0.11 UGI: *	PPL: * AEC: 0.05 UGI: *
Pepco Zone	1.750	0.4040	0.0810	0.0580	5.0	2.40
PSE&G Zone	1.975	0.4557	0.0911	0.0651	5.7	2.71
AP Zone	1.737	0.4009	0.0802	0.0573	5.0	2.39
Rockland Zone	2.676	0.6176	0.1235	0.0882	7.7	3.67
ComEd Zone ^{5/}	^{6/}					

* PPL Electric Utilities Corporation's and UGI Utilities' respective component of the total charge is posted on the PJM Internet website.

AEP East Zone ^{7/} Nov. 1, 2005 SECA Ended W-JF Line In	AEP East Zone ^{7/}	Rate Pursuant to Attachment H-14	Monthly Charge X 12 / 52 0.249 48	Weekly Charge / 5	Weekly Charge / 7	Daily On-Peak Charge / 16
Dayton Zone	Dayton Zone	1.306	0.3014	0.0603	0.0431	3.77
Duquesne Zone	Duquesne Zone	1.18	0.27	0.0540	0.0386	3.38
Dominion Zone ^{8/}	Dominion Zone ^{8/}					
ATSI Zone	ATSI Zone	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21
DEOK Zone	DEOK Zone	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22

- 1/ Monday - Friday except the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.
- 2/ Saturday and Sunday and the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.
- 3/ 7:00 a.m. up to the hour ending 11:00 p.m.
- 4/ 11:00 p.m. up to the hour ending 7:00 a.m.
- 5/ Each month, revenue credits will be applied to the gross charge in accordance with Paragraph 9 below to determine the actual charge to the Transmission Customer.
- 6/ The charges for the ComEd zone are posted on PJM's website. In addition to the other rates set forth in this schedule, customers within the ComEd zone shall be charged for recovery of RTO start-up costs at the following rates, each computed to four decimal places:
Annual Rate - \$/kW/year = \$1,523,039, divided by the 1 CP demand for the ComEd zone for the prior calendar year;
Monthly Rate - \$/kW/month. = Annual Rate divided by 12;
Weekly Rate - \$/kW/week = Annual Rate divided by 52;
Daily rate - \$/kW/day = Weekly Rate divided by 5.
In order to ensure that the charge does not result in either an over-recovery or under-recovery of ComEd's start-up costs, PJM will institute an annual true-up mechanism in the month of May of each of the years 2008-2014. In May of each of those years, PJM will compare the amount collected under this charge for the previous 12 months with the target annual amount of \$1,523,039 and calculate any credits or surcharges that would be needed to ensure that \$1,523,039 is collected for each year. Any credit or surcharge will be assessed in the June bills for years 2008-2014, consistent with the above methodology.

- 7/ The rates for non-firm point-to-point transmission service in the AEP Zone will be charged at the monthly, weekly, daily or hourly rate equivalent to the rate effective in such period under Attachment H-14. In addition to other rates set forth in this schedule, customers within the AEP East Zone shall be charged for recovery of RTO start-up costs at the following rates, each computed to four decimal places:

Annual Rate - \$/kW/year = \$2,362,185, plus any applicable true-up adjustment, divided by the 1 CP demand for the AEP East Zone for the prior calendar year;

Monthly Rate - \$/kW/month. = Annual Rate divided by 12;

Weekly Rate - \$/kW/week = Annual Rate divided by 52;

Daily Rate - \$/kW/day = Weekly Rate divided by 5.

For the period November 1, 2005 through March 31, 2006, the rate shall be \$8.94/MW-month; for the period April 1 through December 31, 2006, the rate shall be \$8.60/MW-month, thereafter, the rate will be subject to the following true-up:

In order to ensure that the charge does not result in either over-recovery or under-recovery of AEP's start-up costs, PJM will institute an annual true-up mechanism and implement revised charges as of January 1st of each of the years 2007-2019. In January of each of those years, PJM will compare the amount collected under this charge for the previous year or part thereof with the target annual amount of \$2,362,185 and calculate the rates that would be needed, given the expected billing demands, to collect \$2,362,185, adjusted for any prior year over-collection or under-collection. In the final year that the rate is collected, PJM will calculate the rate to collect five-twelfths of the annual amount, (\$984,244), plus or minus any prior year true up amount, by May 31 of that year, and shall charge such rate until that amount is collected, whether that date be before or after May 31, 2020.

Effective December 1, 2004, the charge for Points of Delivery at the Border of PJM and the Transitional Revenue Neutrality Charge under this Schedule 8 shall not apply to any Reserved Capacity with a Point of Delivery of the Midwest Independent Transmission System Operator, Inc. obtained pursuant to requests submitted on or after November 17, 2003, for service commencing on or after April 1, 2004. Effective April 1, 2006, the charge for Points of Delivery at the Border of PJM and the Transitional Revenue Neutrality Charge under this Schedule 7 shall not apply to any Reserved Capacity with a Point of Delivery of the Midwest Independent Transmission System Operator, Inc.

- 8/ The service period charges rounded to four decimal places for the Dominion Zone are as follows:

Monthly Charge - \$/kW/month = the formula rate for Network Integration Transmission Service as described in Attachment H-16 and Attachment H-16A divided by 12 divided by 1000 kW/MW;

Weekly Charge - $\$/kW/week = 12 \text{ times Monthly Charge divided by } 52;$

Daily On-Peak Charge - $\$/kW/day = \text{Weekly Charge divided by } 5;$

Daily Off-Peak Charge - $\$/kW/day = \text{Weekly Charge divided by } 7;$

Hourly On-Peak Charge - $\$/MWh = \text{Daily On-Peak Charge} / 16 \text{ hours} * 1000 \text{ kW/ MW};$

Hourly Off-Peak Charge - $\$/MWh = \text{Daily Off-Peak Charge} / 24 \text{ hours} * 1000 \text{ kW/ MW}.$

2) The total demand charge in any week, pursuant to a reservation for Daily On-Peak Delivery or Daily Off-Peak Delivery, shall not exceed the Weekly Delivery rate specified in section (1) above for weekly service times the highest amount in kilowatts of Reserved Capacity and any additional transmission service, if any, in any day during such week.

3) **Hourly delivery:** The basic charge shall be that agreed upon by the Parties at the time this service is reserved and in no event shall exceed the amounts set forth above for a Point of Delivery.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified in section (1) above for daily service times the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified in section (1) above for weekly service times the highest amount in kilowatts of Reserved Capacity in any hour during such week.

4) **Discounts:** Three principal requirements apply to discounts for transmission service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the OASIS, (2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an Affiliate's use) must occur solely by posting on OASIS, and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount agreed upon for service on a path, from point(s) of receipt to point(s) of delivery, the Transmission Provider must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same point(s) of delivery on the Transmission System.

5) **Congestion, Losses and Capacity Export:** A Transmission Customer desiring Non-Firm Point-to-Point Transmission Service may elect to pay transmission congestion charges. If the Transmission Customer so elects, it shall either (a) if the applicable Transmission Congestion Charge as calculated pursuant to Attachment K is positive, pay the higher of the applicable Transmission Congestion Charge or the applicable rate under section (1) above, or (b) if the applicable Transmission Congestion Charge as calculated pursuant to Attachment K is negative, pay or be credited the sum of the applicable Transmission Congestion Charge and the rate under section (1) above. The Transmission Customer shall be responsible for losses as specified in the

Tariff. Any Transmission Customer that is a Capacity Export Transmission Customer, as defined in Attachment DD to this Tariff, shall pay for any applicable charges, and receive any applicable credits, for such a customer pursuant to Attachment DD.

6) **Other Supporting Facilities and Taxes:** In addition to the charges set forth in section (1) of this schedule, the Transmission Customer shall pay charges determined on a case-by-case basis for facilities necessary to provide Transmission Service at voltages lower than those shown in Attachment H for the applicable Zone(s) and any amounts necessary to reimburse the Transmission Provider for any amounts payable as sales, excise, “Btu,” carbon, value-added or similar taxes (other than taxes based upon or measured by net income) with respect to the amounts payable pursuant to the Tariff.

7) **Transmission Enhancement Charges:** In addition to the rates set forth in Section (1) of this Schedule and any other applicable charges, the Transmission Customer shall also pay any Transmission Enhancement Charges for which it is designated as a Responsible Customer under Schedule 12 appended to the Tariff.

8) **Determination of monthly charges for ComEd Zone:** On a monthly basis, revenue credits shall be calculated based on the sum of ComEd’s share of revenues collected during the month from: (i) the PJM Border Rate under Schedule 7; (ii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; (iii) Seams Elimination Charge/Cost Adjustment/Assignment (“SECA”) revenues allocable to ComEd under the Tariff; and (iv) any Point-To-Point Transmission Service where the Point of Receipt and the Point of Delivery are both internal to the ComEd Zone. On this basis, the sum of these revenues will appear as a reduction to the gross monthly rate stated above on a Transmission Customer’s bill in that month for service under this schedule.

9) **Resales:** The rates and rules governing charges and discounts stated above shall not apply to resales of transmission service, compensation for which shall be governed by section 23.1 of the Tariff.

SCHEDULE 10-RFC
Reliability First Corporation Charge

- a) ReliabilityFirst Corporation (RFC) is one of the Regional Entities of NERC. Its purpose is to ensure the reliability of the interconnected bulk power system. This schedule will recover RFC's statutory costs of operations as set forth below.
- b) PJM will charge each customer using Network Integration and Point-to-Point Transmission Service under this Tariff each month a charge equal to the RFC Rate times the total quantity in MWhs of energy delivered to load (including losses) that such customer serves in the PJM Region, excluding the Dominion Zone and the ATSI Zone, during such month. The exclusion applicable to the ATSI Zone shall expire on January 1, 2012.
- c) A fixed rate will be charged for the first eleven billing periods of the current year. During the final billing period, a true-up component will be applied to adjust for any under or over collections for the current year.
- d) NERC will submit final estimated costs to be recovered under this Schedule 10-RFC, determinants, and rates to the Transmission Provider no later than September 30th for the next calendar year. The Transmission Provider will post the rates for both components for the next calendar year no later than October 31st of the current year.
- e) The RFCR shall be calculated each year in accordance with the formula:

$$\text{RFCR} = \frac{\text{CYRC}}{\text{PJMRTL}}$$

where:

RFCR is the RFC Rate.

CYRC is the Current Year RFC Charges. These charges are the FERC approved funding for RFC for the year for which RFCR is being calculated. In the final billing for each calendar year a true-up component will be included applying any credit or deficiencies for the current year based on RFC's actual revenues as compared to RFC's FERC approved funding received under the schedule for the current year.

The Transmission Provider's RFC Total Hourly Load (PJMRTL) is the estimated total quantity in MWhs of energy to be delivered to load (including losses) in the PJM Region, less the total quantity in MWhs of energy to be delivered to load (including losses) in the Dominion Zone, under Network Integration and Point-to-Point Transmission Service by all customers during the year for which RFCR is being calculated.

- f) RFC is responsible for pursuing any and all defaults under this Schedule 10-RFC. Thus, the Transmission Provider will not deem any customer in default under the tariff for failure to pay any charges under this Schedule 10-RFC.

ATTACHMENT D

Methodology for Completing a System Impact Study

The Transmission Provider will notify applicants for transmission service of the need to conduct a System Impact Study whenever the Transmission Provider determines that available transmission capability may not be sufficient to provide the requested firm service(s). The purpose of the impact study will be to determine the effect the requested service(s) will have on system operations, identify any system constraints, redispatch options and whether system expansion will be required to provide the requested service(s).

The Commission's comparability standard will be applied in evaluating the impact of all requests. Specifically, the Transmission Provider will use the same due diligence in completing System Impact Studies for any Eligible Customers that it uses when completing studies for any Transmission Owner that requests service from the Transmission Provider.

Requests for long-term firm transmission service will be evaluated, to the extent possible, as a part of the on-going planning process for Bulk Transmission Supply in the PJM Region. Appropriate planning studies will be conducted annually to assess the capability of the PJM Region Transmission System to deliver the planned Network Resources to the Forecasted Network Loads of the existing load serving entities and any prior committed Firm Point-to-Point Service transmission customers. The loads and resources of Eligible Customers requesting new or additional service during the normal planning cycle will be incorporated into this aggregate planning process along with the loads and resources of all other Firm Point-to-Point and load serving entities for which prior commitments to provide service have been made. Requests for long-term firm service made at times that will not permit the evaluation of impacts as part of the normal planning process, and requests for short-term firm service, will require that special impact studies be completed.

The Transmission Provider plans and evaluates the PJM Region Transmission System in strict compliance with the following:

1. North American Electric Reliability Council ("NERC") Reliability Principles and Guides
2. Applicable Standards
3. Transmission planning criteria, methods and procedures described in the "FERC Form No. 715 - Annual Transmission Planning and Evaluation Report" for each Applicable Regional Entity.

In evaluating the impact of any request for new or additional service(s), the Transmission Provider will first determine the capability of the system to reliably provide prior committed Network and Point-to-Point service for the term of the requested new or additional service(s), or the normal planning horizon (generally 10 years), whichever is shorter. Requests for new or

additional service(s) will then be incorporated into the system representation data and the appropriate system analyses will be completed to evaluate the impacts of the requested services.

1.3 Definitions.

1.3.1 Acceleration Request.

“Acceleration Request” shall mean a request pursuant to section 1.9.4A of this Schedule to accelerate or reschedule a transmission outage scheduled pursuant to sections 1.9.2 or 1.9.4.

1.3.1A Auction Revenue Rights.

“Auction Revenue Rights” or “ARRs” shall mean the right to receive the revenue from the Financial Transmission Right auction, as further described in Section 7.4 of this Schedule.

1.3.1B Auction Revenue Rights Credits.

“Auction Revenue Rights Credits” shall mean the allocated share of total FTR auction revenues or costs credited to each holder of Auction Revenue Rights, calculated and allocated as specified in Section 7.4.3 of this Schedule.

1.3.1B.01 Batch Load Demand Resource.

“Batch Load Demand Resource” shall mean a Demand Resource that has a cyclical production process such that at most times during the process it is consuming energy, but at consistent regular intervals, ordinarily for periods of less than ten minutes, it reduces its consumption of energy for its production processes to minimal or zero megawatts.

1.3.1B.02 Congestion Price.

“Congestion Price” shall mean the congestion component of the Locational Marginal Price, which is the effect on transmission congestion costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing the consumption by a Demand Resource, based on the effect of increased generation from or consumption by the resource on transmission line loadings, calculated as specified in Section 2 of Schedule 1 of this Agreement.

1.3.1B.03 Curtailment Service Provider.

“Curtailed Service Provider” or “CSP” shall mean a Member or a Special Member, which action on behalf of itself or one or more other Members or non-Members, participates in the PJM Interchange Energy Market, *Ancillary Services markets, and/or Reliability Pricing Model* by causing a reduction in demand.

1.3.1B.04 Day-ahead Congestion Price.

“Day-ahead Congestion Price” shall mean the Congestion Price resulting from the Day-ahead Energy Market.

1.3.1C Day-ahead Energy Market.

“Day-ahead Energy Market” shall mean the schedule of commitments for the purchase or sale of energy and payment of Transmission Congestion Charges developed by the Office of the Interconnection as a result of the offers and specifications submitted in accordance with Section 1.10 of this Schedule.

1.3.1C.01 Day-ahead Loss Price.

“Day-ahead Loss Price” shall mean the Loss Price resulting from the Day-ahead Energy Market.

1.3.1D Day-ahead Prices.

“Day-ahead Prices” shall mean the Locational Marginal Prices resulting from the Day-ahead Energy Market.

1.3.1D.01 Day-ahead Scheduling Reserves.

“Day-ahead Scheduling Reserves” shall mean thirty-minute reserves as defined by the Reliability *First* Corporation and SERC.

1.3.1D.02 Day-ahead Scheduling Reserves Requirement.

“Day-ahead Scheduling Reserves Requirement” shall mean the thirty-minute reserve requirement for the PJM Region established consistent with the Applicable Standards, plus any additional thirty-minute reserves scheduled in response to an RTO-wide Hot or Cold Weather Alert or other reasons for conservative operations.

1.3.1D.03 Day-ahead Scheduling Reserves Resources.

“Day-ahead Scheduling Reserves Resources” shall mean synchronized and non-synchronized generation resources and Demand Resources electrically located within the PJM Region that are capable of providing Day-ahead Scheduling Reserves.

1.3.1D.04 Day-ahead Scheduling Reserves Market.

“Day-ahead Scheduling Reserves Market” shall mean the schedule of commitments for the purchase or sale of Day-ahead Scheduling Reserves developed by the Office of the Interconnection as a result of the offers and specifications submitted in accordance with Section 1.10 of this Schedule.

1.3.1D.05 Day-ahead System Energy Price.

“Day-ahead System Energy Price” shall mean the System Energy Price resulting from the Day-ahead Energy Market.

1.3.1E Decrement Bid.

“Decrement Bid” shall mean a bid to purchase energy at a specified location in the Day-ahead Energy Market. An accepted Decrement Bid results in scheduled load at the specified location in the Day-ahead Energy Market.

1.3.1E.01 Demand Resource.

“Demand Resource” shall mean a resource with the capability to provide a reduction in demand.

1.3.1F Dispatch Rate.

“Dispatch Rate” shall mean the control signal, expressed in dollars per megawatt-hour, calculated and transmitted continuously and dynamically to direct the output level of all generation resources dispatched by the Office of the Interconnection in accordance with the Offer Data.

1.3.1G Energy Storage Resource.

“Energy Storage Resource” shall mean flywheel or battery storage facility solely used for short term storage and injection of energy at a later time to participate in the PJM energy and/or Ancillary Services markets as a Market Seller.

1.3.2 Equivalent Load.

“Equivalent Load” shall mean the sum of a Market Participant’s net system requirements to serve its customer load in the PJM Region, if any, plus its net bilateral transactions.

1.3.2A Economic Load Response Participant.

“Economic Load Response Participant” shall mean a Member or Special Member that qualifies under Section 1.5A of this Schedule to participate in the PJM Interchange Energy Market *and/or Ancillary Services markets* through reductions in demand.

1.3.2A.01 Economic Minimum.

“Economic Minimum” shall mean the lowest incremental MW output level a unit can achieve while following economic dispatch.

1.3.2B Energy Market Opportunity Cost.

“Energy Market Opportunity Cost” shall mean the difference between (a) the forecasted cost to operate a specific generating unit when the unit only has a limited number of available run hours due to limitations imposed on the unit by Applicable Laws and Regulations (as defined in PJM Tariff), and (b) the forecasted future hourly Locational Marginal Price at which the generating unit could run while not violating such limitations. Energy Market Opportunity Cost therefore is the value associated with a specific generating unit’s lost opportunity to produce energy during a

higher valued period of time occurring within the same compliance period, which compliance period is determined by the applicable regulatory authority and is reflected in the rules set forth in PJM Manual 15. Energy Market Opportunity Costs shall be limited to those resources which are specifically delineated in Schedule 2 of the Operating Agreement.

1.3.3 External Market Buyer.

“External Market Buyer” shall mean a Market Buyer making purchases of energy from the PJM Interchange Energy Market for consumption by end-users outside the PJM Region, or for load in the PJM Region that is not served by Network Transmission Service.

1.3.4 External Resource.

“External Resource” shall mean a generation resource located outside the metered boundaries of the PJM Region.

1.3.5 Financial Transmission Right.

“Financial Transmission Right” or “FTR” shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2 of this Schedule.

1.3.5A Financial Transmission Right Obligation.

“Financial Transmission Right Obligation” shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2(b) of this Schedule.

1.3.5B Financial Transmission Right Option.

“Financial Transmission Right Option” shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2(c) of this Schedule.

1.3.6 Generating Market Buyer.

“Generating Market Buyer” shall mean an Internal Market Buyer that is a Load Serving Entity that owns or has contractual rights to the output of generation resources capable of serving the Market Buyer’s load in the PJM Region, or of selling energy or related services in the PJM Interchange Energy Market or elsewhere.

1.3.7 Generator Forced Outage.

“Generator Forced Outage” shall mean an immediate reduction in output or capacity or removal from service, in whole or in part, of a generating unit by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the facility, as specified in the relevant portions of the PJM Manuals. A reduction in output or removal from service of a generating unit in response to changes in market conditions shall not constitute a Generator Forced Outage.

1.3.8 Generator Maintenance Outage.

“Generator Maintenance Outage” shall mean the scheduled removal from service, in whole or in part, of a generating unit in order to perform necessary repairs on specific components of the facility, if removal of the facility meets the guidelines specified in the PJM Manuals.

1.3.9 Generator Planned Outage.

“Generator Planned Outage” shall mean the scheduled removal from service, in whole or in part, of a generating unit for inspection, maintenance or repair with the approval of the Office of the Interconnection in accordance with the PJM Manuals.

1.3.9A Increment Bid.

“Increment Bid” shall mean an offer to sell energy at a specified location in the Day-ahead Energy Market. An accepted Increment Bid results in scheduled generation at the specified location in the Day-ahead Energy Market.

1.3.9B Interface Pricing Point.

“Interface Pricing Point” shall have the meaning specified in section 2.6A.

1.3.10 Internal Market Buyer.

“Internal Market Buyer” shall mean a Market Buyer making purchases of energy from the PJM Interchange Energy Market for ultimate consumption by end-users inside the PJM Region that are served by Network Transmission Service.

1.3.11 Inadvertent Interchange.

“Inadvertent Interchange” shall mean the difference between net actual energy flow and net scheduled energy flow into or out of the individual Control Areas operated by PJM.

1.3.11.01 Load Management.

“Load Management” shall mean either a Demand Resource (“DR”) or an Interruptible Load for Reliability (“ILR”) resource, both as defined in the Reliability Assurance Agreement.

1.3.11A Load Reduction Event.

“Load Reduction Event” shall mean a reduction in demand by a Member or Special Member for the purpose of participating in the PJM Interchange Energy Market.

1.3.11A.01 Location.

“Location” as used in the Economic Load Response rules shall mean an end-use customer site as defined by the relevant electric distribution company account number.

1.3.11B Loss Price.

“Loss Price” shall mean the loss component of the Locational Marginal Price, which is the effect on transmission loss costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing the consumption by a Demand Resource based on the effect of increased generation from or consumption by the resource on transmission losses, calculated as specified in Section 2 of Schedule 1 of this Agreement.

1.3.12 Market Operations Center.

“Market Operations Center” shall mean the equipment, facilities and personnel used by or on behalf of a Market Participant to communicate and coordinate with the Office of the Interconnection in connection with transactions in the PJM Interchange Energy Market or the operation of the PJM Region.

1.3.12A Maximum Emergency.

“Maximum Emergency” shall mean the designation of all or part of the output of a generating unit for which the designated output levels may require extraordinary procedures and therefore are available to the Office of the Interconnection only when the Office of the Interconnection declares a Maximum Generation Emergency and requests generation designated as Maximum Emergency to run. The Office of the Interconnection shall post on the PJM website the aggregate amount of megawatts that are classified as Maximum Emergency.

1.3.13 Maximum Generation Emergency.

“Maximum Generation Emergency” shall mean an Emergency declared by the Office of the Interconnection to address either a generation or transmission emergency in which the Office of the Interconnection anticipates requesting one or more Generation Capacity Resources, or Non-Retail Behind The Meter Generation resources to operate at its maximum net or gross electrical power output, subject to the equipment stress limits for such Generation Capacity Resource or Non-Retail Behind The Meter resource in order to manage, alleviate, or end the Emergency.

1.3.14 Minimum Generation Emergency.

“Minimum Generation Emergency” shall mean an Emergency declared by the Office of the Interconnection in which the Office of the Interconnection anticipates requesting one or more generating resources to operate at or below Normal Minimum Generation, in order to manage, alleviate, or end the Emergency.

1.3.14A NERC Interchange Distribution Calculator.

“NERC Interchange Distribution Calculator” shall mean the NERC mechanism that is in effect and being used to calculate the distribution of energy, over specific transmission interfaces, from energy transactions.

1.3.14B Net Benefits Test.

“Net Benefits Test” shall mean a calculation to determine whether the benefits of a reduction in price resulting from the dispatch of Economic Load Response exceeds the cost to other loads resulting from the billing unit effects of the load reduction, as specified in Section 3.3A.4 of this Schedule.

1.3.15 Network Resource.

“Network Resource” shall have the meaning specified in the PJM Tariff.

1.3.16 Network Service User.

“Network Service User” shall mean an entity using Network Transmission Service.

1.3.17 Network Transmission Service.

“Network Transmission Service” shall mean transmission service provided pursuant to the rates, terms and conditions set forth in Part III of the PJM Tariff, or transmission service comparable to such service that is provided to a Load Serving Entity that is also a Transmission Owner.

1.3.17A Non-Regulatory Opportunity Cost.

“Non-Regulatory Opportunity Cost” shall mean the difference between (a) the forecasted cost to operate a specific generating unit when the unit only has a limited number of starts or available run hours resulting from (i) the physical equipment limitations of the unit, for up to one year, due to original equipment manufacturer recommendations or insurance carrier restrictions, (ii) a fuel supply limitation, for up to one year, resulting from an event of force majeure; and, (b) the forecasted future hourly Locational Marginal Price at which the generating unit could run while not violating such limitations. Non-Regulatory Opportunity Cost therefore is the value associated with a specific generating unit’s lost opportunity to produce energy during a higher valued period of time occurring within the same period of time in which the unit is bound by the referenced restrictions, and is reflected in the rules set forth in PJM Manual 15. Non-Regulatory Opportunity Costs shall be limited to those resources which are specifically delineated in Schedule 2 of the Operating Agreement.

1.3.17B Non-Variable Loads.

“Non-Variable Loads” shall have the meaning specified in section 1.5A.6 of this Schedule.

1.3.18 Normal Maximum Generation.

“Normal Maximum Generation” shall mean the highest output level of a generating resource under normal operating conditions.

1.3.19 Normal Minimum Generation.

“Normal Minimum Generation” shall mean the lowest output level of a generating resource under normal operating conditions.

1.3.20 Offer Data.

“Offer Data” shall mean the scheduling, operations planning, dispatch, new resource, and other data and information necessary to schedule and dispatch generation resources and Demand Resource(s) for the provision of energy and other services and the maintenance of the reliability and security of the transmission system in the PJM Region, and specified for submission to the PJM Interchange Energy Market for such purposes by the Office of the Interconnection.

1.3.21 Office of the Interconnection Control Center.

“Office of the Interconnection Control Center” shall mean the equipment, facilities and personnel used by the Office of the Interconnection to coordinate and direct the operation of the PJM Region and to administer the PJM Interchange Energy Market, including facilities and equipment used to communicate and coordinate with the Market Participants in connection with transactions in the PJM Interchange Energy Market or the operation of the PJM Region.

1.3.21A On-Site Generators.

“On-Site Generators” shall mean generation facilities (including Behind The Meter Generation) that (i) are not Capacity Resources, (ii) are not injecting into the grid, (iii) are either synchronized or non-synchronized to the Transmission System, and (iv) can be used to reduce demand for the purpose of participating in the PJM Interchange Energy Market.

1.3.22 Operating Day.

“Operating Day” shall mean the daily 24 hour period beginning at midnight for which transactions on the PJM Interchange Energy Market are scheduled.

1.3.23 Operating Margin.

“Operating Margin” shall mean the incremental adjustments, measured in megawatts, required in PJM Region operations in order to accommodate, on a first contingency basis, an operating contingency in the PJM Region resulting from operations in an interconnected Control Area. Such adjustments may result in constraints causing Transmission Congestion Charges, or may result in Ancillary Services charges pursuant to the PJM Tariff.

1.3.24 Operating Margin Customer.

“Operating Margin Customer” shall mean a Control Area purchasing Operating Margin pursuant to an agreement between such other Control Area and the LLC.

1.3.25 PJM Interchange.

“PJM Interchange” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load exceeds, or is exceeded by, the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup; or (c) the hourly scheduled deliveries of Spot Market Energy by a Market Seller from an External Resource; or (d) the hourly net metered output of any other Market Seller; or (e) the hourly scheduled deliveries of Spot Market Energy to an External Market Buyer; or (f) the hourly scheduled deliveries to an Internal Market Buyer that is not a Network Service User.

1.3.26 PJM Interchange Export.

“PJM Interchange Export” shall mean the following, as determined in accordance with Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load is exceeded by the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup sales; or (c) the hourly scheduled deliveries of Spot Market Energy by a Market Seller from an External Resource; or (d) the hourly net metered output of any other Market Seller.

1.3.27 PJM Interchange Import.

“PJM Interchange Import” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load exceeds the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup purchases; or (c) the hourly scheduled deliveries of Spot Market Energy to an External Market Buyer; or (d) the hourly scheduled deliveries to an Internal Market Buyer that is not a Network Service User.

1.3.28 PJM Open Access Same-time Information System.

“PJM Open Access Same-time Information System” shall mean the electronic communication system for the collection and dissemination of information about transmission services in the PJM Region, established and operated by the Office of the Interconnection in accordance with FERC standards and requirements.

1.3.28A Planning Period Quarter.

“Planning Period Quarter” shall mean any of the following three month periods in the Planning Period: June, July and August; September, October and November; December, January and February; or, March, April and May.

1.3.28B Planning Period Balance.

“Planning Period Balance” shall mean the entire period of time remaining in the Planning Period following the month that a monthly auction is conducted.

1.3.29 Point-to-Point Transmission Service.

“Point-to-Point Transmission Service” shall mean transmission service provided pursuant to the rates, terms and conditions set forth in Part II of the PJM Tariff.

1.3.29A PRD Curve

PRD Curve shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29B PRD Provider

PRD Provider shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29C PRD Reservation Price

PRD Reservation Price shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29D PRD Substation

PRD Substation shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29E Price Responsive Demand

Price Responsive Demand shall have the meaning provided in the Reliability Assurance Agreement.

1.3.30 Ramping Capability.

“Ramping Capability” shall mean the sustained rate of change of generator output, in megawatts per minute.

1.3.30.01 Real-time Congestion Price.

“Real-time Congestion Price” shall mean the Congestion Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.30.02 Real-time Loss Price.

“Real-time Loss Price” shall mean the Loss Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.30A Real-time Prices.

“Real-time Prices” shall mean the Locational Marginal Prices resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.30B Real-time Energy Market.

“Real-time Energy Market” shall mean the purchase or sale of energy and payment of Transmission Congestion Charges for quantity deviations from the Day-ahead Energy Market in the Operating Day.

1.3.30B.01 Real-time System Energy Price.

“Real-time System Energy Price” shall mean the System Energy Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.31 Regulation.

“Regulation” shall mean the capability of a specific generation resource or Demand Resource with appropriate telecommunications, control and response capability to increase or decrease its output or adjust load in response to a regulating control signal, in accordance with the specifications in the PJM Manuals.

1.3.31.01 Residual Auction Revenue Rights.

“Residual Auction Revenue Rights” shall mean incremental stage 1 Auction Revenue Rights created within a Planning Period by an increase in transmission system capability or a change in any other relevant factor that was not modeled pursuant to section 7.5 of Schedule 1 of this Agreement in compliance with section 7.4.2 (h) of Schedule 1 of this Agreement, and, if modeled, would have increased the amount of stage 1 Auction Revenue Rights allocated pursuant to section 7.4.2 of Schedule 1 of this Agreement; provided that, the foregoing notwithstanding, Residual Auction Revenue Rights shall exclude: 1) Incremental Auction Revenue Rights allocated pursuant to Part VI of the Tariff; and 2) Auction Revenue Rights allocated to entities that are assigned cost responsibility pursuant to Schedule 6 of this Agreement for transmission upgrades that create such rights.

1.3.31.02 Special Member.

“Special Member” shall mean an entity that satisfies the requirements of Section 1.5A.02 of this Schedule or the special membership provisions established under the Emergency Load Response Program.

1.3.31A [Reserved]

1.3.31B [Reserved]

1.3.32 Spot Market Backup.

“Spot Market Backup” shall mean the purchase of energy from, or the delivery of energy to, the PJM Interchange Energy Market in quantities sufficient to complete the delivery or receipt obligations of a bilateral contract that has been curtailed or interrupted for any reason.

1.3.33 Spot Market Energy.

“Spot Market Energy” shall mean energy bought or sold by Market Participants through the PJM Interchange Energy Market at System Energy Prices determined as specified in Section 2 of this Schedule.

1.3.33A State Estimator.

“State Estimator” shall mean the computer model of power flows specified in Section 2.3 of this Schedule.

1.3.33B Station Power.

“Station Power” shall mean energy used for operating the electric equipment on the site of a generation facility located in the PJM Region or for the heating, lighting, air-conditioning and office equipment needs of buildings on the site of such a generation facility that are used in the operation, maintenance, or repair of the facility. Station Power does not include any energy (i) used to power synchronous condensers; (ii) used for pumping at a pumped storage facility; (iii) used for compressors at a compressed air energy storage facility; (iv) used for charging an Energy Storage Resource; or (v) used in association with restoration or black start service.

1.3.33B.001 Sub-meter.

“Sub-meter” shall mean a metering point for electricity consumption that does not include all electricity consumption for the end-use customer as defined by the electric distribution company account number. PJM shall only accept sub-meter load data from end-use customers for measurement and verification of Regulation service as set forth in the Economic Load Response rules and PJM Manuals.

1.3.33B.01 Synchronized Reserve.

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

1.3.33B.02 Synchronized Reserve Event.

“Synchronized Reserve Event” shall mean a request from the Office of the Interconnection to generation resources and/or Demand Resources able, assigned or self-scheduled, to provide Synchronized Reserve within ten minutes, to increase the energy output or reduce load by the amount of assigned or self-scheduled Synchronized Reserve capability.

1.3.33B.03 System Energy Price.

“System Energy Price” shall mean the energy component of the Locational Marginal Price, which is the price at which the Market Seller has offered to supply an additional increment of energy from a resource, calculated as specified in Section 2 of Schedule 1 of this Agreement.

1.3.33C Target Allocation.

“Target Allocation” shall mean the allocation of Transmission Congestion Credits as set forth in Section 5.2.3 of this Schedule or the allocation of Auction Revenue Rights Credits as set forth in Section 7.4.3 of this Schedule.

1.3.34 Transmission Congestion Charge.

“Transmission Congestion Charge” shall mean a charge attributable to the increased cost of energy delivered at a given load bus when the transmission system serving that load bus is operating under constrained conditions, or as necessary to provide energy for third-party transmission losses in accordance with Section 9.3, which shall be calculated and allocated as specified in Section 5.1 of this Schedule.

1.3.35 Transmission Congestion Credit.

“Transmission Congestion Credit” shall mean the allocated share of total Transmission Congestion Charges credited to each holder of Financial Transmission Rights, calculated and allocated as specified in Section 5.2 of this Schedule.

1.3.36 Transmission Customer.

“Transmission Customer” shall mean an entity using Point-to-Point Transmission Service.

1.3.37 Transmission Forced Outage.

“Transmission Forced Outage” shall mean an immediate removal from service of a transmission facility by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the transmission facility, as specified in the relevant portions of the PJM Manuals. A removal from service of a transmission facility at the request of the Office of the Interconnection to improve transmission capability shall not constitute a Forced Transmission Outage.

1.3.37A Transmission Loading Relief.

“Transmission Loading Relief” shall mean NERC’s procedures for preventing operating security limit violations, as implemented by PJM as the security coordinator responsible for maintaining transmission security for the PJM Region.

1.3.37B Transmission Loading Relief Customer.

“Transmission Loading Relief Customer” shall mean an entity that, in accordance with Section 1.10.6A, has elected to pay Transmission Congestion Charges during Transmission Loading Relief in order to continue energy schedules over contract paths outside the PJM Region that are increasing the cost of energy in the PJM Region.

1.3.37C Transmission Loss Charge.

“Transmission Loss Charge” shall mean the charges to each Market Participant, Network Customer, or Transmission Customer for the cost of energy lost in the transmission of electricity from a generation resource to load as specified in Section 5 of this Schedule.

1.3.38 Transmission Planned Outage.

“Transmission Planned Outage” shall mean any transmission outage scheduled in advance for a pre-determined duration and which meets the notification requirements for such outages specified in this Agreement or the PJM Manuals.

1.3.38A Variable Loads.

“Variable Loads” shall have the meaning specified in section 1.5A.6 of this Schedule.

1.3.39 Zonal Base Load.

“Zonal Base Load” shall mean the lowest daily zonal peak load from the twelve month period ending October 21 of the calendar year immediately preceding the calendar year in which an annual Auction Revenue Right allocation is conducted, increased by the projected load growth rate for the relevant Zone.

1.6 Office of the Interconnection.

1.6.1 Operation of the PJM Interchange Energy Market.

The Office of the Interconnection shall operate the PJM Interchange Energy Market in accordance with this Agreement.

1.6.2 Scope of Services.

The Office of the Interconnection shall perform the services pertaining to the PJM Interchange Energy Market specified in this Agreement, including but not limited to the following:

- i) Administer the PJM Interchange Energy Market as part of the PJM Region, including scheduling and dispatching of generation resources, accounting for transactions, maintaining appropriate records, and monitoring the compliance of Market Participants with the provisions of this Agreement, all in accordance with applicable provisions of the Operating Agreement, and the Schedules to this Agreement;
- ii) Review and evaluate the qualification of entities to be Market Buyers, Market Sellers, or Economic Load Response Participants under applicable provisions of this Agreement;
- iii) Coordinate, in accordance with applicable provisions of this Agreement, the Reliability Assurance Agreement, and the Consolidated Transmission Owners Agreement, maintenance schedules for generation and transmission resources operated as part of the PJM Region;
- iv) Provide or coordinate the provision of ancillary services necessary for the operation of the PJM Region or the PJM Interchange Energy Market;
- v) Determine and declare that an Emergency is expected to exist, exists, or has ceased to exist, in all or any part of the PJM Region, or in another directly or indirectly interconnected Control Area and serve as a primary point of contact for interested state or federal agencies;
- vi) Administer (a) agreements for the transfer of energy in conditions constituting an Emergency in the PJM Region or in an interconnected Control Area, and the mutual provision of other support in such Emergency conditions with other interconnected Control Areas, and (b) purchases of Emergency energy offered by Members from resources that are not Capacity Resources in conditions constituting an Emergency in the PJM Region;
- vii) Coordinate the curtailment or shedding of load, or other measures appropriate to alleviate an Emergency, in order to preserve reliability in accordance with NERC, or Applicable Regional Entity principles, guidelines and standards, and to ensure the operation of the PJM Region in accordance with Good Utility Practice and this Agreement;
- viii) Protect confidential information as specified in this Agreement; and

ix) Send a representative to meetings of the Members Committee or other Committees, subcommittees, or working groups specified in this Agreement or formed by the Members Committee when requested to do so by the chair or other head of such committee or other group.

1.6.3 Records and Reports.

The Office of the Interconnection shall prepare and maintain such records and prepare such reports, including, but not limited to quarterly budget reports, as are required to document the performance of its obligations to the Market Participants hereunder in a form adopted by the Office of the Interconnection upon consideration of the advice and recommendations of the Members Committee. The Office of the Interconnection shall also produce special reports reasonably requested by the Members Committee and consistent with FERC's standards of conduct; provided, however, the Market Participants shall reimburse the Office of the Interconnection for the costs of producing any such report. Notwithstanding the foregoing, the Office of the Interconnection shall not be required to disclose confidential or commercially sensitive information in any such report.

1.6.4 PJM Manuals.

The Office of the Interconnection shall prepare, maintain and update the PJM Manuals consistent with this Agreement. The PJM Manuals shall be available for inspection by the Market Participants, regulatory authorities with jurisdiction over the LLC or any Member, and the public.

1.7 General.

1.7.1 Market Sellers.

Only Market Sellers shall be eligible to submit offers to the Office of the Interconnection for the sale of electric energy or related services in the PJM Interchange Energy Market. Market Sellers shall comply with the prices, terms, and operating characteristics of all Offer Data submitted to and accepted by the PJM Interchange Energy Market.

1.7.2 Market Buyers.

Only Market Buyers shall be eligible to purchase energy or related services in the PJM Interchange Energy Market. Market Buyers shall comply with all requirements for making purchases from the PJM Interchange Energy Market.

1.7.2A Economic Load Response Participants.

Only Economic Load Response Participants shall be eligible to participate in the Real-time Energy Market and the Day-ahead Energy Market by submitting offers to the Office of the Interconnection to reduce demand.

1.7.3 Agents.

A Market Participant may participate in the PJM Interchange Energy Market through an agent, provided that the Market Participant informs the Office of the Interconnection in advance in writing of the appointment of such agent. A Market Participant participating in the PJM Interchange Energy Market through an agent shall be bound by all of the acts or representations of such agent with respect to transactions in the PJM Interchange Energy Market, and shall ensure that any such agent complies with the requirements of this Agreement.

1.7.4 General Obligations of the Market Participants.

(a) In performing its obligations to the Office of the Interconnection hereunder, each Market Participant shall at all times (i) follow Good Utility Practice, (ii) comply with all applicable laws and regulations, (iii) comply with the applicable principles, guidelines, standards and requirements of FERC, NERC and each Applicable Regional Entity, (iv) comply with the procedures established for operation of the PJM Interchange Energy Market and PJM Region and (v) cooperate with the Office of the Interconnection as necessary for the operation of the PJM Region in a safe, reliable manner consistent with Good Utility Practice.

(b) Market Participants shall undertake all operations in or affecting the PJM Interchange Energy Market and the PJM Region including but not limited to compliance with all Emergency procedures, in accordance with the power and authority of the Office of the Interconnection with respect to the operation of the PJM Interchange Energy Market and the PJM Region as established in this Agreement, and as specified in the Schedules to this Agreement and the PJM Manuals. Failure to comply with the foregoing operational

requirements shall subject a Market Participant to such reasonable charges or other remedies or sanctions for non-compliance as may be established by the PJM Board, including legal or regulatory proceedings as authorized by the PJM Board to enforce the obligations of this Agreement.

(c) The Office of the Interconnection may establish such committees with a representative of each Market Participant, and the Market Participants agree to provide appropriately qualified personnel for such committees, as may be necessary for the Office of the Interconnection and PJMSettlement to perform its obligations hereunder.

(d) All Market Participants shall provide to the Office of the Interconnection the scheduling and other information specified in the Schedules to this Agreement, and such other information as the Office of the Interconnection may reasonably require for the reliable and efficient operation of the PJM Region and PJM Interchange Energy Market, and for compliance with applicable regulatory requirements for posting market and related information. Such information shall be provided as much in advance as possible, but in no event later than the deadlines established by the Schedules to this Agreement, or by the Office of the Interconnection in conformance with such Schedules. Such information shall include, but not be limited to, maintenance and other anticipated outages of generation or transmission facilities, scheduling and related information on bilateral transactions and self-scheduled resources, and implementation of active load management, interruption of load, Price Responsive Demand, and other load reduction measures. The Office of the Interconnection shall abide by appropriate requirements for the non-disclosure and protection of any confidential or proprietary information given to the Office of the Interconnection by a Market Participant. Each Market Participant shall maintain or cause to be maintained compatible information and communications systems, as specified by the Office of the Interconnection, required to transmit scheduling, dispatch, or other time-sensitive information to the Office of the Interconnection in a timely manner.

(e) Subject to the requirements for Economic Load Response Participants in section 1.5A above, each Market Participant shall install and operate, or shall otherwise arrange for, metering and related equipment capable of recording and transmitting all voice and data communications reasonably necessary for the Office of the Interconnection and PJMSettlement to perform the services specified in this Agreement. A Market Participant that elects to be separately billed for its PJM Interchange shall, to the extent necessary, be individually metered in accordance with Section 14 of this Agreement, or shall agree upon an allocation of PJM Interchange between it and the Market Participant through whose meters the unmetered Market Participant's PJM Interchange is delivered. The Office of the Interconnection shall be notified of the allocation by the foregoing Market Participants.

(f) Each Market Participant shall operate, or shall cause to be operated, any generating resources owned or controlled by such Market Participant that are within the PJM Region or otherwise supplying energy to or through the PJM Region in a manner that is consistent with the standards, requirements or directions of the Office of the Interconnection and that will permit the Office of the Interconnection to perform its obligations under this Agreement; provided, however, no Market Participant shall be required to take any action that is inconsistent with Good Utility Practice or applicable law.

(g) Each Market Participant shall follow the directions of the Office of the Interconnection to take actions to prevent, manage, alleviate or end an Emergency in a manner consistent with this Agreement and the procedures of the PJM Region as specified in the PJM Manuals.

(h) Each Market Participant shall obtain and maintain all permits, licenses or approvals required for the Market Participant to participate in the PJM Interchange Energy Market in the manner contemplated by this Agreement.

(i) Consistent with Section 36.1.1 of the PJM Tariff, to the extent its generating facility is dispatchable, a Market Participant shall submit an Economic Minimum in the Real-time Energy Market that is no greater than the higher of its physical operating minimum or its Capacity Interconnection Rights, as that term is defined in the PJM Tariff, associated with such generating facility under its Interconnection Service Agreement under Attachment O of the PJM Tariff or a wholesale market participation agreement.

1.7.5 Market Operations Center.

Each Market Participant shall maintain a Market Operations Center, or shall make appropriate arrangements for the performance of such services on its behalf. A Market Operations Center shall meet the performance, equipment, communications, staffing and training standards and requirements specified in this Agreement for the scheduling and completion of transactions in the PJM Interchange Energy Market and the maintenance of the reliable operation of the PJM Region, and shall be sufficient to enable (i) a Market Seller or an Economic Load Response Participant to perform all terms and conditions of its offers to the PJM Interchange Energy Market, and (ii) a Market Buyer or an Economic Load Response Participant to conform to the requirements for purchasing from the PJM Interchange Energy Market.

1.7.6 Scheduling and Dispatching.

(a) The Office of the Interconnection shall schedule and dispatch in real-time generation resources and/or Demand Resources economically on the basis of least-cost, security-constrained dispatch and the prices and operating characteristics offered by Market Sellers, continuing until sufficient generation resources and/or Demand Resources are dispatched to serve the PJM Interchange Energy Market energy purchase requirements under normal system conditions of the Market Buyers (taking into account any reductions to such requirements in accordance with PRD Curves properly submitted by PRD Providers), as well as the requirements of the PJM Region for ancillary services provided by generation resources and/or Demand Resources, in accordance with this Agreement. Such scheduling and dispatch shall recognize transmission constraints on coordinated flowgates external to the Transmission System in accordance with Appendix A to the Joint Operating Agreement between the Midwest Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. (PJM Rate Schedule FERC No. 38) and on other such flowgates that are coordinated in accordance with

agreements between the LLC and other entities. Scheduling and dispatch shall be conducted in accordance with this Agreement.

(b) The Office of the Interconnection shall undertake to identify any conflict or incompatibility between the scheduling or other deadlines or specifications applicable to the PJM Interchange Energy Market, and any relevant procedures of another Control Area, or any tariff (including the PJM Tariff). Upon determining that any such conflict or incompatibility exists, the Office of the Interconnection shall propose tariff or procedural changes, and undertake such other efforts as may be appropriate, to resolve any such conflict or incompatibility.

(c) To protect its generation or distribution facilities, or local Transmission Facilities not under the monitoring responsibility and dispatch control of the Office of the Interconnection, an entity may request that the Office of the Interconnection schedule and dispatch generation or reductions in demand to meet a limit on Transmission Facilities different from that which the Office of the Interconnection has determined to be required for reliable operation of the Transmission System. To the extent consistent with its other obligations under this Agreement, the Office of the Interconnection shall schedule and dispatch generation and reductions in demand in accordance with such request. An entity that makes a request pursuant to this section 1.7.6(c) shall be responsible for all generation and other costs resulting from its request that would not have been incurred by operating the Transmission System and scheduling and dispatching generation in the manner that the Office of the Interconnection otherwise has determined to be required for reliable operation of the Transmission System.

1.7.7 Pricing.

The price paid for energy bought and sold in the PJM Interchange Energy Market and for demand reductions will reflect the hourly Locational Marginal Price at each load and generation bus, determined by the Office of the Interconnection in accordance with this Agreement. Transmission Congestion Charges and Transmission Loss Charges, which shall be determined by differences in Congestion Prices and Loss Prices in an hour, shall be calculated by the Office of the Interconnection, and collected by PJMSettlement, and the revenues therefrom shall be disbursed by PJMSettlement in accordance with this Schedule.

1.7.8 Generating Market Buyer Resources.

A Generating Market Buyer may elect to self-schedule its generation resources up to that Generating Market Buyer's Equivalent Load, in accordance with and subject to the procedures specified in this Schedule, and the accounting and billing requirements specified in Section 3 to this Schedule. PJMSettlement shall not be a contracting party with respect to such self-scheduled or self-supplied transactions.

1.7.9 Delivery to an External Market Buyer.

A purchase of Spot Market Energy by an External Market Buyer shall be delivered to a bus or busses at the electrical boundaries of the PJM Region specified by the Office of the Interconnection, or to load in such area that is not served by Network Transmission Service,

using Point-to-Point Transmission Service paid for by the External Market Buyer. Further delivery of such energy shall be the responsibility of the External Market Buyer.

1.7.10 Other Transactions.

(a) **Bilateral Transactions.**

(i) In addition to transactions in the PJM Interchange Energy Market, Market Participants may enter into bilateral contracts for the purchase or sale of electric energy to or from each other or any other entity, subject to the obligations of Market Participants to make Generation Capacity Resources available for dispatch by the Office of the Interconnection. Such bilateral contracts shall be for the physical transfer of energy to or from a Market Participant and shall be reported to and coordinated with the Office of the Interconnection in accordance with this Schedule and pursuant to the LLC's rules relating to its eSchedules and Enhanced Energy Scheduler tools.

(ii) For purposes of clarity, with respect to all bilateral contracts for the physical transfer of energy to a Market Participant inside the PJM Region, title to the energy that is the subject of the bilateral contract shall pass to the buyer at the source specified for the bilateral contract, and the further transmission of the energy or further sale of the energy into the PJM Interchange Energy Market shall be transacted by the buyer under the bilateral contract. With respect to all bilateral contracts for the physical transfer of energy to an entity outside the PJM Region, title to the energy shall pass to the buyer at the border of the PJM Region and shall be delivered to the border using transmission service. In no event shall the purchase and sale of energy between Market Participants under a bilateral contract constitute a transaction in the PJM Interchange Energy Market or be construed to define PJMSettlement as a contracting party to any bilateral transactions between Market Participants.

(iii) Market Participants that are parties to bilateral contracts for the purchase and sale and physical transfer of energy reported to and coordinated with the Office of the Interconnection under this Schedule shall use all reasonable efforts, consistent with Good Utility Practice, to limit the megawatt hours of such reported transactions to amounts reflecting the expected load and other physical delivery obligations of the buyer under the bilateral contract.

(iv) All payments and related charges for the energy associated with a bilateral contract shall be arranged between the parties to the bilateral contract and shall not be billed or settled by the Office of the Interconnection or PJMSettlement. The LLC, PJMSettlement, and the Members will not assume financial responsibility for the failure of a party to perform obligations owed to the other party under a bilateral contract reported and coordinated with the Office of the Interconnection under this Schedule.

(v) A buyer under a bilateral contract shall guarantee and indemnify the LLC, PJMSettlement, and the Members for the costs of any Spot Market Backup used to meet the bilateral contract seller's obligation to deliver energy under the bilateral contract and

for which payment is not made to PJMSettlement by the seller under the bilateral contract, as determined by the Office of the Interconnection. Upon any default in obligations to the LLC or PJMSettlement by a Market Participant, the Office of the Interconnection shall (i) not accept any new eSchedules or Enhanced Energy Scheduler reporting by the Market Participant and (ii) terminate all of the Market Participant's eSchedules and Enhanced Energy Schedules associated with its bilateral contracts previously reported to the Office of the Interconnection for all days where delivery has not yet occurred. All claims regarding a buyer's default to a seller under a bilateral contract shall be resolved solely between the buyer and the seller. In such circumstances, the seller may instruct the Office of the Interconnection to terminate all of the eSchedules and Enhanced Energy Schedules associated with bilateral contracts between buyer and seller previously reported to the Office of the Interconnection. PJMSettlement shall assign its claims against a seller with respect to a seller's nonpayment for Spot Market Backup to a buyer to the extent that the buyer has made an indemnification payment to PJMSettlement with respect to the seller's nonpayment.

(vi) Bilateral contracts that do not contemplate the physical transfer of energy to or from a Market Participant are not subject to this Schedule, shall not be reported to and coordinated with the Office of the Interconnection, and shall not in any way constitute a transaction in the PJM Interchange Energy Market.

(b) Market Participants shall have Spot Market Backup with respect to all bilateral transactions that contemplate the physical transfer of energy to or from a Market Participant, that are not dynamically scheduled pursuant to Section 1.12 and that are curtailed or interrupted for any reason (except for curtailments or interruptions through active load management for load located within the PJM Region).

(c) To the extent the Office of the Interconnection dispatches a Generating Market Buyer's generation resources, such Generating Market Buyer may elect to net the output of such resources against its hourly Equivalent Load. Such a Generating Market Buyer shall be deemed a buyer from the PJM Interchange Energy Market to the extent of its PJM Interchange Imports, and shall be deemed a seller to the PJM Interchange Energy Market to the extent of its PJM Interchange Exports.

(d) A Market Seller may self-supply Station Power for its generation facility in accordance with the following provisions:

(i) A Market Seller may self-supply Station Power for its generation facility during any month (1) when the net output of such facility is positive, or (2) when the net output of such facility is negative and the Market Seller during the same month has available at other of its generation facilities positive net output in an amount at least sufficient to offset fully such negative net output. For purposes of this subsection (d), "net output" of a generation facility during any month means the facility's gross energy output, less the Station Power requirements of such facility, during that month. The determination of a generation facility's or a Market Seller's monthly net output under this subsection (d) will apply only to determine whether the Market Seller self-supplied

Station Power during the month and will not affect the price of energy sold or consumed by the Market Seller at any bus during any hour during the month. For each hour when a Market Seller has positive net output and delivers energy into the Transmission System, it will be paid the LMP at its bus for that hour for all of the energy delivered. Conversely, for each hour when a Market Seller has negative net output and has received Station Power from the Transmission System, it will pay the LMP at its bus for that hour for all of the energy consumed.

(ii) Transmission Provider will determine the extent to which each affected Market Seller during the month self-supplied its Station Power requirements or obtained Station Power from third-party providers (including affiliates) and will incorporate that determination in its accounting and billing for the month. In the event that a Market Seller self-supplies Station Power during any month in the manner described in subsection (1) of subsection (d)(i) above, Market Seller will not use, and will not incur any charges for, transmission service. In the event, and to the extent, that a Market Seller self-supplies Station Power during any month in the manner described in subsection (2) of subsection (d)(i) above (hereafter referred to as “remote self-supply of Station Power”), Market Seller shall use and pay for transmission service for the transmission of energy in an amount equal to the facility’s negative net output from Market Seller’s generation facility(ies) having positive net output. Unless the Market Seller makes other arrangements with Transmission Provider in advance, such transmission service shall be provided under Part II of the PJM Tariff and shall be charged the hourly rate under Schedule 8 of the PJM Tariff for Non-Firm Point-to-Point Transmission Service with an election to pay congestion charges, provided, however, that no reservation shall be necessary for such transmission service and the terms and charges under Schedules 1, 1A, 2 through 6, 9 and 10 of the PJM Tariff shall not apply to such service. The amount of energy that a Market Seller transmits in conjunction with remote self-supply of Station Power will not be affected by any other sales, purchases, or transmission of capacity or energy by or for such Market Seller under any other provisions of the PJM Tariff.

(iii) A Market Seller may self-supply Station Power from its generation facilities located outside of the PJM Region during any month only if such generation facilities in fact run during such month and Market Seller separately has reserved transmission service and scheduled delivery of the energy from such resource in advance into the PJM Region.

1.7.11 Emergencies.

(a) The Office of the Interconnection, with the assistance of the Members’ dispatchers as it may request, shall be responsible for monitoring the operation of the PJM Region, for declaring the existence of an Emergency, and for directing the operations of Market Participants as necessary to manage, alleviate or end an Emergency. The standards, policies and procedures of the Office of the Interconnection for declaring the existence of an Emergency, including but not limited to a Minimum Generation Emergency, and for managing, alleviating or ending an Emergency, shall apply to all Members on a non-discriminatory basis. Actions by the Office of the Interconnection and the Market Participants shall be carried out in accordance with

this Agreement, the NERC Operating Policies, Applicable Regional Entity reliability principles and standards, Good Utility Practice, and the PJM Manuals. A declaration that an Emergency exists or is likely to exist by the Office of the Interconnection shall be binding on all Market Participants until the Office of the Interconnection announces that the actual or threatened Emergency no longer exists. Consistent with existing contracts, all Market Participants shall comply with all directions from the Office of the Interconnection for the purpose of managing, alleviating or ending an Emergency. The Market Participants shall authorize the Office of the Interconnection and PJM Settlement to purchase or sell energy on their behalf to meet an Emergency, and otherwise to implement agreements with other Control Areas interconnected with the PJM Region for the mutual provision of service to meet an Emergency, in accordance with this Agreement.

(b) To the extent load must be shed to alleviate an Emergency in a Control Zone, the Office of the Interconnection shall, to the maximum extent practicable, direct the shedding of load within such Control Zone. The Office of the Interconnection may shed load in one Control Zone to alleviate an Emergency in another Control Zone under its control only as necessary after having first shed load to the maximum extent practicable in the Control Zone experiencing the Emergency and only to the extent that PJM supports other control areas (not under its control) in those situations where load shedding would be necessary, such as to prevent isolation of facilities within the Eastern Interconnection, to prevent voltage collapse, or to restore system frequency following a system collapse; provided, however, that the Office of the Interconnection may not order a manual load dump in a Control Zone solely to address capacity deficiencies in another Control Zone. This section shall be implemented consistent with the North American Electric Reliability Council and applicable reliability council standards.

1.7.12 Fees and Charges.

Each Market Participant, except for Special Members, shall pay all fees and charges of the Office of the Interconnection for operation of the PJM Interchange Energy Market as determined by and allocated to the Market Participant by the Office of the Interconnection in accordance with Schedule 3.

1.7.13 Relationship to the PJM Region.

The PJM Interchange Energy Market operates within and subject to the requirements for the operation of the PJM Region.

1.7.14 PJM Manuals.

The Office of the Interconnection shall be responsible for maintaining, updating, and promulgating the PJM Manuals as they relate to the operation of the PJM Interchange Energy Market. The PJM Manuals, as they relate to the operation of the PJM Interchange Energy Market, shall conform and comply with this Agreement, NERC operating policies, and Applicable Regional Entity reliability principles, guidelines and standards, and shall be designed to facilitate administration of an efficient energy market within industry reliability standards and the physical capabilities of the PJM Region.

1.7.15 Corrective Action.

Consistent with Good Utility Practice, the Office of the Interconnection shall be authorized to direct or coordinate corrective action, whether or not specified in the PJM Manuals, as necessary to alleviate unusual conditions that threaten the integrity or reliability of the PJM Region, or the regional power system.

1.7.16 Recording.

Subject to the requirements of applicable State or federal law, all voice communications with the Office of the Interconnection Control Center may be recorded by the Office of the Interconnection and any Market Participant communicating with the Office of the Interconnection Control Center, and each Market Participant hereby consents to such recording.

1.7.17 Operating Reserves.

(a) The following procedures shall apply to any generation unit subject to the dispatch of the Office of the Interconnection for which construction commenced before July 9, 1996, or any Demand Resource subject to the dispatch of the Office of the Interconnection.

(b) The Office of the Interconnection shall schedule to the Operating Reserve and load-following objectives of the Control Zones of the PJM Region and the PJM Interchange Energy Market in scheduling generation resources and/or Demand Resources pursuant to this Schedule. A table of Operating Reserve objectives for each Control Zone is calculated and published annually in the PJM Manuals. Reserve levels are probabilistically determined based on the season's historical load forecasting error and forced outage rates.

(c) Nuclear generation resources shall not be eligible for Operating Reserve payments unless: 1) the Office of the Interconnection directs such resources to reduce output, in which case, such units shall be compensated in accordance with section 3.2.3(f) of this Schedule; or 2) the resource submits a request for a risk premium to the Market Monitoring Unit under the procedures specified in Section II.B of Attachment M - Appendix. A nuclear generation resource (i) must submit a risk premium consistent with its agreement under such process, or, (ii) if it has not agreed with the Market Monitoring Unit on an appropriate risk premium, may submit its own determination of an appropriate risk premium to the Office of the Interconnection, subject to acceptance by the Office of the Interconnection, with or without prior approval from the Commission.

(d) PJMSettlement shall be the Counterparty to the purchases and sales of Operating Reserve in the PJM Interchange Energy Market.

1.7.18 Regulation.

(a) Regulation to meet the Regulation objective of each Regulation Zone shall be supplied from generation resources and/or demand resources located within the metered

electrical boundaries of such Regulation Zone. Generating Market Buyers, and Market Sellers offering Regulation, shall comply with applicable standards and requirements for Regulation capability and dispatch specified in the PJM Manuals.

(b) The Office of the Interconnection shall obtain and maintain for each Regulation Zone an amount of Regulation equal to the Regulation objective for such Regulation Zone as specified in the PJM Manuals.

(c) The Regulation range of a generation unit or demand resource shall be at least twice the amount of Regulation assigned.

(d) A generation unit capable of automatic energy dispatch that is also providing Regulation shall have its energy dispatch range reduced by twice the amount of the Regulation provided. The amount of Regulation provided by a generation unit shall serve to redefine the Normal Minimum Generation and Normal Maximum Generation energy limits of that generation unit, in that the amount of Regulation shall be added to the generation unit's Normal Minimum Generation energy limit, and subtracted from its Normal Maximum Generation energy limit.

(e) Qualified Regulation must satisfy the verification tests described in the PJM Manuals.

1.7.19 Ramping.

A generator dispatched by the Office of the Interconnection pursuant to a control signal appropriate to increase or decrease the generator's megawatt output level shall be able to change output at the ramping rate specified in the Offer Data submitted to the Office of the Interconnection for that generator.

1.7.19A Synchronized Reserve.

(a) Synchronized Reserve shall be supplied from generation resources and/or Demand Resources located within the metered boundaries of the PJM Region. Generating Market Buyers, and Market Sellers offering Synchronized Reserve shall comply with applicable standards and requirements for Synchronized Reserve capability and dispatch specified in the PJM Manuals

(b) The Office of the Interconnection shall obtain and maintain for each Synchronized Reserve Zone an amount of Synchronized Reserve equal to the Synchronized Reserve objective for such Synchronized Reserve Zone, as specified in the PJM Manuals.

(c) The Synchronized Reserve capability of a generation resource and Demand Resource shall be the increase in energy output or load reduction achievable by the generation resource and Demand Resource within a continuous 10-minute period.

(d) A generation unit capable of automatic energy dispatch that also is providing Synchronized Reserve shall have its energy dispatch range reduced by the amount of the

Synchronized Reserve provided. The amount of Synchronized Reserve provided by a generation unit shall serve to redefine the Normal Maximum Generation energy limit of that generation unit in that the amount of Synchronized Reserve provided shall be subtracted from its Normal Maximum Generation energy limit.

1.7.19B Bilateral Transactions Regarding Regulation, Synchronized Reserve and Day-ahead Scheduling Reserves.

(a) In addition to transactions in the Regulation market, Synchronized Reserve market, and Day-ahead Scheduling Reserves Market, Market Participants may enter into bilateral contracts for the purchase or sale of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to or from each other or any other entity. Such bilateral contracts shall be for the physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to or from a Market Participant and shall be reported to and coordinated with the Office of the Interconnection in accordance with this Schedule and pursuant to the LLC's rules relating to its eMarket tools.

(b) For purposes of clarity, with respect to all bilateral contracts for the physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to a Market Participant in the PJM Region, title to the product that is the subject of the bilateral contract shall pass to the buyer at the source specified for the bilateral contract, and any further transactions associated with such products or further sale of such Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves in the markets for Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves, respectively, shall be transacted by the buyer under the bilateral contract. In no event shall the purchase and sale of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves between Market Participants under a bilateral contract constitute a transaction in PJM's markets for Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves, or otherwise be construed to define PJMSettlement as a contracting party to any bilateral transactions between Market Participants.

(c) Market Participants that are parties to bilateral contracts for the purchase and sale and physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves reported to and coordinated with the Office of the Interconnection under this Schedule shall use all reasonable efforts, consistent with Good Utility Practice, to limit the amounts of such reported transactions to amounts reflecting the expected requirements for Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves of the buyer pursuant to such bilateral contracts.

(d) All payments and related charges for the Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves associated with a bilateral contract shall be arranged between the parties to the bilateral contract and shall not be billed or settled by the Office of the Interconnection. The LLC, PJMSettlement, and the Members will not assume financial responsibility for the failure of a party to perform obligations owed to the other party under a bilateral contract reported and coordinated with the Office of the Interconnection under this Schedule.

(e) A buyer under a bilateral contract shall guarantee and indemnify the LLC, PJMSettlement, and the Members for the costs of any purchases by the seller under the bilateral contract in the markets for Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves used to meet the bilateral contract seller's obligation to deliver Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves under the bilateral contract and for which payment is not made to PJMSettlement by the seller under the bilateral contract, as determined by the Office of the Interconnection. Upon any default in obligations to the LLC or PJMSettlement by a Market Participant, the Office of the Interconnection shall (i) not accept any new eMarket reporting by the Market Participant and (ii) terminate all of the Market Participant's reporting of eMarkets schedules associated with its bilateral contracts previously reported to the Office of the Interconnection for all days where delivery has not yet occurred. All claims regarding a buyer's default to a seller under a bilateral contract shall be resolved solely between the buyer and the seller. In such circumstances, the seller may instruct the Office of the Interconnection to terminate all of the reported eMarkets schedules associated with bilateral contracts between buyer and seller previously reported to the Office of the Interconnection.

(f) Market Participants shall purchase Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves from PJM's markets for Regulation, Synchronized Reserve, Day-ahead Scheduling Reserves, in quantities sufficient to complete the delivery or receipt obligations of a bilateral contract that has been curtailed or interrupted for any reason, with respect to all bilateral transactions that contemplate the physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to or from a Market Participant.

1.7.20 Communication and Operating Requirements.

(a) Market Participants. Each Market Participant shall have, or shall arrange to have, its transactions in the PJM Interchange Energy Market subject to control by a Market Operations Center, with staffing and communications systems capable of real-time communication with the Office of the Interconnection during normal and Emergency conditions and of control of the Market Participant's relevant load or facilities sufficient to meet the requirements of the Market Participant's transactions with the PJM Interchange Energy Market, including but not limited to the following requirements as applicable.

(b) Market Sellers selling from generation resources and/or Demand Resources within the PJM Region shall: report to the Office of the Interconnection sources of energy and Demand Resources available for operation; supply to the Office of the Interconnection all applicable Offer Data; report to the Office of the Interconnection generation resources and Demand Resources that are self-scheduled; with respect to generation resources, report to the Office of the Interconnection bilateral sales transactions to buyers not within the PJM Region; confirm to the Office of the Interconnection bilateral sales to Market Buyers within the PJM Region; respond to the Office of the Interconnection's directives to start, shutdown or change output levels of generation units, or change scheduled voltages or reactive output levels of generation units, or reduce load from Demand Resources; continuously maintain all Offer Data concurrent with on-line operating information; and ensure that, where so equipped, generating

equipment and Demand Resources are operated with control equipment functioning as specified in the PJM Manuals.

(c) Market Sellers selling from generation resources outside the PJM Region shall: provide to the Office of the Interconnection all applicable Offer Data, including offers specifying amounts of energy available, hours of availability and prices of energy and other services; respond to Office of the Interconnection directives to schedule delivery or change delivery schedules; and communicate delivery schedules to the Market Seller's Control Area.

(d) Market Participants that are Load Serving Entities or purchasing on behalf of Load Serving Entities shall: respond to Office of the Interconnection directives for load management steps; report to the Office of the Interconnection Generation Capacity Resources to satisfy capacity obligations that are available for pool operation; report to the Office of the Interconnection all bilateral purchase transactions; respond to other Office of the Interconnection directives such as those required during Emergency operation.

(e) Market Participants that are not Load Serving Entities or purchasing on behalf of Load Serving Entities shall: provide to the Office of the Interconnection requests to purchase specified amounts of energy for each hour of the Operating Day during which it intends to purchase from the PJM Interchange Energy Market, along with Dispatch Rate levels above which it does not desire to purchase; respond to other Office of the Interconnection directives such as those required during Emergency operation.

(f) Economic Load Response Participants are responsible for maintaining demand reduction information, including the amount and price at which demand may be reduced. The Economic Load Response Participant shall provide this information to the Office of the Interconnection by posting it on the Load Response Program Registration link of the PJM website as required by the PJM Manuals. The Economic Load Response Participant shall notify the Office of the Interconnection of a demand reduction concurrent with, or prior to, the beginning of such demand reduction in accordance with the PJM Manuals. In the event that an Economic Load Response Participant chooses to measure load reductions using a Customer Baseline Load, the Economic Load Response Participant shall inform the Office of the Interconnection of a change in its operations or the operations of the end-use customer that would affect a relevant Customer Baseline Load as required by the PJM Manuals.

(g) PRD Providers shall be responsible for ensuring automated reductions to their Price Responsive Demand in response to price in accordance with their PRD Curves submitted to the Office of the Interconnection.

**ATTACHMENT N-1
FORM OF
SYSTEM IMPACT STUDY AGREEMENT**

(PJM Queue Position #____)

RECITALS

1. This System Impact Study Agreement, dated as of _____, is entered into, by and between _____ ("New Service Customer") and PJM Interconnection, L.L.C. ("Transmission Provider") pursuant to Part VI of the PJM Interconnection, L.L.C. Open Access Transmission Tariff ("PJM Tariff").
2. The Transmission Provider has: (i) pursuant to Section 36.2 of the PJM Tariff, completed an Interconnection Feasibility Study and provided the results of that study to the New Service Customer; (ii) received a valid Upgrade Request; or (iii) pursuant to Section 19 or Section 32, as applicable, of the PJM Tariff, the Transmission Provider has completed an Initial Study and provided the results of that study to the New Service Customer.
3. Pursuant to Sections 19.1, 32.1, 37, 110.2, 111.2, 204.2, or 204.3, as applicable, of the PJM Tariff, the New Service Customer (i) requests that the Transmission Provider perform a System Impact Study, and (ii) agrees to submit a deposit to the Transmission Provider which will be applied to the New Service Customer's cost responsibility for the System Impact Study, as set forth in Section 204.3A of the PJM Tariff.

PREVIOUS SUBMISSIONS

{For Interconnection Customers, use the following paragraph 4}

4. Except as otherwise specifically set forth in an attachment to this agreement, New Service Customer represents and warrants that the information provided in Section 3 of the Interconnection Feasibility Study Agreement dated _____, for the project designated _____ {insert Queue Position} by and between the New Service Customer and the Transmission Provider is accurate and complete as of the date of execution of this System Impact Study Agreement. New Service Customer further provides the following information and represents and warrants that said information is true and correct:

{For Generation Facilities, use the following paragraphs a through c}

- a. Specify whether the generation to be interconnected to the Transmission System is to be a Capacity Resource or an Energy Resource.

- b. Identification of evidence of initial application for the necessary air permits (attach documentation separately):

- c. Other information not previously provided that may be relevant to the study being conducted hereunder (attach generator data for stability study analysis):

{For Merchant Transmission Facilities, use the following paragraphs a through c}

- a. Provide evidence of ownership in, or right to acquire or control the site(s) where New Service Customer intends to install its major equipment, in the form of a deed, option agreement, lease or other similar document acceptable to PJM:

- b. Provide evidence of the rights or option to obtain such rights to use any existing transmission facilities within PJM that are necessary for construction of the proposed project.

- c. Other information not previously provided that may be relevant to the study being conducted hereunder:

{For New Service Customer other than Interconnection Customers, use the following paragraph 4}

4. Except as otherwise specifically set forth in an attachment to this agreement, New Service Customer represents and warrants that the information provided in Section ____ {insert applicable section number} of the New Service Request dated _____, for the request designated _____ {insert Queue Position} is accurate and complete as of the date of execution of this System Impact Study Agreement. New Service Customer further

provides the following information and represents and warrants that said information is true and correct:

PURPOSE OF THE SYSTEM IMPACT STUDY

5. Consistent with Section 205 of the PJM Tariff, the Transmission Provider, in consultation with the affected Transmission Owner(s), shall conduct a System Impact Study that identifies the system constraints relating to the New Service Requests being evaluated in the study and the Attachment Facilities, Local Upgrades, and Network Upgrades necessary to accommodate such New Service Requests. It is expected that the System Impact Study will be completed by {insert date}. In the event that the Transmission Provider is unable to complete the System Impact Study by that date, the Transmission Provider shall notify the New Service Customer and explain the reasons for the delay.
6. The System Impact Study conducted hereunder will provide more comprehensive estimates of the cost and length of time required to accommodate the New Service Customer's New Service Request than those developed through the Feasibility Study or Initial Study, if applicable, performed for the New Service Customer. These estimates shall represent a good faith attempt to determine the cost of necessary facilities and upgrades to accommodate the New Service Customer's New Service Request, and the New Service Customer's cost responsibility for them, but shall not be deemed final or binding. The scope of the System Impact Study {include for Merchant Transmission Facilities: may depend in part on the interconnection rights elected by the New Service Customer under Section 36.1.03 of the PJM Tariff and} may include (a) an assessment of sub-area import deliverability, (b) an assessment of sub-area export deliverability, (c) an assessment of project related system stability issues, (d) an assessment of project related short circuit duty issues, (e) a contingency analysis consistent with NERC's and each Applicable Regional Entity's reliability criteria, (f) an assessment of regional transmission upgrades that most effectively meet identified needs, and (g) an analysis to determine cost allocation responsibility for required facilities and upgrades. Final estimates will be developed only upon execution of a Facilities Study Agreement in accordance with Part VI of the PJM Tariff. The System Impact Study necessarily will employ various assumptions regarding the New Service Request, other pending requests, and PJM's Regional Transmission Expansion Plan at the time of the study. **IN NO EVENT SHALL THE SYSTEM IMPACT STUDY IN ANY WAY BE DEEMED TO OBLIGATE THE TRANSMISSION PROVIDER OR THE TRANSMISSION OWNERS THAT MAY INTERCONNECT WITH THE NEW SERVICE CUSTOMER TO CONSTRUCT ANY FACILITIES OR UPGRADES.**

CONFIDENTIALITY

7. The New Service Customer agrees to provide all information requested by the Transmission Provider necessary to complete the System Impact Study. Subject to paragraph 8 of this System Impact Study Agreement and to the extent required by Section 222 of the PJM Tariff, information provided pursuant to this Section 7 shall be and remain confidential.

8. Until completion of the System Impact Study, the Transmission Provider shall keep confidential all information provided to it by the New Service Customer. Pursuant to Section 205.4 of the PJM Tariff, upon completion of the System Impact Study, the Transmission Provider shall provide a copy of the System Impact Study to all New Service Customers whose New Service Requests were evaluated in the System Impact Study along with all related work papers. Additionally, Transmission Provider shall post on Transmission Provider's OASIS (i) the existence of the System Impact Study, (ii) the New Service Customers that had New Service Requests evaluated in the System Impact Study, (iii) the location and size in megawatts of each New Service Customer's generation project, if applicable, and (iv) each New Service Customer's Queue Position. Additionally, New Service Customer acknowledges and consents to such other disclosures as may be required under the PJM Tariff or the FERC's rules and regulations.
9. New Service Customer acknowledges that, consistent with Part VI of the PJM Tariff, the Transmission Owners will participate in the System Impact Study process and that the Transmission Provider may disseminate information to the Transmission Owners and rely upon them to conduct part or all of the System Impact Study.

COST RESPONSIBILITY

10. The New Service Customer shall reimburse the Transmission Provider for the actual cost of the System Impact Study in accordance with its cost responsibility as determined under Sections 110.2, 111.2 or 203 of the PJM Tariff. The deposit described in Section 3 of this Agreement, paid by the New Service Customer pursuant to Sections 110.2, 111.2, or 204.3A of the PJM Tariff, shall be applied toward the New Service Customer's System Impact Study cost responsibility. In the event that the Transmission Provider anticipates that the New Service Customer's study cost responsibility will substantially exceed the deposit, the Transmission Provider shall provide the New Service Customer with an estimate of the study costs and the New Service Customer's cost responsibility. Within 10 days of receiving such estimate, the New Service Customer may withdraw its New Service Request by providing notice to the Transmission Provider, in which event the deposit paid to Transmission Provider shall be refunded. Unless the New Service Request is withdrawn within 10 days, the New Service Customer agrees to pay the amount of its actual System Impact Study cost responsibility.

DISCLAIMER OF WARRANTY, LIMITATION OF LIABILITY

11. In analyzing and preparing the System Impact Study, the Transmission Provider, the Transmission Owner(s), and any other subcontractors employed by the Transmission Provider shall have to rely on information provided by the New Service Customer and possibly by third parties and may not have control over the accuracy of such information. Accordingly, NEITHER THE TRANSMISSION PROVIDER, THE TRANSMISSION OWNER(S), NOR ANY OTHER SUBCONTRACTORS EMPLOYED BY THE TRANSMISSION PROVIDER MAKES ANY WARRANTIES, EXPRESS OR IMPLIED, WHETHER ARISING BY OPERATION OF LAW, COURSE OF

PERFORMANCE OR DEALING, CUSTOM, USAGE IN THE TRADE OR PROFESSION, OR OTHERWISE, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WITH REGARD TO THE ACCURACY, CONTENT, OR CONCLUSIONS OF THE SYSTEM IMPACT STUDY. The New Service Customer acknowledges that it has not relied on any representations or warranties not specifically set forth herein and that no such representations or warranties have formed the basis of its bargain hereunder. Neither this System Impact Study Agreement nor the System Impact Study prepared hereunder is intended, nor shall either be interpreted, to constitute agreement by the Transmission Provider or the Transmission Owner(s) to provide any transmission or interconnection service to or on behalf of the New Service Customer either at this point in time or in the future.

12. In no event will the Transmission Provider, Transmission Owner(s) or other subcontractors employed by the Transmission Provider be liable for indirect, special, incidental, punitive, or consequential damages of any kind including loss of profits, whether arising under this System Impact Study Agreement or otherwise, even if the Transmission Provider, Transmission Owner(s), or other subcontractors employed by the Transmission Provider have been advised of the possibility of such a loss. Nor shall the Transmission Provider, Transmission Owner(s), or other subcontractors employed by the Transmission Provider be liable for any delay in delivery or of the non-performance or delay in performance of the Transmission Provider's obligations under this System Impact Study Agreement.

Without limitation of the foregoing, the New Service Customer further agrees that Transmission Owner(s) and other subcontractors employed by the Transmission Provider to prepare or assist in the preparation of any System Impact Study shall be deemed third party beneficiaries of this provision entitled "Disclaimer of Warranty/Limitation of Liability."

MISCELLANEOUS

13. Any notice or request made to or by either party regarding this System Impact Study Agreement shall be made to the representative of the other party as indicated below.

Transmission Provider

PJM Interconnection, L.L.C.
955 Jefferson Avenue
Valley Forge Corporate Center
Norristown, PA 19403-2497

New Service Customer

14. No waiver by either party of one or more defaults by the other in performance of any of the provisions of this System Impact Study Agreement shall operate or be construed as a waiver of any other or further default or defaults, whether of a like or different character.
15. This System Impact Study Agreement or any part thereof, may not be amended, modified, or waived other than by a writing signed by all parties hereto.
16. This System Impact Study Agreement shall be binding upon the parties hereto, their heirs, executors, administrators, successors, and assigns.
17. Neither this System Impact Study Agreement nor the System Impact Study performed hereunder shall be construed as an application for service under Part II or Part III of the PJM Tariff.
18. The provisions of Part VI of the PJM Tariff are incorporated herein and made a part hereof.
19. Capitalized terms used but not otherwise defined herein shall have the meaning ascribed to them in the PJM Tariff.
20. This System Impact Study Agreement shall be effective as of the date of the New Service Customer's execution of it and shall remain in effect until the earlier of (a) the date on which the Transmission Provider tenders the completed System Impact Study and a proposed Facilities Study Agreement to New Service Customer pursuant to Section 206 of the PJM Tariff, or (b) termination and withdrawal of the New Service Request(s) to which the System Impact Study hereunder relates.
21. **No Third-Party Beneficiaries**
This System Impact Study Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the parties, and the obligations herein assumed are solely for the use and benefit of the parties, their successors in interest and where permitted, their assigns.
22. **Multiple Counterparts**
This System Impact Study Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.
23. **No Partnership**
This System Impact Study Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the parties or to impose any partnership obligation or partnership liability upon either party. Neither party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other party.

24. **Severability**
If any provision or portion of this System Impact Study Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the parties shall negotiate in good faith to restore insofar as practicable the benefits to each party that were affected by such ruling, and (3) the remainder of this System Impact Study Agreement shall remain in full force and effect.
25. **Governing Law, Regulatory Authority, and Rules**
For Interconnection Requests, the validity, interpretation and enforcement of this System Impact Study Agreement and each of its provisions shall be governed by the laws of the state of _____ (where the Point of Interconnection is located), without regard to its conflicts of law principles. This System Impact Study Agreement is subject to all Applicable Laws and Regulations. Each party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.
26. **Reservation of Rights**
The Transmission Provider shall have the right to make a unilateral filing with FERC to modify this System Impact Study Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and the Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this System Impact Study Agreement under any applicable provision of the Federal Power Act and FERC's rules and regulations; provided that each party shall have the right to protest any such filing by the other party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this System Impact Study Agreement shall limit the rights of the parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations, except to the extent that the parties otherwise agree as provided herein.

IN WITNESS WHEREOF, the Transmission Provider and the New Service Customer have caused this System Impact Study Agreement to be executed by their respective authorized officials.

Transmission Provider: PJM Interconnection, L.L.C.

By: _____
Name Title Date

Printed Name

New Service Customer: [Name of Party]

By: _____
Name Title Date

Printed Name

4.8 Under- and Over-Frequency Conditions:

The Transmission System is designed to automatically activate a load-shed program as required by NERC and each Applicable Regional Entity in the event of an under-frequency system disturbance. A Generation Interconnection Customer shall implement under-frequency and over-frequency relay set points for the Customer Facility as required by NERC and each Applicable Regional Entity to ensure “ride through” capability of the Transmission System. The response of a Generation Interconnection Customer’s Customer Facility to frequency deviations of predetermined magnitudes, both under-frequency and over-frequency deviations shall be studied and coordinated with the Transmission Provider in accordance with Good Utility Practice. The term “ride through” as used herein shall mean the ability of a Generation Interconnection Customer’s Customer Facility to stay connected to and synchronized with the Transmission System during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice.

6.1 Obligations:

Subject to Applicable Laws and Regulations, each Interconnection Party shall comply with the Emergency Condition procedures of NERC, the Applicable Regional Entity, Transmission Provider, the Interconnected Transmission Owner and Interconnection Customer.

ATTACHMENT U

INDEPENDENT TRANSMISSION COMPANIES

References to section numbers in this Attachment U refer to sections of this Attachment U, unless otherwise specified.

This Attachment U sets forth a general framework for the development and operation of independent transmission companies (“ITCs”) as to certain of the transmission facilities for which the Transmission Provider, PJM Interconnection, L.L.C. (“PJM”), is otherwise responsible. The provisions of this Attachment U shall govern in the event of any conflict between this Attachment and the other provisions of the Tariff, except as to Attachment M of the Tariff. If there is a conflict between the provisions of Attachment U and Attachment M, the provisions of Attachment M shall govern. Under this Attachment U, certain responsibilities may be assigned to an ITC, if the ITC enters into an ITC Agreement in the form set forth in this Tariff and if FERC acceptance of the independence of the ITC and FERC approval or acceptance of the assignment is obtained as provided herein.

This Attachment U sets forth the standard terms and conditions, and the standard division of rights, responsibilities, and functions, in conformance with FERC policy and precedent, for any ITC that operates under PJM. Any entity or entities submitting a proposal to become an ITC (“ITC Sponsor”) shall enter into an ITC Agreement in the form set forth in Attachment V to the Tariff, which is subject to and incorporates the standard terms and conditions of this Attachment U and identifies the ITC Transmission Facilities (as defined herein).

It is recognized that PJM shall be responsible for administering any wholesale energy market (and providing all functions integral to such market administration) within the PJM region.

1. FERC APPROVAL

1.1 FERC Acceptance As A Prerequisite. Before receiving the rights and responsibilities provided for under this Attachment U, the ITC Sponsor shall apply for and receive a FERC order accepting the ITC proposal to be implemented and finding that the proposed ITC satisfies FERC’s independence criteria and that such entity may be treated as an ITC under this Attachment U.

1.2 Effect of FERC Acceptance. Once FERC issues an order accepting the filing and providing the finding required under Section 1.1, then the ITC, subject to satisfaction of the other requirements of this section 1, may operate under PJM consistent with the rights, responsibilities, and functions that have been accepted or approved by FERC.

1.3 Any entity or entities submitting a proposal to become an ITC (“ITC Sponsor”) shall submit a filing with FERC detailing each of the rights, responsibilities, and functions the ITC proposes to assume, which may consist of some or all of the rights, responsibilities, and functions set forth in this Attachment U, together with specifics on implementing any of these assigned rights, responsibilities, and functions. An ITC Sponsor must have, or demonstrate to

FERC that it shall have prior to implementation, ownership of, or the authority to direct the operation of, transmission facilities that are within the PJM region, or that are to be added to the PJM region as a result of the establishment of the ITC (such facilities referred to herein as the “ITC Transmission Facilities”).

1.4 Following the FERC approvals specified in section 1.1 above, the ITC shall assume the rights and responsibilities described herein on the first day of the calendar month (“ITC Commencement Date”) following the date on which the ITC provides written notice to Transmission Provider that the ITC is prepared to assume its responsibilities hereunder in accordance with section 15 below. PJM shall coordinate with the ITC prior to the ITC Commencement Date to ensure that PJM is capable as of the ITC Commencement Date of providing the responsibilities reserved to PJM hereunder as to the ITC Transmission Facilities and related bulk power facilities.

1.5 Prior to the ITC Commencement Date, the ITC and each owner of transmission facilities participating in such ITC shall execute, with respect to the transmission facilities over which it has the authority to direct the operation: (a) the Consolidated Transmission Owners Agreement; and (b) the Operating Agreement. In the event of any conflict between the ITC Agreement and the Operating Agreement that affects the PJM Region other than the ITC Transmission Facilities, the provisions of the Operating Agreement shall control pending dispute resolution, with final approval of the dispute’s resolution by FERC. In the event of any other express conflict between the ITC Agreement and the Operating Agreement or the transmission owners agreement executed by ITC, neither the transmission owners agreement nor the Operating Agreement shall be interpreted to limit the rights and responsibilities assigned to ITC in its role as an ITC pursuant to the ITC Agreement.

2. SECURITY COORDINATION

2.1 Regional Reliability Authority. PJM shall be the regional Reliability Authority under NERC standards for all PJM transmission facilities, including any ITC Transmission Facilities. As the Reliability Authority, PJM is responsible for monitoring and directing corrective action for reliability for all areas in the PJM region.

2.2 ITC Actions to Preserve System Security. An ITC may monitor and analyze the security of the ITC Transmission Facilities and may take actions to protect the ITC Transmission Facilities from physical damage or prevent injury or damage to persons or property in accordance with good utility practice and the PJM Operating Manuals, as they may be modified pursuant to Section 16 of this Attachment U, before requesting assistance from PJM. At the earliest possible time, the ITC shall inform PJM of any such actions taken and coordinate further actions with PJM.

2.3 Ultimate Authority. Notwithstanding any other provision in this Attachment U, PJM may intercede and direct appropriate actions in its role as the regional Reliability Authority. The ITC shall be responsible for implementing such corrective actions directed by PJM. If such PJM action or direction is disputed, PJM’s position shall control pending resolution of the dispute.

3. BASE TRANSMISSION RATES

3.1 Right to File Rate Changes. The ITC shall possess the unilateral right, subject to consultation with PJM, to file at FERC and to place into effect pursuant to FPA Section 205 the rates for transmission services for delivery to the zone or zones comprising the ITC Transmission Facilities (including incentive rate structures, but excluding ancillary services, except as permitted by section 17, and excluding the congestion pricing methodology for the PJM region), and for additional services, if any, solely involving the ITC Transmission Facilities, and the revenue requirement for such zones for use in developing rates for other transmission services provided by PJM. Such rate or rate structure changes shall be included in discrete schedules or portions of the Tariff (hereafter, such the “ITC Rate Schedule”). The ITC shall consult with PJM prior to making a section 205 rate filing to ensure that PJM has adequate opportunity to determine whether the proposal results in adverse impacts outside the zone or zones comprising the ITC Transmission Facilities.

3.2 Limitations. The ITC may not implement transmission rates in accordance with Section 3.1 that violate the terms of the Consolidated Transmission Owners Agreement.

3.3 No Rate Pancaking. Notwithstanding its rights under Section 3.1, the ITC shall not implement rates or a rate structure that results in a Transmission Customer paying more than one base transmission charge for use of the Transmission System for any one transaction.

4. REVENUE DISTRIBUTION

4.1 ITC Receipt of Transmission Revenues. The ITC shall receive and/or retain revenues resulting from the provision of transmission service under the Tariff in accordance with the applicable revenue distribution procedures of the Consolidated Transmission Owners Agreement. The ITC may take no unilateral action that interferes with or affects the revenue distribution provided for in such agreements or that interferes with the collection by PJM of the revenues due it for services it provides or arranges.

4.2 Redistribution of Revenues. The ITC may distribute the revenues due it in accordance with section 4.1 above in any manner it wishes subject to receiving any necessary regulatory approvals, without involvement of PJM.

5. MANAGEMENT OF CONGESTION PRICING METHODOLOGY

5.1 Subject to FERC approval, PJM shall determine the congestion pricing methodology for the PJM region, administer the dispatch of the generation and transmission facilities in the PJM region in accordance with the approved methodology, calculate the resulting congestion prices, and conduct all related billing and settlement.

6. ACTIONS TO ENHANCE TRANSMISSION PERFORMANCE

6.1 The ITC may take actions with respect to the system comprised of the ITC Transmission Facilities that can be accommodated within the framework of the approved congestion pricing

methodology referenced in Section 5.1 above. It may do this through targeted transmission system investment, outage management, the determination of transmission device settings, establishing contractual arrangements (e.g., with generators and LSE's), changes in technology, and other operating actions affecting the ITC Transmission Facilities. Before it first implements such actions, the ITC shall consult with PJM to develop procedures for inclusion in the PJM Operating Manuals for each class of such action that the ITC may thereafter implement. In such consultation, PJM shall consider whether the type of action can be accommodated within the framework of the approved congestion pricing methodology and whether the type of action would result in violations of regional reliability criteria applied in the PJM region. Following inclusion of procedures for each such type of action in the Manuals, the ITC may implement such actions in coordination with PJM in the manner set forth in the manuals. In addition, the ITC and PJM shall cooperate with one another in solving operational issues outside the ITC region that affect the ITC Transmission Facilities, or inside the ITC region that affect facilities outside such region.

6.2 Incentive Mechanisms. The ITC shall possess the unilateral right to file with FERC incentive mechanisms relating to the system comprised of the ITC Transmission Facilities in a manner that can be accommodated within the framework of the approved methodology referenced in Section 5.1 above. The ITC shall consult with PJM prior to filing any such mechanism to allow PJM to consider whether any such proposed mechanism can be so accommodated and whether it would result in violations of regional reliability criteria applied in the PJM region. In addition, prior to the implementation of any such incentive mechanism, the ITC and PJM shall coordinate the operation of any such mechanism. PJM shall modify the PJM Operating Manuals as necessary to allow for the implementation of any FERC-approved incentive mechanism.

7. TARIFF ADMINISTRATION

7.1 Service under the Tariff. PJM is the Transmission Provider and remains responsible for administering the Tariff, which shall be amended to include the ITC Transmission Facilities and any provisions specific to the ITC Transmission Facilities that the ITC may propose pursuant to this Attachment U. Transmission Customers on the ITC Transmission Facilities will receive transmission service under the Tariff. PJM shall execute the agreements with customers for service under the Tariff, except that the ITC and PJM shall both execute agreements with customers for interconnection services. For transmission services for delivery to the zone or zones comprising the ITC Transmission Facilities, to the extent rate discounting is authorized as to such transmission services, the ITC shall make all decisions on rate discounts.

7.2 OASIS. PJM shall maintain the OASIS specified in section 4 of the Tariff. Customers shall apply for service on the PJM OASIS. PJM shall have responsibility for granting or denying all transmission service requests, but shall coordinate as necessary with ITC in developing its response to transmission service requests, including any necessary studies. The ITC shall be entitled to have and maintain a site page within the PJM OASIS for any additional services provided by such ITC.

7.3 Studies. PJM shall administer the contracts with the customers and shall provide the notices and make filings under this Tariff. If a system impact, facilities, or other study is required to address a connection to, or a constraint or other impact on, the ITC Transmission Facilities, then the ITC shall assume responsibility for the study subject to oversight by, and coordination with, PJM, and satisfaction of PJM criteria for such studies as set forth in the joint planning protocol developed pursuant to Section 10.3. The study agreement shall be executed by PJM; provided however, that nothing herein shall preclude the ITC from entering into additional agreements with customers regarding studies.

7.4 ATC. PJM shall calculate Available Transfer Capability (“ATC”), in accordance with Attachment C to the Tariff, for all facilities, including the ITC Transmission Facilities, provided that the ITC shall possess the unilateral right to provide, pursuant to section 9.1 of this Attachment U, the ratings, transfer limits, inputs, assumptions, and corresponding operating guides with respect to the ITC Transmission Facilities to be used in calculating ATC. If PJM disagrees with these ratings, transfer limits, calculations, inputs, assumptions, or corresponding operating guides, the ITC’s position shall prevail pending dispute resolution, unless PJM determines that ITC’s position would violate system reliability criteria, in which case PJM’s position shall prevail pending dispute resolution.

7.5 Scheduling. Customers will schedule through the processes established by PJM.

8. CURTAILMENTS

8.1 PJM shall be responsible for directing all curtailments consistent with the Tariff and the Operating Agreement. The ITC and PJM shall develop protocols to implement any curtailments ordered by PJM with respect to the ITC Transmission Facilities.

8.2 The ITC may propose to PJM operating methods to avoid and/or limit the need for curtailments, and may implement such measures involving operation of the ITC Transmission Facilities, in coordination with PJM; provided, however, that if PJM determines that a measure proposed by the ITC would exacerbate an existing violation of a system reliability criterion, or cause a violation of such criterion elsewhere on the system, or of another system reliability criterion, then that measure shall not be implemented, pending dispute resolution.

9. OPERATIONS

9.1 Ratings and Rating Procedures. The ITC is responsible for the establishment of ratings, transfer limits, and rating procedures for the ITC Transmission Facilities. The ITC shall provide notice to PJM of all changes in ratings, transfer limits, and rating procedures, along with the related information called for by section 1.9.8 of Schedule 1 to the PJM Operating Agreement, in accordance with the deadlines set forth in such section 1.9.8 and in accordance with the PJM Manuals, as they may be modified pursuant to Section 16; provided that nothing in section 1.9.8 shall preclude the ITC from instituting ratings changes (including, but not limited to, dynamic ratings changes) in accordance with applicable PJM Operating Manuals, as they may be revised pursuant to section 16 of this Attachment U. Notwithstanding sections 1.9.8 or 1.9.9(e) of

Schedule 1 to the Operating Agreement, should PJM dispute the application of a rating, then the ITC's position shall prevail pending dispute resolution.

9.2 Transmission Maintenance. The ITC shall be responsible for developing its own coordinated transmission maintenance and outage schedules for the ITC Transmission Facilities and shall advise PJM of all such maintenance and outage schedules, for all ITC Transmission Facilities, in accordance with section 1.9.2 of Schedule 1 to the Operating Agreement. PJM shall have the authority to disapprove transmission maintenance outages on the ITC Transmission Facilities if ITC fails to comply with the notice requirements of section 1.9.2 of Schedule 1 to the Operating Agreement, or if PJM determines that such outages would create a violation of system reliability criteria. PJM shall have the authority to revoke its previously granted approval of transmission maintenance outages on the ITC Transmission System if forced transmission outages or emergency circumstances occur such that proceeding with the approved outage would create a violation of system reliability criteria; provided that, where time permits, PJM will consult with the ITC to determine whether steps can be taken that would enable the maintenance outage to go forward as scheduled. PJM shall notify the ITC of the decision to reschedule or revoke approval of the transmission maintenance outage as soon as possible after the circumstances arise that create the need for the rescheduling or revocation. Within a reasonable time after it requires a transmission maintenance outage to be rescheduled or revokes its approval of such an outage, PJM shall consult with the ITC to explain the reasons for its decisions and to consider measures that the parties may adopt to avoid the need for further rescheduling or revocation of outages.

9.3 Generation Maintenance. In accordance with the Operating Agreement and with procedures in the PJM Manuals, as they may be modified pursuant to Section 16, the ITC shall promptly provide PJM with any advance notice of scheduled outages it receives from generators, and PJM shall promptly provide the ITC with any advance notice it receives of scheduled generator outages that affect the ITC Transmission Facilities, to permit the ITC to schedule transmission outages on the ITC Transmission Facilities and perform its other functions hereunder, and to permit PJM to exercise its responsibilities under the PJM Operating Agreement with respect to generator outages. The ITC may agree to coordinate with generators to modify its planned transmission outage schedules in coordination with generator outage schedules.

9.4 Scheduling and Dispatch. PJM shall be responsible for administering day-ahead and real-time wholesale energy markets, including transmission security monitoring and constrained economic dispatch, for all facilities, including the ITC Transmission Facilities. The ITC shall manage the configuration and topology of the ITC Transmission Facilities, including acting as the primary interface for all switching, maintenance, ratings, transfer limits, and monitoring, subject to the direction of PJM as the regional Reliability Authority, and in accordance with the PJM Operating Manuals, as they may be revised pursuant to Section 16 of this Attachment U.

9.5 Operations. The ITC shall have the authority and responsibility, in accordance with its agreements with the owners of the ITC Transmission Facilities, the terms of the Consolidated Transmission Owners Agreement, NERC and Applicable Regional Entity standards and guidelines, and the PJM Operating Manuals, as such manuals may be revised pursuant to section 16 of this Attachment U, to operate those facilities in a safe, economical, and reliable manner.

PJM shall have the authority and responsibility to issue operating instructions to the ITC as they relate to the ITC Transmission Facilities in accordance with the PJM Manuals, as they may be revised pursuant to Section 16 of this Attachment U, provided that nothing herein shall be construed to require a change in the physical control of the ITC Transmission Facilities using the ITC's control center facilities and equipment. The ITC and PJM shall seek agreement (where time limitations allow) on real-time operational decisions affecting the ITC Transmission Facilities not otherwise specified in the PJM Operating Manuals. In the absence of such agreement, or if time limitations do not permit reaching agreement, PJM shall exercise its authority to direct operations, subject to any actions the ITC may take in accordance with section 2.2 of this Attachment U.

10. PLANNING

10.1 PJM has the ultimate authority for developing a Regional Transmission Expansion Plan for its entire region, including the ITC Transmission Facilities, and may direct expansions as required in accordance with Schedule 6 to the PJM Operating Agreement, or successor provisions, as they may be amended. In the event of disputes between PJM and ITC concerning the contents of such Regional Transmission Expansion Plan, the position of PJM, as the ultimate authority for planning in the region, shall prevail. Pursuant to the joint planning protocol developed under Section 10.3 below, PJM shall be responsible for setting appropriate planning criteria and the ITC shall be responsible for studying the need for modifications, enhancements, or additions to the ITC Transmission Facilities and for proposing a plan of modifications, enhancements, or additions to the ITC Transmission Facilities. Each component of a timely plan proposed by the ITC shall be incorporated without PJM approval in the Regional Transmission Expansion Plan if PJM determines that such component does not materially adversely affect the Transmission System other than the ITC Transmission Facilities. The ITC also may suggest, in accordance with any established stakeholder procedures under Schedule 6 of the PJM Operating Agreement, potential modifications, enhancements, or additions to transmission facilities in the PJM region other than the ITC Transmission Facilities. Subject to any necessary FERC approval, the ITC may adopt any procedures it deems necessary with respect to the ITC's development of a plan of enhancements or expansions, so long as such procedures do not adversely affect PJM's ability to prepare the Regional Transmission Expansion Plan in a timely and efficient manner. Nothing in this Attachment U impairs the rights of affected parties to participate in the PJM planning process in accordance with Commission-approved procedures. During the planning process the ITC shall adhere to all Applicable Regional Entity, NERC and PJM Planning criteria. The ITC shall participate with PJM in the development of the system needs analysis, any system impact studies and the transmission expansion plans as necessary to promote fully coordinated and efficient solutions.

10.2 Interconnection Requests. Customer requests for interconnection, including requests for interconnection with the ITC Transmission Facilities, will be coordinated by PJM in accordance with the Tariff and the PJM Manuals, as they may be modified pursuant to Section 16 of this Attachment U. The ITC shall assume primary responsibility for interconnection projects on the ITC Transmission Facilities. PJM shall be responsible for setting interconnection standards, receiving interconnection requests, administering the queue, coordinating the analysis of requests for interconnection with ITC Transmission Facilities with requests for interconnection with non-

ITC Transmission Facilities, and ensuring that proposed interconnections to the ITC Transmission Facilities will not materially adversely affect the Transmission System other than the ITC Transmission Facilities. PJM as the Transmission Provider under this Tariff also shall retain primary responsibility for all service-related matters under the Tariff, including issuance and administration of interconnection rights. ITC shall regularly and frequently update PJM on the status and results of all interconnect studies performed by or for the ITC, in accordance with the joint planning protocol developed pursuant to Section 10.3. The results of any ITC studies prepared in response to interconnection requests shall be reflected in the Regional Transmission Expansion Plan.

10.3 Joint Planning Protocol. PJM and ITC shall develop a joint planning protocol to facilitate the seamless and efficient integration of all ITC transmission planning, study and analysis efforts, and all ITC proposals for transmission enhancements, modifications, and additions into the Regional Transmission Expansion Plan under Schedule 6 to the Operating Agreement and the regional generation interconnection queuing, study, and cost allocation process under Part IV of the Tariff. Such protocols shall be designed to facilitate the preparation of the Regional Transmission Expansion Plan, and shall reflect and accommodate the procedures, timelines, and study cycles employed for the regional transmission planning and generation interconnection process. PJM and ITC shall each implement the provisions of the joint planning protocol. PJM and ITC shall consult regularly concerning the extent to which changes to the joint planning protocol may be required to achieve the foregoing purposes in light of experience and, as applicable, the coordination of planning activities among PJM and all ITCs in the PJM region.

10.4 Material Adverse Effect. As used in this Attachment, a material adverse effect on the Transmission System other than the ITC Transmission Facilities shall not be present only if all of the following statements are true:

1. The proposed facility or requested service does not result in any non-ITC facilities in the PJM Region exceeding thermal, voltage, or stability limits, consistent with all applicable reliability criteria; and
2. The proposed facility or requested service does not result in any circuit breaker on non-ITC facilities in the PJM Region exceeding its interrupting capability.

11. BILLING AND REMITTANCE

11.1 PJM Responsibilities. PJM shall be responsible for all billing, settlement, and revenue distribution, except as provided in Section 11.2 below.

11.2 ITC Responsibilities. The ITC may elect to perform billing, settlement, and revenue distribution for the additional services, if any, provided by the ITC as referenced in section 3.1 of this Attachment U. The ITC may elect to contract for the provision of those functions by PJM or another third party.

12. MONITORING

12.1 The Market Monitoring Unit established under Attachment M of this Tariff shall monitor the services provided by the ITC, and the ITC-PJM relationship, to detect any problems that may inhibit a robust and competitive market. Transactions utilizing the ITC Transmission Facilities shall be subject to the authority of the Market Monitoring Unit on the same basis as transactions involving any other Market Participant (as defined in Attachment M) using other portions of the Transmission System. This provision is also found in Article IV, Section C-1 of Attachment M of the Tariff.

13. LIABILITY AND INDEMNITY

13.1 The ITC shall execute the Operating Agreement as a Member of PJM and the liability and indemnity provisions as set forth in section 16 of the Operating Agreement shall apply to acts or omissions resulting from, arising out of, or in any way connected with this Attachment or the ITC Agreement.

14. DISPUTE RESOLUTION

14.1 Dispute resolution as used herein refers to the dispute resolution procedures in section 12 of the Tariff, as it may be amended.

15. NOTIFICATION OF ASSUMPTION OF RESPONSIBILITIES

15.1 The ITC shall provide adequate notice to PJM of its intent to assume the responsibilities described in this Attachment U.

16. OPERATING PROCEDURES AND PROTOCOLS

16.1 Operating Guides, Manuals and Procedures. As provided in section 9.5 of this Attachment U, the ITC shall operate the ITC Transmission Facilities in accordance with the PJM Operating Manuals. Prior to start-up, and from time to time after the ITC commences operations, the ITC shall review such manuals and shall timely notify PJM of any changes or additions desired by the ITC to address specific conditions or operating procedures on the ITC Transmission Facilities. Subject to PJM's agreement, the PJM Manuals shall be revised or supplemented accordingly. PJM shall apprise ITC of subsequent changes to the PJM manuals through its established procedures for stakeholder notification of such changes. Any dispute between the ITC and PJM concerning changes to the PJM Manuals shall be resolved in accordance with Section 14.1, above. Nothing herein precludes the ITC from maintaining more detailed operating guides, manuals, and procedures specific to the ITC Transmission Facilities that are consistent with and subject to the operating guides and procedures in the PJM Manuals.

16.2 ITC Start-Up Procedures and Protocols. The ITC and PJM shall cooperate and use their best efforts to develop the necessary procedures and protocols to allow timely start-up of the ITC pursuant to this Attachment U.

17. ANCILLARY SERVICES

17.1 ITC System Control and Administrative Services. ITC shall recover its costs of providing system control and other administrative services through an appropriate schedule to the Tariff, as filed and made effective by ITC, subject to FERC acceptance.

17.2 System Restoration and Black Start Generation. PJM and the ITC shall coordinate in the preparation of a workable system restoration plan for the ITC Transmission Facilities in accordance with approved PJM Tariff requirements. PJM and the ITC shall be responsible for implementing their respective assigned duties under such system restoration plan.

17.3 Reactive Support. PJM shall be responsible for purchases of reactive support from generators under the PJM Tariff. If desired by ITC and approved by FERC, PJM shall designate ITC as a supplier of reactive support in accordance with an ITC Rate Schedule to be included in the PJM Tariff.

18. INFORMATION SHARING

18.1 Subject to FERC approval of any necessary changes to the PJM Operating Agreement, PJM shall share with the ITC information within the possession of PJM that is necessary for the ITC to perform those rights, responsibilities and functions that FERC authorizes the ITC to perform and the ITC shall share with PJM information within the possession of the ITC that is necessary for PJM to perform those rights, responsibilities and functions that FERC authorizes PJM to perform. If such data are immediately available, it is expected that the parties will establish communication links for data transfer as appropriate and necessary. Data requiring manipulation shall be made available within a reasonable time. In all cases, all data designated as confidential shall be handled as provided in section 18.2 of this Attachment U.

18.2 Confidentiality. To the extent ITC obtains from PJM or any Member of PJM any documents, data, or other information that has been designated by PJM or a Member as confidential, ITC shall treat such information in the same manner and subject to the same procedures, restrictions, and obligations as set forth in section 18.17 of the Operating Agreement. To the extent PJM obtains from ITC any documents, data, or other information that has been designated by ITC as confidential, PJM shall treat such information in accordance with the procedures, restrictions, and obligations as set forth in section 18.17 of the Operating Agreement.

19. INTERREGIONAL COORDINATION

19.1 PJM is responsible for coordination with all neighboring regions, including those adjacent to the ITC (or operated by the ITC in adjacent regions).

19.2 To the extent that an ITC (or its affiliates) is operating in PJM and a neighboring region, the ITC may, in coordination with PJM, undertake efforts to facilitate interregional coordination between PJM and the neighboring region. The ITC shall consult with PJM prior to implementing any such efforts to allow PJM to consider whether the actions could be accommodated within the framework of PJM's approved congestion pricing methodology and other rules and whether the actions would result in violations of regional reliability criteria applied in the PJM region.

20. REVISION OF ITC FUNCTIONS

20.1 The division of functions and responsibilities between PJM and ITC shall be as set forth in this Attachment U and the ITC Agreement and may be modified from time to time to reflect the functionality permitted for independent transmission companies in accordance with FERC policy as pronounced in proceedings concerning Standard Market Design or otherwise, and to reflect the experience of the parties in the actual performance of their functions hereunder. PJM and ITC from time to time will review the allocation of functions and responsibilities and address appropriate changes, if any, to the division of functions between ITC and PJM consistent with such FERC policy, and any such changes shall be subject to any required regulatory approvals.

ATTACHMENT V

FORM OF ITC AGREEMENT

1.0 This ITC Agreement, dated as of _____, is entered into, by and between PJM Interconnection, L.L.C. (“PJM”) and _____ (“Independent Transmission Company” or “ITC”).

2.0 ITC has, or shall have, prior to commencement of service as an ITC, ownership of, or functional control of, the transmission facilities for which it wishes to become the ITC (“ITC Transmission Facilities”). ITC desires to become an independent transmission company within the PJM region, in accordance with Attachment S to the PJM Open Access Transmission Tariff (“Tariff”).

3.0 This ITC Agreement is subject to and expressly incorporates by this reference the provisions of Attachment U to this Tariff, as it may be modified from time to time, which sets forth the standard division of responsibilities, and associated terms and conditions, for any ITC that operates in the PJM region.

4.0 Any responsibility or function of PJM not expressly assigned or transferred herein to ITC shall remain with PJM. Any responsibility or function of ITC under any agreement between ITC and any owner of transmission facilities not expressly assigned or transferred herein to PJM shall remain with ITC. Capitalized terms used herein that are not otherwise defined herein shall have the meaning given to such term in the Tariff.

5.0 PJM and ITC agree to assume, with respect to the ITC Transmission Facilities, the respective rights and responsibilities set forth in Attachment U to the Tariff.

6.0 The ITC Transmission Facilities that are the subject of this agreement are specifically identified in Schedule 1 to this ITC Agreement.

6.1 In the event ITC acquires or otherwise operates transmission facilities not identified in Schedule 1 to this Agreement that are outside the PJM region, such facilities shall not be deemed ITC Transmission Facilities unless ITC so chooses to designate or assign such facilities, subject to PJM’s agreement and FERC’s approval. If ITC acquires or otherwise operates transmission facilities not identified in Schedule 1 of this Agreement that are within the PJM region, such facilities shall be deemed ITC Transmission Facilities.

7.0 Following ITC’s satisfaction of the prerequisites specified in Attachment S, including FERC approvals, the ITC shall assume the rights and responsibilities described herein on the first day of the calendar month (“ITC Commencement Date”) following the date on which the ITC provides written certification to Transmission Provider that the ITC has in place the capability, including, without limitation, the approvals, licenses, assignments, trained and qualified personnel, systems, and facilities necessary to undertake its responsibilities hereunder. PJM shall coordinate with the ITC prior to the ITC Commencement Date to ensure that PJM is

capable as of the ITC Commencement Date of providing the responsibilities reserved to PJM hereunder as to the ITC Transmission Facilities and related bulk power facilities.

8.0 This Agreement shall remain in effect until the effective date of ITC's withdrawal from this Agreement. ITC may withdraw from this Agreement upon ninety (90) days advance written notice to PJM, provided that such withdrawal shall not be effective until ITC with respect to the ITC Transmission Facilities has (1) satisfied all applicable NERC and Applicable Regional Entity requirements for operating a control area or being included within an existing control area; (2) put in place alternative arrangements for satisfaction of FERC's requirements with respect to comparable transmission services and, if required, participation in an RTO or Independent Transmission Provider; (3) transferred all of its functions and obligations as an ITC to one or more other entities to the satisfaction of FERC, and (4) received FERC approval or acceptance without suspension or hearing.

8.1 If ITC withdraws, it shall remain liable for any and all obligations incurred hereunder by ITC prior to the effective date of ITC's withdrawal.

8.2 If ITC becomes aware of any event that will cause ITC to relinquish functional control of any ITC Transmission Facilities, ITC shall notify PJM in writing as soon as practicable after becoming aware of such event.

9.0 This Agreement shall not be interpreted or construed to create any association, joint venture, or partnership between or among PJM and ITC or to impose any partnership obligation liability upon any either party. No party shall have the right, power or authority under this Agreement to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, any other party.

10.0 This Agreement is intended solely for the benefit of the parties and their respective successors and permitted assigns and is not intended to and shall not confer any rights or benefits on, any third party (other than the parties' successors and permitted assigns) that is not a signatory hereto.

11.0 This ITC Agreement shall inure to the benefit of and be binding upon the parties and their respective successors and assigns permitted herein, but shall not be assigned except to a successor in the operation of a party's Transmission Facilities by reason of a merger, consolidation, reorganization, sale, spin-off, or foreclosure, as a result of which substantially all such Transmission Facilities are acquired by such a successor, and such successor expressly is made a party to this Agreement, provided that any successor to either party shall procure all necessary regulatory approvals to exercise its rights and responsibilities in accordance with this Agreement.

12.0 This Agreement shall be interpreted, construed and governed by the laws of the state of Delaware.

13.0 Whether expressly so stated or not, all notices, demands, requests and other communications required or permitted by or provided for in this Agreement ("Notice") shall be given in writing to a party at the address set forth below, or at such other address as a party shall

designate for itself in writing in accordance with this section, and shall be delivered by hand or overnight courier:

For all Notices:

PJM Interconnection, L.L.C.
955 Jefferson Avenue
Valley Forge Corporate Center
Norristown, PA 19403-2497
Attn: Phillip Harris
President

With a copy to:

PJM Interconnection, L.L.C.
955 Jefferson Avenue
Valley Forge Corporate Center
Norristown, PA 19403-2497
Attn: Richard Wodyka
Chief Operating Officer

ITC

ITC represents and warrants to PJM that ITC has obtained, and at all times shall retain ownership of, or the authority to direct the operation of, the ITC Transmission Facilities; provided, however, that if a transmission owner participating in the ITC withdraws from the ITC, the description of the ITC Transmission Facilities in Schedule 1 shall be revised accordingly.

IN WITNESS WHEREOF, PJM and ITC have caused this ITC Agreement to be executed by their duly authorized representatives.

[signature blocks]

5.10 Auction Clearing Requirements

The Office of the Interconnection shall clear each Base Residual Auction and Incremental Auction for a Delivery Year in accordance with the following:

a) Variable Resource Requirement Curve

The Office of the Interconnection shall determine Variable Resource Requirement Curves for the PJM Region and for such Locational Deliverability Areas as determined appropriate in accordance with subsection (a)(iii) for such Delivery Year to establish the level of Capacity Resources that will provide an acceptable level of reliability consistent with the Reliability Principles and Standards. It is recognized that the variable resource requirement reflected in the Variable Resource Requirement Curve can result in an optimized auction clearing in which the level of Capacity Resources committed for a Delivery Year exceeds the PJM Region Reliability Requirement (less the Forecast RTO ILR Obligation for Delivery Years through May 31, 2012, or less the Short-Term Resource Procurement Target for Delivery Years thereafter) or Locational Deliverability Area Reliability Requirement (less the Forecast Zonal ILR Obligation for Delivery Years through May 31, 2012, or less the Short-Term Resource Procurement Target for Delivery Years thereafter for the Zones associated with such LDA) for such Delivery Year. For any auction, the Updated Forecast Peak Load, and Short-Term Resource Procurement Target applicable to such auction, shall be used, and Price Responsive Demand from any applicable approved PRD Plan, including any associated PRD Reservation Prices, shall be reflected in the derivation of the Variable Resource Requirement Curves, in accordance with the methodology specified in the PJM Manuals.

i) Methodology to Establish the Variable Resource Requirement Curve

Prior to the Base Residual Auction, in accordance with the schedule in the PJM Manuals, the Office of the Interconnection shall establish the Variable Resource Requirement Curve for the PJM Region as follows:

- Each Variable Resource Requirement Curve shall be plotted on a graph on which Unforced Capacity is on the x-axis and price is on the y-axis;
- The Variable Resource Requirement Curve for the PJM Region shall be plotted by first combining (i) a horizontal line from the y-axis to point (1), (ii) a straight line connecting points (1) and (2), (iii) a straight line connecting points (2) and (3), and (iv) a vertical line from point (3) to the x-axis, where:
 - For point (1), price equals: {the greater of [the Cost of New Entry] or [1.5 times (the Cost of New Entry minus the Net Energy and Ancillary Service Revenue Offset)]} divided by (one minus the pool-wide average EFORD) and Unforced Capacity equals: [the PJM Region Reliability Requirement multiplied by (100% plus the approved PJM Region Installed Reserve Margin (“IRM”)% minus

3%) divided by (100% plus IRM%)] minus the Forecast RTO ILR Obligation for Delivery Years through May 31, 2012 or less the Short-Term Resource Procurement Target for Delivery Years thereafter;

- For point (2), price equals: (the Cost of New Entry minus the Net Energy and Ancillary Service Revenue Offset) divided by (one minus the pool-wide average EFORD) and Unforced Capacity equals: [the PJM Region Reliability Requirement multiplied by (100% plus IRM% plus 1%) divided by (100% plus IRM%)] minus the Forecast RTO ILR Obligation for Delivery Years through May 31, 2012 or less the Short-Term Resource Procurement Target for Delivery Years thereafter; and
- For point (3), price equals [0.2 times (the Cost of New Entry minus the Net Energy and Ancillary Service Revenue Offset)] divided by (one minus the pool-wide average EFORD) and Unforced Capacity equals: [the PJM Region Reliability Requirement multiplied by (100% plus IRM% plus 5%) divided by (100% plus IRM%)] minus the Forecast RTO ILR Obligation for Delivery Years through May 31, 2012 or less the Short-Term Resource Procurement Target for Delivery Years thereafter;

ii) For any Delivery Year, the Office of the Interconnection shall establish a separate Variable Resource Requirement Curve for each LDA for which:

- A. the Capacity Emergency Transfer Limit is less than 1.15 times the Capacity Emergency Transfer Objective, as determined by the Office of the Interconnection in accordance with NERC and Applicable Regional Entity guidelines; or
- B. such LDA had a Locational Price Adder in any one or more of the three immediately preceding Base Residual Auctions; or
- C. such LDA is determined in a preliminary analysis by the Office of the Interconnection to be likely to have a Locational Price Adder, based on historic offer price levels; provided however that for the Base Residual Auction conducted for the Delivery Year commencing on June 1, 2012, the Eastern Mid-Atlantic Region (“EMAR”), Southwest Mid-Atlantic Region (“SWMAR”), and Mid-Atlantic Region (“MAR”) LDAs shall employ separate Variable Resource Requirement Curves regardless of the outcome of the above three tests; and provided further that the Office of the Interconnection may establish a separate Variable Resource Requirement Curve for an LDA not otherwise qualifying under the above three tests if it finds that such is required to achieve an acceptable level of reliability consistent with the Reliability Principles and Standards, in

which case the Office of the Interconnection shall post such finding, such LDA, and such Variable Resource Requirement Curve on its internet site no later than the March 31 last preceding the Base Residual Auction for such Delivery Year. The same process as set forth in subsection (a)(i) shall be used to establish the Variable Resource Requirement Curve for any such LDA, except that the Locational Deliverability Area Reliability Requirement for such LDA shall be substituted for the PJM Region Reliability Requirement and the LDA Short-Term Resource Procurement Target shall be substituted for the PJM Region Short-Term Resource Procurement Target. For purposes of calculating the Capacity Emergency Transfer Limit under this section, all generation resources located in the PJM Region that are, or that qualify to become, Capacity Resources, shall be modeled at their full capacity rating, regardless of the amount of capacity cleared from such resource for the immediately preceding Delivery Year.

iii) Procedure for ongoing review of Variable Resource Requirement Curve shape.

Beginning no later than for the Delivery Year that commences June 1, 2015, and continuing no later than for every third Delivery Year thereafter, the Office of the Interconnection shall perform a review of the shape of the Variable Resource Requirement Curve, as established by the requirements of the foregoing subsection. Such analysis shall be based on simulation of market conditions to quantify the ability of the market to invest in new Capacity Resources and to meet the applicable reliability requirements on a probabilistic basis. Based on the results of such review, PJM shall prepare a recommendation to either modify or retain the existing Variable Resource Requirement Curve shape. The Office of the Interconnection shall post the recommendation and shall review the recommendation through the stakeholder process to solicit stakeholder input. If a modification of the Variable Resource Requirement Curve shape is recommended, the following process shall be followed:

- A) If the Office of the Interconnection determines that the Variable Resource Requirement Curve shape should be modified, Staff of the Office of the Interconnection shall propose a new Variable Resource Requirement Curve shape on or before September 1, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new values would be applied.
- B) The PJM Members shall review the proposed modification to the Variable Resource Requirement Curve shape.
- C) The PJM Members shall either vote to endorse the proposed modification, to propose alternate modifications or to recommend no modification by October 31, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new values would be applied.

- D) The PJM Board of Managers shall consider a proposed modification to the Variable Resource Requirement Curve shape, and the Office of the Interconnection shall file any approved modified Variable Resource Requirement Curve shape with the FERC by December 1, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new values would be applied.

iv) Cost of New Entry

- A) For the Delivery Year commencing on June 1, 2012, and continuing thereafter unless and until changed pursuant to subsection (B) below, the Cost of New Entry for the PJM Region shall be \$112,868 per MW-year. The Cost of New Entry for each LDA shall be determined based upon the Transmission Owner zones that comprise such LDA, as provided in the table below. If an LDA combines transmission zones with differing Cost of New Entry values, the lowest such value shall be used.

Geographic Location Within the PJM Region Encompassing These Zones	Cost of New Entry in \$/MW-Year
PS, JCP&L, AE, PECO, DPL, RECO ("CONE Area 1")	<i>134,000</i>
BGE, PEPCO ("CONE Area 2")	<i>123,700</i>
AEP, Dayton, ComEd, APS, DQL, ATSI, DEOK ("CONE Area 3")	<i>123,500</i>
PPL, MetEd, Penelec ("CONE Area 4")	<i>130,100</i>
Dominion ("CONE Area 5")	<i>111,000</i>

- B) Beginning with the 2013-2014 Delivery Year, the CONE shall be adjusted to reflect changes in generating plant construction costs based on changes in the Applicable H-W Index, in accordance with the following:

(1) The Applicable H-W Index for any Delivery Year shall be the most recently published twelve-month change, at the time CONE values are required to be posted for the Base Residual Auction for such Delivery Year, in the Total Other Production Plant Index shown in the Handy-Whitman Index of Public Utility Construction Costs for the North Atlantic Region for purposes of CONE Areas 1, 2, and 4, for the North Central Region for purposes of CONE Area 3, and for the South Atlantic Region for purposes of CONE Area 5.

(2) The CONE in a CONE Area shall be adjusted prior to the Base Residual Auction for each Delivery Year by applying the Applicable H-W Index for such CONE Area to the Benchmark CONE for such CONE Area.

(3) The Benchmark CONE for a CONE Area shall be the CONE used for such CONE Area in the Base Residual Auction for the prior Delivery Year.

(4) Notwithstanding the foregoing, CONE values for any CONE Area for any Delivery Year shall be subject to amendment pursuant to appropriate filings with FERC under the Federal Power Act, including, without limitation, any filings resulting from the process described in section 5.10(a)(vii)(C) or any filing to establish new or revised CONE Areas.

v) Net Energy and Ancillary Services Revenue Offset

A) The Office of the Interconnection shall determine the Net Energy and Ancillary Services Revenue Offset each year for the PJM Region as (A) the annual average of the revenues that would have been received by the Reference Resource from the PJM energy markets during a period of three consecutive calendar years preceding the time of the determination, based on (1) the heat rate and other characteristics of such Reference Resource; (2) fuel prices reported during such period at an appropriate pricing point for the PJM Region with a fuel transmission adder appropriate for such region, as set forth in the PJM Manuals, assumed variable operation and maintenance expenses for such resource of \$6.47 per MWh, and actual PJM hourly average Locational Marginal Prices recorded in the PJM Region during such period; and (3) an assumption that the Reference Resource would be dispatched for both the Day-Ahead and Real-Time Energy Markets on a Peak-Hour Dispatch basis; plus (B) ancillary service revenues of \$2,199 per MW-year.

B) The Office of the Interconnection also shall determine a Net Energy and Ancillary Service Revenue Offset each year for each sub-region of the PJM Region for which the Cost of New Entry is determined as identified above, using the same procedures and methods as set forth in the previous subsection; provided, however, that: (1) the average hourly LMPs for the Zone in which the Reference Resource was assumed to be installed for purposes of the CONE estimate (as specified in the PJM Manuals) shall be used in place of the PJM Region average hourly LMPs; (2) if such sub-region was not integrated into the PJM Region for the entire applicable period, then the offset shall be calculated using only those whole calendar years during which the sub-region was integrated; and (3) a posted fuel pricing point in such sub-region, if available, and (if such pricing point is not available) a fuel

transmission adder appropriate to each assumed Cost of New Entry location from an appropriate PJM Region pricing point shall be used for each such sub-region.

vi) Adjustment to Net Energy and Ancillary Services Revenue Offset

Beginning with the Base Residual Auction scheduled for May 2010, the Net Energy and Ancillary Services Revenue Offset for a CONE Area shall be adjusted following any Delivery Year during which Scarcity Pricing was effective in such CONE Area pursuant to the Scarcity Pricing provisions of section 6A of Schedule 1 to the PJM Operating Agreement. Following each Delivery Year, the Scarcity Pricing revenues the Reference Resource in each CONE Area would have received during such Delivery Year shall be calculated based on the assumed heat rate and other characteristics of the Reference Resource, assumed Peak-Hour Dispatch, and the actual locational marginal prices and actual fuel prices during the Delivery Year for the applicable location, which shall be the transmission zone in which such resource was assumed to be installed for purposes of the estimate of CONE applicable to such CONE Area. The Scarcity Pricing revenues so determined shall be subtracted from the Net CONE otherwise calculated for such CONE Area for use in the Base Residual Auction next occurring after the Delivery Year in which Scarcity Pricing was effective in such CONE Area.

vii) Process for Establishing Parameters of Variable Resource Requirement Curve

- A) The parameters of the Variable Resource Requirement Curve will be established prior to the conduct of the Base Residual Auction for a Delivery Year and will be used for such Base Residual Auction.
- B) The Office of the Interconnection shall determine the PJM Region Reliability Requirement and the Locational Deliverability Area Reliability Requirement for each Locational Deliverability Area for which a Variable Resource Requirement Curve has been established for such Base Residual Auction on or before February 1, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new values will be applied, in accordance with the Reliability Assurance Agreement.
- C) Beginning no later than for the Delivery Year that commences June 1, 2015, and continuing no later than for every third Delivery Year thereafter, the Office of the Interconnection shall review the calculation of the Cost of New Entry for each CONE Area.
 - 1) If the Office of the Interconnection determines that the Cost of New Entry values should be modified, the Staff of the Office of the Interconnection shall propose new Cost of New Entry values on or before September 1, prior to the

conduct of the Base Residual Auction for the first Delivery Year in which the new values would be applied.

- 2) The PJM Members shall review the proposed values.
 - 3) The PJM Members shall either vote to endorse the proposed values or propose alternate values by October 31, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new values would be applied.
 - 4) The PJM Board of Managers shall consider Cost of New Entry values, and the Office of the Interconnection shall file any approved modified Cost of New Entry values with the FERC by December 1, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new values would be applied.
- D) Beginning no later than for the Delivery Year that commences June 1, 2015, and continuing no later than for every third Delivery Year thereafter, the Office of the Interconnection shall review the methodology set forth in this Attachment for determining the Net Energy and Ancillary Services Revenue Offset for the PJM Region and for each Zone.
- 1) If the Office of the Interconnection determines that the Net Energy and Ancillary Services Revenue Offset methodology should be modified, Staff of the Office of the Interconnection shall propose a new Net Energy and Ancillary Services Revenue Offset methodology on or before September 1, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new methodology would be applied.
 - 2) The PJM Members shall review the proposed methodology.
 - 3) The PJM Members shall either vote to endorse the proposed methodology or propose an alternate methodology by October 31, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new methodology would be applied.
 - 4) The PJM Board of Managers shall consider the Net Revenue Offset methodology, and the Office of the Interconnection shall file any approved modified Net Energy and Ancillary Services Revenue Offset values with

the FERC by December 1, prior to the conduct of the Base Residual Auction for the first Delivery Year in which the new values would be applied.

b) Locational Requirements

The Office of Interconnection shall establish locational requirements prior to the Base Residual Auction to quantify the amount of Unforced Capacity that must be committed in each Locational Deliverability Area, in accordance with the PJM Reliability Assurance Agreement.

c) Minimum Annual Resource Requirements

Prior to the Base Residual Auction and each Incremental Auction for each Delivery Year, beginning with the Delivery Year that starts on June 1, 2014, the Office of the Interconnection shall establish the Minimum Annual Resource Requirement and the Minimum Extended Summer Resource Requirement for the PJM Region and for each Locational Deliverability Area for which the Office of the Interconnection is required under section 5.10(a) of this Attachment DD to establish a separate VRR Curve for such Delivery Year.

d) Preliminary PJM Region Peak Load Forecast for the Delivery Year

The Office of the Interconnection shall establish the Preliminary PJM Region Load Forecast for the Delivery Year in accordance with the PJM Manuals by February 1, prior to the conduct of the Base Residual Auction for such Delivery Year.

e) Updated PJM Region Peak Load Forecasts for Incremental Auctions

The Office of the Interconnection shall establish the updated PJM Region Peak Load Forecast for a Delivery Year in accordance with the PJM Manuals by February 1, prior to the conduct of the First, Second, and Third Incremental Auction for such Delivery Year.

17. TRANSITION

17.1 Phase-in of the Reliability Pricing Model

The Reliability Pricing Model shall be phased in during the Transition Period as described below.

17.2 Reliability Pricing Model Auctions Conducted During Transition Period

- (a) The Office of the Interconnection shall conduct Base Residual Auctions for each Delivery Year in the Transition Period in accordance with the following schedule:

Delivery Year	Base Residual Auction Held
June 1, 2007 – May 31, 2008	April 2007
June 1, 2008 – May 31, 2009	July 2007
June 1, 2009 – May 31, 2010	October, 2007
June 1, 2010 – May 31, 2011	January, 2008
June 1, 2011 – May 31, 2012	May 2008

- b) The Office of the Interconnection shall conduct Incremental Auctions for each Delivery Year in the Transition Period in accordance with the following schedule:

Delivery Year	First Incremental Auction Held	Second Incremental Auction Held If Necessary	Third Incremental Auction Held
June 1, 2007 – May 31, 2008	None Held	None Held	None Held
June 1, 2008 – May 31, 2009	None Held	None Held	January, 2008
June 1, 2009 – May 31, 2010	None Held	April, 2008	January, 2009
June 1, 2010 – May 31, 2011	None Held	April, 2009	January, 2010
June 1, 2011 – May 31, 2012	June 2009	July 2010	February 2011

17.3 Transition Period Locational Deliverability Areas

The Office of the Interconnection shall establish Locational Deliverability Areas during the Transition Period in accordance with the following:

2007/2008, 2008/2009, and 2009/2010 Delivery Years

- MAR and APS (the zones listed below for EMAR, SWMAR and Western Mid-Atlantic Region (“WMAR”), plus APS)
- ComEd, AEP, Dayton, Dominion and Duquesne

- EMAR (PSE&G, JCP&L, PECO, AE, DPL & RECO)
- SWMAR (PEPCO & BG&E)

2010/2011 and subsequent Delivery Years

- MAR
- ComEd, AEP, Dayton, APS, and Duquesne
- Dominion
- EMAR
- SWMAR
- WMAR (Penelec, MetEd, PPL)
- Penelec
- ComEd
- AEP
- Dayton
- Duquesne
- APSAE
- BG&E
- DPL
- PECO
- PEPCO
- PSE&G
- JCP&L
- MetEd
- PPL
- PSEG northern region (north of Linden substation); and
- DPL southern region (south of Chesapeake and Delaware Canal).

17.4 Transition Period Variable Resource Requirement Curves

During the Transition Period, the Office of the Interconnection shall post on the PJM internet site the Variable Resource Requirement Curves that will apply for each Delivery Year no later than one month prior to the conduct of the Base Residual Auction for such Delivery Year.

17.5 Market Mitigation

The provisions of Section 6 of this Attachment shall apply to all Reliability Pricing Model Auctions conducted during the Transition Period; provided, however, that during the Transition Period, as to a Capacity Market Seller that owns or controls no more than 10,000 megawatts of Unforced Capacity in the PJM Region, the otherwise applicable Market Seller Offer Cap provided in Section 6 shall be increased by up to the following amounts in the following years for any Sell Offer submitted by such a seller in any Unconstrained LDA Group, with respect to no more than 3,000 megawatts of such Unforced Capacity:

- (a) \$10/MW-day for the 2007-2008 Delivery Year;
- (b) \$10/MW-day for the 2008-2009 Delivery Year; and

(c) \$7.50/MW-day for the 2009-2010 Delivery Year;

For purposes of this provision, the 10,000 megawatt maximum shall apply separately to a Capacity Market Seller's resources subject to state rate-based regulation and resources that are not subject to state rate-based regulation.

17.6 Performance Assessment

Within six months after the end of the fourth Delivery Year, the Office of the Interconnection shall prepare, provide to Members, and file with FERC an assessment of the performance of the Reliability Pricing Model.

APPENDIX II

DEFINITIONS

1. Definitions.

The following definitions shall apply to this Agreement.

1.1 “Affiliate”

Affiliate shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

1.2 “Applicable Laws and Regulations”

Applicable Laws and Regulations shall mean all duly promulgated applicable federal, State and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority having jurisdiction over the relevant Parties, their respective facilities, and/or the respective services they provide.

1.3 “Applicable Regional Entity”

Applicable Regional Entity shall mean the Regional Entity for the region in which the Transmission Owner or New Service Customer operates.

1.4 “Applicable Standards”

Applicable Standards shall mean the requirements and guidelines of NERC, the Applicable Regional Entity and the Control Area in which the Direct Assignment Facilities or Customer-Funded Upgrades are electrically located, the PJM Manuals and applicable technical requirements and standards.

1.5 “Breach”

Breach shall mean the failure of a Party to perform or observe any material term or condition of the applicable Part of the PJM Tariff or this Upgrade CSA.

1.6 “Breaching Party”

Breaching Party shall mean a Party that is in Breach of the applicable Part of the PJM Tariff and/or this Upgrade CSA.

1.7 “Cancellation Costs”

Cancellation Costs shall mean the Costs and liabilities incurred in connection with: (a) cancellation of supplier and contractor written orders and agreements entered into to design, engineer, construct and install the Direct Assignment Facilities or Customer-Funded Upgrades identified in Appendix I to this Upgrade CSA; and/or (b) completion of some or all of the Direct Assignment Facilities or Customer-Funded Upgrades identified in Appendix I to this Upgrade CSA, or specific unfinished portions and/or removal of any or all of such Direct Assignment Facilities or Customer-Funded Upgrades which have been installed, to the extent required for the Transmission Owner and Transmission Provider to perform their respective obligations under this Upgrade CSA.

1.8 “Commission”

Commission shall mean the Federal Energy Regulatory Commission.

1.9 “Confidential Information”

Confidential Information shall mean any confidential, proprietary, or trade secret information of a plan, specification, pattern, procedure, design, engineering, device, list, concept, policy, or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed verbally, electronically, in writing, through inspection, or otherwise, and shall include, without limitation, all information relating to the producing Party’s technology, research and development, business affairs and pricing, and any information supplied by any Party to another such Party prior to the execution of a Transmission Service Agreement or this Upgrade CSA.

1.10 “Constructing Entity”

Constructing Entity shall mean either the Transmission Owner or the New Service Customer, depending on which entity has the construction responsibility pursuant to Part VI and this Upgrade CSA.

1.11 “Control Area”

Control Area shall mean an electric power system or combination of electric power systems to which a common automatic generation control scheme is applied in order to: (1) match, at all times, the power output of the generators within the electric power system(s) and capacity and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s); (2) maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice; (3) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice; and (4) provide sufficient generating capacity to maintain operating reserves in accordance with Good Utility Practice.

1.12 “Costs”

Costs shall mean all of the actual costs and expenses incurred by the Transmission Owner to complete its obligations under Section 2.4 of this Upgrade CSA, including, but not limited to, capital expenditures, overhead, return, and the costs of financing, equipment, labor, services, taxes, income tax gross-ups and any Incidental Expenses.

1.13 “Default”

Default shall mean the failure of a Breaching Party to cure its Breach in accordance with the applicable provisions of this Upgrade CSA and the PJM Tariff.

1.14 “Delivering Party”

Delivering Party shall mean the entity supplying capacity and energy to be transmitted at Point(s) of Receipt.

1.15 “Emergency Condition”

Emergency Condition shall mean a condition or situation: (i) that in the judgment of any Party is imminently likely to endanger life or property; or (ii) that in the judgment of the Transmission Owner or the Transmission Provider is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Transmission System, a Transmission Owner’s transmission system or distribution system to which the Transmission System is directly or indirectly connected; or (iii) that in the judgment of the New Service Customer is imminently likely (as determined in a non-discriminatory manner) to cause damage to the facility.

1.16 “Environmental Laws”

Environmental Laws shall mean Applicable Laws or Regulations relating to pollution or protection of the environment, natural resources or human health and safety.

1.17 “Facilities Study”

Facilities Study shall mean that certain Facilities Study conducted by Transmission Provider (or at its direction) to determine the design and specification of the Direct Assignment Facilities or Customer-Funded Upgrades necessary to accommodate the New Service Request, as applicable.

1.18 “Federal Power Act”

Federal Power Act shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a, et seq.

1.19 “FERC”

FERC shall mean the Federal Energy Regulatory Commission or its successor.

1.20 “Firm Point-To-Point Transmission Service”

Firm Point-To-Point Transmission Service shall mean Transmission Service under the PJM Tariff that is reserved and/or scheduled between specified Points of Receipt and Delivery pursuant to Part II of the PJM Tariff.

1.21 “Force Majeure”

Force Majeure shall mean any cause beyond the control of the affected Party, including but not restricted to, acts of God, flood, drought, earthquake, storm, fire, lightning, epidemic, war, riot, civil disturbance or disobedience, labor dispute, labor or material shortage, sabotage, acts of public enemy, explosions, orders, regulations or restrictions imposed by governmental, military, or lawfully established civilian authorities, which, in any of the foregoing cases, by exercise of due diligence such Party could not reasonably have been expected to avoid, and which, by the exercise of due diligence, it has been unable to overcome. Force Majeure does not include: (i) a failure of performance that is due to an affected Party’s own negligence or intentional wrongdoing; (ii) any removable or remediable causes (other than settlement of a strike or labor dispute) which an affected Party fails to remove or remedy within a reasonable time; or (iii) economic hardship of an affected Party.

1.22 “Good Utility Practice”

Good Utility Practice shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

1.23 “Governmental Authority”

Governmental Authority means any federal, State, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, arbitrating body, or other governmental authority having jurisdiction over any Party regarding any matter relating to this Upgrade CSA, as applicable.

1.24 “Hazardous Substances”

Hazardous Substances shall mean any chemicals, materials or substances defined as or included in the definition of “hazardous substances,” “hazardous wastes,” “hazardous materials,” “hazardous constituents,” “restricted hazardous materials,” “extremely hazardous substances,” “toxic substances,” “radioactive substances,” “contaminants,” “pollutants,” “toxic pollutants” or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

1.25 “Incidental Expenses”

Incidental Expenses shall mean those expenses incidental to the performance of design, engineering, procurement and construction of the Direct Assignment Facilities or Customer-Funded Upgrades identified in Appendix I to this Upgrade CSA, including, but not limited to, the expense of temporary construction power, telecommunications charges, Transmission Owner expenses associated with, but not limited to, document preparation, design review, engineering, installation, monitoring, and construction-related operations and maintenance for the Direct Assignment Facilities or Customer-Funded Upgrades identified in Appendix I to this Upgrade CSA.

1.26 “Local Upgrades”

Local Upgrades shall mean modifications or additions of facilities to abate any local thermal loading, voltage, short circuit, stability or similar engineering problem caused by the interconnection and delivery of generation to the Transmission System. Local Upgrades shall include: (i) Direct Connection Local Upgrades which are Local Upgrades that only serve the Customer Interconnection Facility and have no impact or potential impact on the Transmission System until the final tie-in is complete; and (ii) Non-Direct Connection Local Upgrades which are parallel flow Local Upgrades that are not Direct Connection Local Upgrades.

(i) Direct Connection Local Upgrades which are Local Upgrades that only serve the Customer Interconnection Facility and have no impact or potential impact on the Transmission System until the final tie-in is complete; and

(ii) Direct Connection Local Upgrades which are parallel flow Local Upgrades that are not Direct Connection Local Upgrades.

1.27 “Long-Term Firm Point-To-Point Transmission Service”

Long-Term Firm Point-To-Point Transmission Service shall mean Firm Point-To-Point Transmission Service under Part II of the PJM Tariff with a term of one year or more.

1.28 “NERC”

NERC shall mean the North American Electric Reliability Council or any successor thereto.

1.29 “Network Upgrades”

Network Upgrades shall mean modifications or additions to transmission-related facilities that are integrated with and support the Transmission Provider’s overall Transmission System for the general benefit of all users of such Transmission System. Network Upgrades shall include:

(i) **Direct Connection Network Upgrades** which are Network Upgrades that only serve the Customer Interconnection Facility and have no impact or potential impact on the Transmission System until the final tie-in is complete; and

(ii) **Non-Direct Connection Network Upgrades** which are parallel flow Network Upgrades that are not Direct Connection Network Upgrades.

1.30 “Office of the Interconnection”

Office of the Interconnection shall mean the Office of the Interconnection, as supervised by the Board of Managers of the PJM Interconnection, L.L.C., acting pursuant to the Operating Agreement.

1.31 “Operating Agreement of the PJM Interconnection, L.L.C.” or “Operating Agreement”

Operating Agreement of the PJM Interconnection, L.L.C.” or “Operating Agreement shall mean that agreement dated as of April 1, 1997 and as amended and restated as of June 2, 1997 and as amended from time to time thereafter, among the members of the PJM Interconnection, L.L.C.

1.32 “Part I”

Part I shall mean the PJM Tariff Definitions and Common Service Provisions contained in Sections 2 through 12 of the PJM Tariff.

1.33 “Part II”

Part II shall mean PJM Tariff Sections 13 through 27 pertaining to Point-To-Point Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments of the PJM Tariff.

1.34 “Part III”

Part III shall mean PJM Tariff Sections 28 through 35 pertaining to Network Integration Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments of the PJM Tariff.

1.35 “Part IV”

Part IV shall mean PJM Tariff Sections 36 through 112 pertaining to generation or merchant transmission interconnection to the Transmission System in conjunction with applicable Common Service Provision of Part I and appropriate Schedules and Attachments.

1.36 “Part VI”

Part VI shall mean PJM Tariff Sections 200 through 237 pertaining to the queuing, study, and agreements relating to New Service Requests, and the rights associated with Customer-Funded Upgrades in conjunction with the applicable Common Service Provision of Part I and appropriate Schedules and Attachments.

1.37 “PJM Interchange Energy Market”

PJM Interchange Energy Market shall mean the regional competitive market administered by the Transmission Provider for the purchase and sale of spot electric energy at wholesale interstate commerce and related services, as more fully set forth in Attachment K – Appendix to the PJM Tariff and Schedule 1 to the Operating Agreement.

1.38 “PJM Manuals”

PJM Manuals shall mean the instructions, rules, procedures and guidelines established by the Transmission Provider for the operation, planning, and accounting requirements of the PJM Region and the PJM Interchange Energy Market.

1.39 “PJM Region”

PJM Region shall have the meaning specified in the Operating Agreement.

1.40 “Point(s) of Delivery”

Point(s) of Delivery shall mean the point(s) on the Transmission Provider’s Transmission System where capacity and energy transmitted by the Transmission Provider will be made available to the Receiving Party under Part II of the PJM Tariff. The Point(s) of Delivery shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

1.41 “Point(s) of Receipt”

Point(s) of Receipt shall mean the point(s) of interconnection on the Transmission Provider’s Transmission System where capacity and energy will be made available to the Transmission Provider by the Delivering Party under Part II of the PJM Tariff. The Point(s) of Receipt shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

1.42 “Project Financing” means:

Project Financing shall mean

(a) One or more loans, leases, equity and/or debt financings, together with all modifications, renewals, supplements, substitutions and replacements thereof, the proceeds of which are used to finance or refinance the costs of the Direct Assignment Facilities or Customer-Funded Upgrades identified in Appendix I to this Upgrade CSA, any alteration, expansion or improvement to such Direct Assignment Facilities or Customer-Funded Upgrades, the purchase

and sale of such Direct Assignment Facilities or Customer-Funded Upgrades or the operation of such Direct Assignment Facilities or Customer-Funded Upgrades;

(b) Loans and/or debt issues secured by the Direct Assignment Facilities or Customer-Funded Upgrades identified in Appendix I to this Upgrade CSA.

1.43 “Project Finance Entity”

Project Finance Entity means: (a) a holder, trustee or agent for holders, of any component of Project Financing; or (b) any purchaser of capacity and/or energy produced by the facility to which New Service Customer has granted a mortgage or other lien as security for some or all of New Service Customer’s obligations under the corresponding power purchase agreement.

1.44 “Reasonable Efforts”

Reasonable Efforts shall mean, with respect to any action required to be made, attempted, or taken by Transmission Provider or Transmission Owner, such efforts as are timely and consistent with Good Utility Practice and with efforts that such Party would undertake for the protection of its own interests.

1.45 “Receiving Party”

Receiving Party shall mean the entity receiving the capacity and energy transmitted by the Transmission Provider to Point(s) of Delivery.

1.46 “Regional Transmission Expansion Plan” or “RTEP”

Regional Transmission Expansion Plan or “RTEP” shall mean the plan prepared by the Office of the Interconnection pursuant to Schedule 6 of the Operating Agreement for the enhancement and expansion of the Transmission System in order to meet the demands for firm transmission service in the PJM Region.

1.47 “Schedule and Scope of Work”

Schedule and Scope of Work shall mean that schedule and scope of work attached to the Upgrade CSA setting forth the scope and timing of work to be performed by the Transmission Owner, based upon the Facilities Study and subject to modification, as required, in accordance with Transmission Provider’s scope change process for projects set forth in the PJM Manuals.

1.48 “Security”

Security shall mean the letter of credit or other reasonable form of security provided by the New Service Customer to the Transmission Provider pursuant to Section 213.4 of the PJM Tariff to secure the New Service Customer’s responsibility for Costs incurred pursuant to this Upgrade CSA.

1.49 “Service Agreement”

Service Agreement shall mean the initial agreement and any amendments or supplements thereto entered into by the New Service Customer and the Transmission Provider for service under the PJM Tariff.

1.50 “State”

State shall mean a state of the United States or the District of Columbia.

1.51 “Transmission System”

Transmission System shall mean the facilities controlled or operated by the Transmission Provider within the PJM Region that are used to provide transmission service under Part II and Part III of the PJM Tariff.

**Section(s) of the
PJM Operating Agreement
(Clean Version)**

Definitions A - B

1.1 Act.

“Act” shall mean the Delaware Limited Liability Company Act, Title 6, §§ 18-101 to 18-1109 of the Delaware Code.

1.1A Active and Significant Business Interest.

“Active and Significant Business Interest” is a term that shall be used to assess the scope of a Member’s PJM membership and shall be based on a Member’s activity in the PJM RTO and/or Interchange Energy Markets. A Member’s Active and Significant Business Interest shall: 1) be determined relative to the scope of the Member’s PJM membership and activity in the PJM RTO and/or Interchange Energy Markets considering, among other things, the Member’s public statements and/or regulatory filings regarding its PJM activities; and 2) reflect a substantial contributor to the Member’s recent market activity, revenues, costs, investment, and/or earnings when considering the Member and its corporate affiliates’ interests within the PJM footprint.

1.2 Affiliate.

“Affiliate” shall mean any two or more entities, one of which controls the other or that are under common control. “Control” shall mean the possession, directly or indirectly, of the power to direct the management or policies of an entity. Ownership of publicly-traded equity securities of another entity shall not result in control or affiliation for purposes of this Agreement if the securities are held as an investment, the holder owns (in its name or via intermediaries) less than 10 percent of the outstanding securities of the entity, the holder does not have representation on the entity's board of directors (or equivalent managing entity) or vice versa, and the holder does not in fact exercise influence over day-to-day management decisions. Unless the contrary is demonstrated to the satisfaction of the Members Committee, control shall be presumed to arise from the ownership of or the power to vote, directly or indirectly, ten percent or more of the voting securities of such entity.

1.2A Affected Member.

“Affected Member” shall mean a Member which as a result of its participation in PJM’s markets or its membership in the LLC PJM provided confidential information to the Office of the Interconnection, which confidential information is requested by, or is disclosed to an Authorized Person under a Non-Disclosure Agreement.

1.3 Agreement or Operating Agreement.

“Agreement” or “Operating Agreement” shall mean this Amended and Restated Operating Agreement of PJM Interconnection, L.L.C., including all Schedules, Exhibits, Appendices, addenda or supplements hereto, as amended from time to time.

1.4 Annual Meeting of the Members.

“Annual Meeting of the Members” shall mean the meeting specified in Section 8.3.1 of this Agreement.

1.4.01 Associate Member.

“Associate Member” shall mean an entity that satisfies the requirements of Section 11.7 of this Agreement.

1.4A Authorized Commission.

“Authorized Commission” shall mean (i) a State public utility commission that regulates the distribution or supply of electricity to retail customers and is legally charged with monitoring the operation of wholesale or retail markets serving retail suppliers or customers within its State or (ii) an association or organization comprised exclusively of State public utility commissions described in the immediately preceding clause (i).

1.4B Authorized Person.

“Authorized Person” shall have the meaning set forth in Section 18.17.4.

1.5 Board Member.

“Board Member” shall mean a member of the PJM Board.

1.5A Applicable Regional Entity.

“Applicable Regional Entity” shall mean the Regional Entity for the region in which a Member operates.

1.5B Behind The Meter Generation.

“Behind The Meter Generation” refers to a generating unit that delivers energy to load without using the Transmission System or any distribution facilities (unless the entity that owns or leases the distribution facilities has consented to such use of the distribution facilities and such consent has been demonstrated to the satisfaction of the Office of the Interconnection); provided, however, that Behind The Meter Generation does not include (i) at any time, any portion of such generating unit’s capacity that is designated as a Generation Capacity Resource, or (ii) in any hour, any portion of the output of such generating unit[s] that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market.

Definitions C - D

1.6 Capacity Resource.

“Capacity Resource” have the meaning provided in the Reliability Assurance Agreement.

1.6A Consolidated Transmission Owners Agreement.

“Consolidated Transmission Owners Agreement” dated as of December 15, 2005, by and among the Transmission Owners and by and between the Transmission Owners and PJM Interconnection, L.L.C.

1.7 Control Area.

“Control Area” shall mean an electric power system or combination of electric power systems bounded by interconnection metering and telemetry to which a common automatic generation control scheme is applied in order to:

- (a) match the power output of the generators within the electric power system(s) and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s);
- (b) maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice;
- (c) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice and the criteria of NERC and each Applicable Regional Entity;
- (d) maintain power flows on transmission facilities within appropriate limits to preserve reliability; and
- (e) provide sufficient generating capacity to maintain operating reserves in accordance with Good Utility Practice.

1.7.01 Control Zone.

“Control Zone” shall mean one Zone or multiple contiguous Zones, as designated in the PJM Manuals.

1.7.01a Counterparty.

“Counterparty” shall mean PJMSettlement as the contracting party, in its name and own right and not as an agent, to an agreement or transaction with Market Participants or other entities, including the agreements and transactions with customers regarding transmission service and other transactions under the PJM Tariff and this Operating Agreement. PJMSettlement shall not be a counterparty to (i)

any bilateral transactions between Market Participants, or (ii) with respect to self-supplied or self-scheduled transactions reported to the Office of the Interconnection.

1.7.02 Default Allocation Assessment.

“Default Allocation Assessment” shall mean the assessment determined pursuant to section 15.2.2 of this Agreement.

1.7.03 Demand Resource.

“Demand Resource” shall have the meaning provided in the Reliability Assurance Agreement.

1.7A [Reserved].

1.7B [Reserved].

Definitions E - F

1.7C [Reserved]

1.7D [Reserved]

1.8 Electric Distributor.

“Electric Distributor” shall mean a Member that: 1) owns or leases with rights equivalent to ownership electric distribution facilities that are used to provide electric distribution service to electric load within the PJM Region; or 2) is a generation and transmission cooperative or a joint municipal agency that has a member that owns electric distribution facilities used to provide electric distribution service to electric load within the PJM Region.

1.9 Effective Date.

“Effective Date” shall mean August 1, 1997, or such later date that FERC permits this Agreement to go into effect.

1.10 Emergency.

“Emergency” shall mean: (i) an abnormal system condition requiring manual or automatic action to maintain system frequency, or to prevent loss of firm load, equipment damage, or tripping of system elements that could adversely affect the reliability of an electric system or the safety of persons or property; or (ii) a fuel shortage requiring departure from normal operating procedures in order to minimize the use of such scarce fuel; or (iii) a condition that requires implementation of emergency procedures as defined in the PJM Manuals.

1.11 End-Use Customer.

“End-Use Customer” shall mean a Member that is a retail end-user of electricity within the PJM Region. A Member that is a retail end-user that owns generation may qualify as an End-Use customer if: (1) the average physical unforced capacity owned by the Member and its affiliates in the PJM region over the five Planning Periods immediately preceding the relevant Planning Period does not exceed the average PJM capacity obligation for the Member and its affiliates over the same time period; or (2) the average energy produced by the Member and its affiliates within the PJM region over the five Planning Periods immediately preceding the relevant Planning Period does not exceed the average energy consumed by that Member and its affiliates within the PJM region over the same time period. The foregoing notwithstanding, taking retail service may not be sufficient to qualify a Member as an End-Use Customer.

1.12 FERC.

“FERC” shall mean the Federal Energy Regulatory Commission or any successor federal agency, commission or department exercising jurisdiction over this Agreement.

1.13 Finance Committee.

“Finance Committee” shall mean the body formed pursuant to Section 7.5.1 of this Agreement.

Definitions M - N

1.20 [Reserved]

1.20A PJM Mid-Atlantic Region.

“PJM Mid-Atlantic Region” shall mean the aggregate of the Transmission Facilities of Atlantic City Electric Company, Baltimore Gas and Electric Company, Delmarva Power and Light Company, Jersey Central Power and Light Company, Metropolitan Edison Company, PECO Energy Company, Pennsylvania Electric Company, PPL Electric Utilities Corporation, Potomac Electric Power Company, Public Service Electric and Gas Company, and Rockland Electric Company.

1.20B [Reserved]

1.20C [Reserved]

1.21 Market Buyer.

“Market Buyer” shall mean a Member that has met reasonable creditworthiness standards established by the Office of the Interconnection and that is otherwise able to make purchases in the PJM Interchange Energy Market.

1.22 Market Participant.

“Market Participant” shall mean a Market Buyer, a Market Seller, an Economic Load Response Participant, or all three.

1.23 Market Seller.

“Market Seller” shall mean a Member that has met reasonable creditworthiness standards established by the Office of the Interconnection and that is otherwise able to make sales in the PJM Interchange Energy Market.

1.24 Member.

“Member” shall mean an entity that satisfies the requirements of Section 11.6 of this Agreement and that (i) is a member of the LLC immediately prior to the Effective Date, or (ii) has executed an Additional Member Agreement in the form set forth in Schedule 4 hereof.

1.25 Members Committee.

“Members Committee” shall mean the committee specified in Section 8 of this Agreement composed of representatives of all the Members.

1.26 NERC.

“NERC” shall mean the North American Electric Reliability Council, or any successor thereto.

1.26A Non-Disclosure Agreement.

“Non-Disclosure Agreement” shall mean an agreement between an Authorized Person and the Office of the Interconnection, pursuant to Section 18 of this Agreement, the form of which is appended to this Agreement as Schedule 10, wherein the Authorized Person is given access to otherwise restricted confidential information, for the benefit of their respective Authorized Commission.

1.26B Non-Retail Behind The Meter Generation.

“Non-Retail Behind The Meter Generation” shall mean Behind the Meter Generation that is used by municipal electric systems, electric cooperatives, and electric distribution companies to serve load.

Definitions O - P

1.27 Office of the Interconnection.

“Office of the Interconnection” shall mean the LLC.

1.28 Operating Reserve.

“Operating Reserve” shall mean the amount of generating capacity scheduled to be available for a specified period of an Operating Day to ensure the reliable operation of a Control Zone, as specified in the PJM Manuals.

1.29 Original PJM Agreement.

“Original PJM Agreement” shall mean that certain agreement between certain of the Members, originally dated September 26, 1956, and as amended and supplemented up to and including December 31, 1996, relating to the coordinated operation of their electric supply systems and the interchange of electric capacity and energy among their systems.

1.30 Other Supplier.

“Other Supplier” shall mean a Member that: (i) is engaged in buying, selling or transmitting electric energy, capacity, ancillary services, financial transmission rights or other services available under PJM’s governing documents in or through the Interconnection or has a good faith intent to do so, and; (ii) does not qualify for the Generation Owner, Electric Distributor, Transmission Owner or End-Use Customer sectors.

1.31 PJM Board.

“PJM Board” shall mean the Board of Managers of the LLC, acting pursuant to this Agreement.

1.31A [Reserved].

1.32 PJM Control Area.

“PJM Control Area” shall mean the Control Area recognized by NERC as the PJM Control Area.

1.33 PJM Dispute Resolution Procedures.

“PJM Dispute Resolution Procedures” shall mean the procedures for the resolution of disputes set forth in Schedule 5 of this Agreement.

1.34 PJM Interchange Energy Market.

“PJM Interchange Energy Market” shall mean the regional competitive market administered by the Office of the Interconnection for the purchase and sale of spot electric energy at wholesale in interstate commerce and related services established pursuant to Schedule 1 to this Agreement.

1.35 PJM Manuals.

“PJM Manuals” shall mean the instructions, rules, procedures and guidelines established by the Office of the Interconnection for the operation, planning, and accounting requirements of the PJM Region and the PJM Interchange Energy Market.

1.35.01 PJM Market Monitor.

“PJM Market Monitor” shall mean the Market Monitoring Unit established under Attachment M to the PJM Tariff.

1.35A PJM Region.

“PJM Region” shall mean the aggregate of the Zones within PJM as set forth in Attachment J to the PJM Tariff.

1.35B PJM South Region.

“PJM South Region” shall mean the Transmission Facilities of Virginia Electric and Power Company.

1.35C PJMSettlement.

“PJMSettlement” shall mean PJM Settlement, Inc. (or its successor), established by PJM as set forth in Section 3.3.

1.36 PJM Tariff.

“PJM Tariff” shall mean the PJM Open Access Transmission Tariff providing transmission service within the PJM Region, including any schedules, appendices, or exhibits attached thereto, as in effect from time to time.

1.36A [Reserved.]

1.36B PJM West Region.

“PJM West Region” shall mean the Zones of Allegheny Power; Commonwealth Edison Company (including Commonwealth Edison Co. of Indiana); AEP East Operating Companies; The Dayton Power and Light Company; the Duquesne Light Company; American Transmission Systems, Incorporated; Duke Energy Ohio, Inc. and Duke Energy Kentucky, Inc.

1.37 Planning Period.

“Planning Period” shall initially mean the 12 months beginning June 1 and extending through May 31 of the following year, or such other period established under the procedures of, as applicable, the Reliability Assurance Agreement.

1.38 President.

“President” shall have the meaning specified in Section 9.2.

1.38A Public Policy Objectives

“Public Policy Objectives” shall refer to Public Policy Requirements, as well as public policy initiatives of state or federal entities that have not been codified into law or regulation but which nonetheless may have important impacts on long term planning considerations.

1.38B Public Policy Requirements

“Public Policy Requirements” shall refer to policies pursued by state or federal entities, where such policies are reflected in enacted statutes or regulations, including but not limited to, state renewable portfolio standards and requirements under Environmental Protection Agency regulations.

Definitions Q - R

1.38.001 Regional Entity.

“Regional Entity” shall mean an organization that NERC has delegated the authority to propose and enforce reliability standards pursuant to the Federal Power Act.

1.38.01 Regional RTEP Project.

“Regional RTEP Project” shall mean a transmission expansion or enhancement rated at 230 kV or above which is required for compliance with the following PJM criteria: system reliability, operational performance or economic criteria, pursuant to a determination by the Office of the Interconnection.

1.38.01A Relevant Electric Retail Regulatory Authority:

An entity that has jurisdiction over and establishes prices and policies for competition for providers of retail electric service to end-customers, such as the city council for a municipal utility, the governing board of a cooperative utility, the state public utility commission or any other such entity.

1.38A Regulation Zone.

“Regulation Zone” shall mean any of those one or more geographic areas, each consisting of a combination of one or more Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, regulation service.

1.39 Related Parties.

“Related Parties” shall mean, solely for purposes of the governance provisions of this Agreement: (i) any generation and transmission cooperative and one of its distribution cooperative members; and (ii) any joint municipal agency and one of its members. For purposes of this Agreement, representatives of state or federal government agencies shall not be deemed Related Parties with respect to each other, and a public body's regulatory authority, if any, over a Member shall not be deemed to make it a Related Party with respect to that Member.

1.40 Reliability Assurance Agreement.

“Reliability Assurance Agreement” shall mean that certain Reliability Assurance Agreement Among Load-Serving Entities in the PJM Region, on file with FERC as PJM Interconnection, L.L.C. Rate Schedule FERC. No .42, establishing obligations, standards and procedures for maintaining the reliable operation of the PJM Region.

1.40A [Reserved].

1.40B [Reserved].

Definitions U - Z

1.47 User Group.

“User Group” shall mean a group formed pursuant to Section 8.7 of this Agreement.

1.47A VACAR.

“VACAR” shall mean the group of five companies, consisting of Duke Energy, Carolina Power and Light, South Carolina Public Service Authority, South Carolina Electric and Gas, and Virginia Electric and Power Company.

1.47B [Reserved]

1.48 Voting Member.

“Voting Member” shall mean (i) a Member as to which no other Member is an Affiliate or Related Party, or (ii) a Member together with any other Members as to which it is an Affiliate or Related Party.

1.49 Weighted Interest.

“Weighted Interest” shall be equal to $(0.1(1/N) + 0.5(B/C) + 0.2(D/E) + 0.2(F/G))$, where:

N = the total number of Members excluding ex officio Members and State Consumer Advocates (which, for purposes of Section 15.2 of this agreement, shall be calculated as of five o'clock p.m. Eastern Time on the date PJM declares a Member in default)

B = the Member's internal peak demand for the previous calendar year (which, for Load Serving Entities under the Reliability Assurance Agreement, shall be that used to calculate Accounted For Obligation as determined by the Office of the Interconnection pursuant to Schedule 7 of the Reliability Assurance Agreement averaged over the previous calendar year)

C = the sum of factor B for all Members

D = the Member's generating capability from Generation Capacity Resources located in the PJM Region as of January 1 of the current calendar year, determined by the Office of the Interconnection pursuant to Schedule 9 of the Reliability Assurance Agreement

E = the sum of factor D for all Members

F = the sum of the Member's circuit miles of transmission facilities multiplied by the respective operating voltage for facilities 100 kV and above as of January 1 of the current calendar year

G = the sum of factor F for all Members

1.50 [Reserved].

1.51 [Reserved].

1.52 Zone.

“Zone” shall mean an area within the PJM Region, as set forth in Attachment J to the PJM Tariff.

10.4 Duties and Responsibilities.

The Office of the Interconnection, under the direction of the President as supervised and overseen by the PJM Board, shall carry out the following duties and responsibilities, in accordance with the provisions of this Agreement:

- i) Administer and implement this Agreement;
- ii) Perform such functions in furtherance of this Agreement as the PJM Board, acting within the scope of its duties and responsibilities under this Agreement, may direct;
- iii) Prepare, maintain, update and disseminate the PJM Manuals;
- iv) Comply with NERC, and Applicable Regional Entity operation and planning standards, principles and guidelines;
- v) Maintain an appropriately trained workforce, and such equipment and facilities, including computer hardware and software and backup power supplies, as necessary or appropriate to implement or administer this Agreement;
- vi) Direct the operation and coordinate the maintenance of the facilities of the PJM Region used for both load and reactive supply, so as to maintain reliability of service and obtain the benefits of pooling and interchange consistent with this Agreement, and the Reliability Assurance Agreement;
- vii) Direct the operation and coordinate the maintenance of the bulk power supply facilities of the PJM Region with such facilities and systems of others not party to this Agreement in accordance with agreements between the LLC and such other systems to secure reliability and continuity of service and other advantages of pooling on a regional basis;
- viii) Perform interchange accounting and maintain records pertaining to the operation of the PJM Interchange Energy Market and the PJM Region;
- ix) Notify the Members of the receipt of any application to become a Member, and of the action of the Office of the Interconnection on such application, including but not limited to the completion of integration of a new Member's system into the PJM Region, as specified in Section 11.6(f);
- x) Calculate the Weighted Interest and Default Allocation Assessment of each Member;
- xi) Maintain accurate records of the sectors in which each Voting Member is entitled to vote, and calculate the results of any vote taken in the Members Committee;
- xii) Furnish appropriate information and reports as are required to keep the Members regularly informed of the outlook for, the functioning of, and results achieved by the PJM Region;

- xiii) File with FERC on behalf of the Members any amendments to this Agreement or the Schedules hereto, any new Schedules hereto, and make any other regulatory filings on behalf of the Members or the LLC necessary to implement this Agreement;
- xiv) At the direction of the PJM Board, submit comments to regulatory authorities on matters pertinent to the PJM Region;
- xv) Consult with the standing or other committees established pursuant to Section 8.6(a) on matters within the responsibility of the committee;
- xvi) Perform operating studies of the bulk power supply facilities of the PJM Region and make such recommendations and initiate such actions as may be necessary to maintain reliable operation of the PJM Region;
- xvii) Accept, on behalf of the Members, notices served under this Agreement;
- xviii) Perform those functions and undertake those responsibilities transferred to it under the Consolidated Transmission Owners Agreement including (A) directing the operation of the transmission facilities of the parties to the Consolidated Transmission Owners Agreement (B) administering the PJM Tariff, and (C) administering the Regional Transmission Expansion Planning Protocol set forth as Schedule 6 to this Agreement;
- xix) Perform those functions and undertake those responsibilities transferred to it under the Reliability Assurance Agreement, as specified in Schedule 8 of this Agreement;
- xx) Monitor the operation of the PJM Region, ensure that appropriate Emergency plans are in place and appropriate Emergency drills are conducted, declare the existence of an Emergency, and direct the operations of the Members as necessary to manage, alleviate or end an Emergency;
- xxi) Incorporate the grid reliability requirements applicable to nuclear generating units in the PJM Region planning and operating principles and practices;
- xxii) Initiate such legal or regulatory proceedings as directed by the PJM Board to enforce the obligations of this Agreement; and
- xxiii) Select an individual to serve as the Alternate Dispute Resolution Coordinator as specified in the PJM Dispute Resolution Procedures.

11.3 Member Responsibilities.

11.3.1 General.

To facilitate and provide for the work of the Office of the Interconnection and of the several committees appointed by the Members Committee, each Member shall, to the extent applicable;

- (a) Maintain complete and accurate records, if any, required to meet the purposes of this section and, subject to the provisions of this Agreement for the protection of the confidentiality of proprietary or commercially sensitive information, provide, as reasonably requested, data (excluding transactional data), documents, or records, to the Office of the Interconnection required for the following purposes: (i) maintenance of correct and updated Member and Affiliate Information, including appropriate personnel contacts, PJM committee representatives, organizational structure and other information as reasonably requested by the Office of the Interconnection to ensure the accuracy and completeness of Member records, (ii) maintenance of correct and updated Member and Affiliate Information on unit ownership, unit offer determination, unit offer submissions and unit operation, (iii) coordination of operations, (iv) accounting for all interchange transactions, (v) preparation of required reports, (vi) coordination of planning, including those data required for capacity accounting under the Reliability Assurance Agreement; (vii) preparation of maintenance schedules, (viii) analysis of system disturbances, and (ix) such other purposes, including those set forth in Schedule 2, as will contribute to the reliable and economic operation of the PJM Region and the administration by the Office of the Interconnection of the Agreement, the PJM Tariff and PJM Manuals – For the purposes of this subsection, Member and Affiliate Information means information regarding Members and either: (1) their direct and/or indirect subsidiaries subject to the jurisdiction of the FERC, or (2) their Related Parties;
- (b) Provide such recording, telemetering, revenue quality metering, communication and control facilities as are required for the coordination of its operations with the Office of the Interconnection and those of the other Members and to enable the Office of the Interconnection to operate the PJM Region and otherwise implement and administer this Agreement, including equipment required in normal and Emergency operations and for the recording and analysis of system disturbances;
- (c) Provide adequate and properly trained personnel to (i) permit participation in the coordinated operation of the PJM Region (ii) meet its obligation on a timely basis for supply of records and data, (iii) serve on committees and participate in their investigations, and (iv) share in the representation of the Interconnection in inter-regional and national reliability activities. Minimum training for Members that operate Market Operations Centers and local control centers shall include compliance with the applicable training standards and requirements in PJM Manual 01, Control Center Requirements, including the PJM System Operator Training Requirements in Attachment C;
- (d) Share in the costs of committee activities and investigations (including costs of consultants, computer time and other appropriate items), communication facilities used by all the Members (in addition to those provided in the Office of the Interconnection), and such other

expenses as are approved for payment by the PJM Board, such costs to be recovered as provided in Schedule 3;

(e) Comply with the requirements of the PJM Manuals and all directives of the Office of the Interconnection to take any action for the purpose of managing, alleviating or ending an Emergency, and authorize the Office of the Interconnection to direct the transfer or interruption of the delivery of energy on their behalf to meet an Emergency and to implement agreements with other Control Areas interconnected with the PJM Region for the mutual provision of service to meet an Emergency, and be subject to the emergency procedure charges specified in Schedule 9 of this Agreement for any failure to follow the Emergency instructions of the Office of the Interconnection. In addressing any Emergency, the Office of the Interconnection shall comply with the terms of any reserve sharing agreements in effect for any part of the PJM Region.

11.3.2 Facilities Planning and Operation.

Consistent with and subject to the requirements of this Agreement, the PJM Tariff, the governing agreements of each Applicable Regional Entity, the Reliability Assurance Agreement, the Consolidated Transmission Owners Agreement, and the PJM Manuals, each Member shall cooperate with the other Members in the coordinated planning and operation of the facilities of its System within the PJM Region so as to obtain the greatest practicable degree of reliability, compatible economy and other advantages from such coordinated planning and operation. In furtherance of such cooperation each Member shall, as applicable:

(a) Consult with the other Members and the Office of the Interconnection, and coordinate the installation of its electric generation and Transmission Facilities with those of such other Members so as to maintain reliable service in the PJM Region;

(b) Coordinate with the other Members, the Office of the Interconnection and with others in the planning and operation of the regional facilities to secure a high level of reliability and continuity of service and other advantages;

(c) Cooperate with the other Members and the Office of the Interconnection in the implementation of all policies and procedures established pursuant to this Agreement for dealing with Emergencies, including but not limited to policies and procedures for maintaining or arranging for a portion of a Member's Generation Capacity Resources, at least equal to the applicable levels established from time to time by the Office of the Interconnection, to have the ability to go from a shutdown condition to an operating condition and start delivering power without assistance from the power system;

(d) Cooperate with the members of each Applicable Regional Entity to augment the reliability of the bulk power supply facilities of the region and comply with Applicable Regional Entities and NERC operating and planning standards, principles and guidelines and the PJM Manuals implementing such standards, principles and guidelines;

(e) Obtain or arrange for transmission service as appropriate to carry out this Agreement;

- (f) Cooperate with the Office of the Interconnection's coordination of the operating and maintenance schedules of the Member's generating and Transmission Facilities with the facilities of other Members to maintain reliable service to its own customers and those of the other Members and to obtain economic efficiencies consistent therewith;
- (g) Cooperate with the other Members and the Office of the Interconnection in the analysis, formulation and implementation of plans to prevent or eliminate conditions that impair the reliability of the PJM Region; and
- (h) Adopt and apply standards adopted pursuant to this Agreement and conforming to NERC, and Applicable Regional Entity standards, principles and guidelines and the PJM Manuals, for system design, equipment ratings, operating practices and maintenance practices.

11.3.3 Electric Distributors.

In addition to any of the foregoing responsibilities that may be applicable, each Member that is an Electric Distributor, whether or not that Member votes in the Members Committee in the Electric Distributor sector or meets the eligibility requirements for any other sector of the Members Committee, shall:

- (a) Accept, comply with or be compatible with all standards applicable within the PJM Region with respect to system design, equipment ratings, operating practices and maintenance practices as set forth in the PJM Manuals, or be subject to an interconnected Member's requirements relating to the foregoing, so that sufficient electrical equipment, control capability, information and communication are available to the Office of the Interconnection for planning and operation of the PJM Region;
- (b) Assure the continued compatibility of its local system energy management system monitoring and telecommunications systems to satisfy the technical requirements of interacting automatically or manually with the Office of the Interconnection as it directs the operation of the PJM Region;
- (c) Maintain or arrange for a portion of its connected load to be subject to control by automatic underfrequency, under-voltage, or other load-shedding devices at least equal to the levels established pursuant to the Reliability Assurance Agreement, or be subject to another Member's control for these purposes;
- (d) Provide or arrange for sufficient reactive capability and voltage control facilities to conform to Good Utility Practice and (i) to meet the reactive requirements of its system and customers and (ii) to maintain adequate voltage levels and the stability required by the bulk power supply facilities of the PJM Region;
- (e) Shed connected load, share Generation Capacity Resources, initiate Interruptible Load for Reliability programs, and take such other coordination actions as may be necessary in accordance with the directions of the Office of the Interconnection in Emergencies;

- (f) Maintain or arrange for a portion of its Generation Capacity Resources at least equal to the level established pursuant to the Reliability Assurance Agreement to have the ability to go from a shutdown condition to an operating condition and start delivering power without assistance from the power system;
- (g) Provide or arrange through another Member for the services of a 24-hour local control center to coordinate with the Office of the Interconnection, each such control center to be furnished with appropriate telemetry equipment as specified in the PJM Manuals, and to be staffed by system operators trained and delegated sufficient authority to take any action necessary to assure that the system for which the operator is responsible is operated in a stable and reliable manner. In addition to meeting any training standards and requirements specified in this Agreement, local control center staff shall be required to meet applicable training standards and requirements in PJM Manual 01, Control Center Requirements, including the PJM System Operator Training Requirements in Attachment C;
- (h) Provide to the Office of the Interconnection all System, accounting, customer tracking, load forecasting (including all load to be served from its System) and other data necessary or appropriate to implement or administer this Agreement, and the Reliability Assurance Agreement; and
- (i) Comply with the underfrequency relay obligations and charges specified in Schedule 7 of this Agreement.

11.3.4 Reports to the Office of the Interconnection.

Each Member shall report as promptly as possible to the Office of the Interconnection any changes in its operating practices and procedures relating to the reliability of the bulk power supply facilities of the PJM Region. The Office of the Interconnection shall review such reports, and if any change in an operating practice or procedure of the Member is not in accord with the established operating principles, practices and procedures for the PJM Region and such change adversely affects such region and regional reliability, it shall so inform such Member, and the other Members through their representative on the Operating Committee, and shall direct that such change be modified to conform to the established operating principles, practices and procedures.

11.6 Membership Requirements.

- (a) To qualify as a Member, an entity shall:
 - i) Be a Transmission Owner a Generation Owner, an Other Supplier, an Electric Distributor, or an End-Use Customer; and
 - ii) Accept the obligations set forth in this Agreement.
- (b) Certain Members that are Load Serving Entities are parties to the Reliability Assurance Agreement. Upon becoming a Member, any entity that is a Load Serving Entity in the PJM Region and that wishes to become a Market Buyer shall also simultaneously execute the Reliability Assurance Agreement
- (c) An entity that wishes to become a party to this Agreement shall apply, in writing, to the President setting forth its request, its qualifications for membership, its agreement to supply data as specified in this Agreement, its agreement to pay all costs and expenses in accordance with Schedule 3, and providing all information specified pursuant to the Schedules to this Agreement for entities that wish to become Market Participants. Any such application that meets all applicable requirements shall be approved by the President within sixty (60) days.
- (d) Nothing in this Section 11 is intended to remove, in any respect, the choice of participation by other utility companies or organizations in the operation of the PJM Region through inclusion in the System of a Member.
- (e) An entity whose application is accepted by the President pursuant to Section 11.6(c) shall execute a supplement to this Agreement in substantially the form prescribed in Schedule 4, which supplement shall be countersigned by the President. The entity shall become a Member effective on the date the supplement is countersigned by the President.
- (f) Entities whose applications contemplate expansion or rearrangement of the PJM Region may become Members promptly as described in Sections 11.6(c) and 11.6(e) above, but the integration of the applicant's system into all of the operation and accounting provisions of this Agreement and the Reliability Assurance Agreement, shall occur only after completion of all required installations and modifications of metering, communications, computer programming, and other necessary and appropriate facilities and procedures, as determined by the Office of the Interconnection. The Office of the Interconnection shall notify the other Members when such integration has occurred.
- (g) Entities that become Members will be listed in Schedule 12 of this Agreement.
- (h) In accordance with this Agreement, Members agree that PJMSettlement shall be the Counterparty with respect to certain transactions under the PJM Tariff and this Agreement.

18.17 Confidentiality.

18.17.1 Party Access.

(a) No Member shall have a right hereunder to receive or review any documents, data or other information of another Member, including documents, data or other information provided to the Office of the Interconnection, to the extent such documents, data or information have been designated as confidential pursuant to the procedures adopted by the Office of the Interconnection and/or the PJM Market Monitor or to the extent that they have been designated as confidential by such other Member; provided, however, a Member may receive and review any composite documents, data and other information that may be developed based on such confidential documents, data or information if the composite does not disclose any individual Member's confidential data or information.

(b) Except as may be provided in this Agreement or in the PJM Open Access Transmission Tariff, the Office of the Interconnection shall not disclose to its Members or to third parties, any documents, data, or other information of a Member or entity applying for Membership, to the extent such documents, data, or other information has been designated confidential pursuant to the procedures adopted by the Office of the Interconnection and/or the PJM Market Monitor or by such Member or entity applying for membership; provided that nothing contained herein shall prohibit the Office of the Interconnection from providing any such confidential information to its agents, representatives, or contractors to the extent that such person or entity is bound by an obligation to maintain such confidentiality; provided further that nothing contained herein shall prohibit the Office of the Interconnection from providing Member confidential information to the NERC, any Applicable Regional Entity, or to any reliability coordinator, to the extent that (i) the Office of the Interconnection determines in its reasonable discretion that the exchange of such information is required to enhance and/or maintain reliability within the Members' Applicable Regional Entities and their neighboring Regional Entities, or within the region of any reliability coordinator, (ii) such entity is bound by a written agreement to maintain such confidentiality, and (iii) the Office of the Interconnection has notified the affected party of its intention to release such information no less than five business days prior to the release. The Office of the Interconnection and/or the PJM Market Monitor shall collect and use confidential information only in connection with its authority under this Agreement and the Open Access Transmission Tariff and the retention of such information shall be in accordance with PJM's data retention policies.

(c) Nothing contained herein shall prevent the Office of the Interconnection from releasing a Member's confidential data or information to a third party provided that the Member has delivered to the Office of the Interconnection and/or the PJM Market Monitor specific, written authorization for such release setting forth the data or information to be released, to whom such release is authorized, and the period of time for which such release shall be authorized. The Office of the Interconnection shall limit the release of a Member's confidential data or information to that specific authorization received from the Member. Nothing herein shall prohibit a Member from withdrawing such authorization upon written notice to the Office of the Interconnection, who shall cease such release as soon as practicable after receipt of such withdrawal notice.

(d) Reciprocal provisions to Sections 18.17.1, 18.17.2, 18.17.3, 18.17.4 and 18.17.5 hereof, delineating the confidentiality requirements of PJM's Market Monitoring Unit, are set forth in Attachment M – Appendix, section I.

(e) Notwithstanding anything to the contrary in this Agreement or in the PJM Tariff, to allow the tracking of Market Participants' non-aggregated bids and offers over time as required by FERC Order No. 719, the Office of the Interconnection shall post on its Web site the non-aggregated bid data and Offer Data submitted by Market Participants (for participation on the PJM Interchange Energy Market) approximately four months after the bid or offer was submitted to the Office of the Interconnection. However, to protect the confidential, market sensitive and/or proprietary bidding strategies of Market Participants as well as the identity of Market Participants from being discernible from the published data, the posted information will not reveal the (a) name of the resource, (b) characteristics of a specific resource, (c) identity of the load, (d) name of the individual or entity submitting the data, (e) identity of the resource owner, or (f) location of the resource at a level lower than its Zone. The Office of the Interconnection also reserves the right to take any other precautionary measures that it deems appropriate to preserve the confidential, market sensitive and/or proprietary bidding strategies of Market Participants to the extent not specifically set forth herein.

18.17.2 Required Disclosure.

(a) Notwithstanding anything in the foregoing Section to the contrary, and subject to the provisions of Section 18.17.3, if a Member, the Office of the Interconnection is required by applicable law, or in the course of administrative or judicial proceedings, to disclose to third parties, information that is otherwise required to be maintained in confidence pursuant to this Agreement, that Member, the Office of the Interconnection may make disclosure of such information; provided, however, that as soon as the Member, the Office of the Interconnection learns of the disclosure requirement and prior to making disclosure, that Member, the Office of the Interconnection shall notify the affected Member or Members of the requirement and the terms thereof and the affected Member or Members may direct, at their sole discretion and cost, any challenge to or defense against the disclosure requirement. The disclosing Member, the Office of the Interconnection shall cooperate with such affected Members to the maximum extent practicable to minimize the disclosure of the information consistent with applicable law. Each Member, the Office of the Interconnection shall cooperate with the affected Members to obtain proprietary or confidential treatment of such information by the person to whom such information is disclosed prior to any such disclosure.

(b) Nothing in this Section 18.17 shall prohibit or otherwise limit the Office of the Interconnection's use of information covered herein if such information was: (i) previously known to the Office of the Interconnection without an obligation of confidentiality; (ii) independently developed by or for the Office of the Interconnection using nonconfidential information; (iii) acquired by the Office of the Interconnection from a third party which is not, to the Office of the Interconnection's knowledge, under an obligation of confidence with respect to such information; (iv) which is or becomes publicly available other than through a manner inconsistent with this Section 18.17.

(c) The Office of the Interconnection shall impose on any contractors retained to provide technical support or otherwise to assist with the implementation or administration of this Agreement or of the Open Access Transmission Tariff a contractual duty of confidentiality consistent with this Agreement. A Member shall not be obligated to provide confidential or proprietary information to any contractor that does not assume such a duty of confidentiality, and the Office of the Interconnection shall not provide any such information to any such contractor without the express written permission of the Member providing the information.

18.17.3 Disclosure to FERC.

(a) Notwithstanding anything in this Section to the contrary, if the FERC or its staff, during the course of an investigation or otherwise, requests information from the Office of the Interconnection that is otherwise required to be maintained in confidence pursuant to this Agreement, the Office of the Interconnection shall provide the requested information to the FERC or its staff, within the time provided for in the request for information. In providing the information to the FERC or its staff, the Office of the Interconnection may, consistent with 18 C.F.R. § 388.112, request that the information be treated as confidential and non-public by the FERC and its staff and that the information be withheld from public disclosure. The Office of the Interconnection shall notify any affected Member(s) when it is notified by FERC or its staff, that a request for disclosure of, or decision to disclose, confidential information has been received, at which time the Office of the Interconnection and/or the affected Member may respond before such information would be made public, pursuant to 18 C.F.R. § 388.112.

(b) Section 18.17.3(a) shall not apply to requests for production of information under Subpart D of the FERC's Rules of Practice and Procedure (18 CFR Part 385) in proceedings before FERC and its administrative law judges. In all such proceedings, PJM shall follow the procedures in Section 18.17.2.

18.17.4 Disclosure to Authorized Commissions.

(a) Notwithstanding anything in this section to the contrary, the Office of the Interconnection shall disclose confidential information, otherwise required to be maintained in confidence pursuant to this Agreement, to an Authorized Commission under the following conditions:

- i) The Authorized Commission has provided the FERC with a properly-executed Certification in the form attached hereto as Schedule 10A. Upon receipt of the Authorized Commission's Certification, the FERC shall provide public notice of the Authorized Commission's filing pursuant to 18 C.F.R. § 385.2009. If any interested party disputes the accuracy and adequacy of the representations contained in the Authorized Commission's Certification, that party may file a protest with the Commission within 14 days of the date of such notice, pursuant to 18 C.F.R. § 385.211. The Authorized Commission may file a response to any such protest within seven days. Each party shall bear its own costs in connection with such a FERC protest proceeding. If there are material

changes in law that affect the accuracy and adequacy of the representations in the Certification filed with the Commission, the Authorized Commission shall, within thirty (30) days, submit an amended Certification identifying such changes. Any such amended Certification shall be subject to the same procedures for comment and review by the Commission as set forth above in this paragraph.

The Office of the Interconnection may not disclose data to an Authorized Commission during the Commission's consideration of the Certification and any filed protests. If the Commission does not act upon an Authorized Commission's Certification within 90 days of the date of filing, the Certification shall be deemed approved and the Authorized Commission shall be permitted to receive confidential information pursuant to this section. In the event that an interested party protests the Authorized Commission's Certification and the Commission approves the Certification, that party may not challenge any Information Request made by the Authorized Commission on the grounds that the Authorized Commission is unable to protect the confidentiality of the information requested, in the absence of a showing of changed circumstances.

- ii) Any confidential information provided to an Authorized Commission pursuant to this section shall not be further disclosed by the recipient Authorized Commission except by order of the Commission.
- iii) The Office of the Interconnection shall be expressly entitled to rely upon such Authorized Commission Certifications in providing confidential information to the Authorized Commission, and shall in no event be liable, or subject to damages or claims of any kind or nature hereunder, due to the ineffectiveness or inaccuracy of such Authorized Commission Certifications.
- iv) The Authorized Commission may provide confidential information obtained from the Office of the Interconnection to such of its employees, attorneys and contractors as needed to examine or handle that information in the course and scope of their work on behalf of the Authorized Commission, provided that (a) the Authorized Commission has internal procedures in place, pursuant to the Certification, to ensure that each person receiving such information agrees to protect the confidentiality of such information (such employees, attorneys or contractors to be defined hereinafter as "Authorized Persons"); (b) the Authorized Commission provides, pursuant to the Certification, a list of such Authorized Persons to the Office of the Interconnection and the PJM Market Monitor and updates such list, as necessary, every ninety (90) days; and (c) any third-party contractors provided access to confidential information sign a non-disclosure agreement in the form attached hereto as Schedule 10 before being provided access to any such confidential information.

- v) The Office of the Interconnection shall maintain a schedule of all Authorized Persons and the Authorized Commissions they represent, which shall be made publicly available on its website, or by written request. Such schedule shall be compiled by the Office of the Interconnection, based on information provided by any Authorized Commission. The Office of the Interconnection shall update the schedule promptly upon receipt of information from an Authorized Commission, but shall have no obligation to verify or corroborate any such information, and shall not be liable or otherwise responsible for any inaccuracies in the schedule due to incomplete or erroneous information conveyed to and relied upon by the Office of the Interconnection in the compilation and/or maintenance of the schedule.

(b) The Office of the Interconnection may, in the course of discussions with an Authorized Person, orally disclose information otherwise required to be maintained in confidence, without the need for a prior Information Request. Such oral disclosures shall provide enough information to enable the Authorized Person or the Authorized Commission with which that Authorized Person is associated to determine whether additional Information Requests are appropriate. The Office of the Interconnection will not make any written or electronic disclosures of confidential information to the Authorized Person pursuant to this Section 18.17.4(b). In any such discussions, the Office of the Interconnection shall ensure that the individual or individuals receiving such confidential information are Authorized Persons as defined herein, orally designate confidential information that is disclosed, and refrain from identifying any specific Affected Member whose information is disclosed. The Office of the Interconnection shall also be authorized to assist Authorized Persons in interpreting confidential information that is disclosed. The Office of the Interconnection shall provide any Affected Member with oral notice of any oral disclosure immediately, but not later than one (1) business day after the oral disclosure. Such oral notice to the Affected Member shall include the substance of the oral disclosure, but shall not reveal any confidential information of any other Member and must be received by the Affected Member before the name of the Affected Member is released to the Authorized Person; provided however, disclosure of the identity of the Affected Party must be made to the Authorized Commission with which the Authorized Person is associated within two (2) business days of the initial oral disclosure.

(c) As regards Information Requests:

- (i) Information Requests to the Office of the Interconnection and/or PJM Market Monitor by an Authorized Commission shall be in writing, which shall include electronic communications, addressed to the Office of the Interconnection, and shall: (a) describe the information sought in sufficient detail to allow a response to the Information Request; (b) provide a general description of the purpose of the Information Request; (c) state the time period for which confidential information is requested; and (d) re-affirm that only Authorized Persons shall have access to the confidential information requested. The Office of the Interconnection shall provide an

Affected Member with written notice, which shall include electronic communication, of an Information Request by an Authorized Commission as soon as possible, but not later than two (2) business days after the receipt of the Information Request.

- (ii) Subject to the provisions of section (c)(iii), the Office of the Interconnection shall supply confidential information to the Authorized Commission in response to any Information Request within five (5) business days of the receipt of the Information Request, to the extent that the requested confidential information can be made available within such period; provided however, that in no event shall confidential information be released prior to the end of the fourth (4th) business day without the express consent of the Affected Member. To the extent that the Office of the Interconnection cannot reasonably prepare and deliver the requested confidential information within such five (5) day period, it shall, within such period, provide the Authorized Commission with a written schedule for the provision of such remaining confidential information. Upon providing confidential information to the Authorized Commission, the Office of the Interconnection shall either provide a copy of the confidential information to the Affected Member(s), or provide a listing of the confidential information disclosed; provided, however, that the Office of the Interconnection shall not reveal any Member's confidential information to any other Member.
- (iii) Notwithstanding section (c)(ii), above, should the Office of the Interconnection or an Affected Member object to an Information Request or any portion thereof, any of them may, within four (4) business days following the Office of the Interconnection's receipt of the Information Request, request, in writing, a conference with the Authorized Commission to resolve differences concerning the scope or timing of the Information Request; provided, however, nothing herein shall require the Authorized Commission to participate in any conference. Any party to the conference may seek assistance from FERC staff in resolution of the dispute or terminate the conference process at any time. Should such conference be refused or terminated by any participant or should such conference not resolve the dispute, then the Office of the Interconnection or the Affected Member may file a complaint with the Commission pursuant to Rule 206 objecting to the Information Request within ten (10) business days following receipt of written notice from any conference participant terminating such conference. Any complaints filed at FERC objecting to a particular Information Request shall be designated by the party as a "fast track" complaint and each party shall bear its own costs in connection with such FERC proceeding. The grounds for such a complaint shall be limited to the following: (a) the Authorized Commission is no longer able to preserve the confidentiality of the requested information due to changed circumstances relating to the Authorized Commission's ability

to protect confidential information arising since the filing of or rejection of a protest directed to the Authorized Commission's Certification; (b) complying with the Information Request would be unduly burdensome to the complainant, and the complainant has made a good faith effort to negotiate limitations in the scope of the requested information; or (c) other exceptional circumstances exist such that complying with the Information Request would result in harm to the complainant. There shall be a presumption that "exceptional circumstances," as used in the prior sentence, does not include circumstances in which an Authorized Commission has requested wholesale market data (or PJM Market Monitor workpapers that support or explain conclusions or analyses) generated in the ordinary course and scope of the operations of the Office of the Interconnection and/or the PJM Market Monitor. There shall be a presumption that circumstances in which an Authorized Commission has requested personnel files, internal emails and internal company memos, analyses and related work product constitute "exceptional circumstances" as used in the prior sentence. If no complaint challenging the Information Request is filed within the ten (10) day period defined above, the Office of the Interconnection shall utilize its best efforts to respond to the Information Request promptly. If a complaint is filed, and the Commission does not act on that complaint within ninety (90) days, the complaint shall be deemed denied and the Office of Interconnection shall use its best efforts to respond to the Information Request promptly.

- (iv) Any Authorized Commission may initiate appropriate legal action at FERC within ten (10) business days following receipt of information designated as "Confidential," challenging such designation. Any complaints filed at FERC objecting to the designation of information as "Confidential" shall be designated by the party as a "fast track" complaint and each party shall bear its own costs in connection with such FERC proceeding. The party filing such a complaint shall be required to prove that the material disclosed does not merit "Confidential" status because it is publicly available from other sources or contains no trade secret or other sensitive commercial information (with "publicly available" not being deemed to include unauthorized disclosures of otherwise confidential data).

(d) In the event of any breach of confidentiality of information disclosed pursuant to an Information Request by an Authorized Commission or Authorized Person:

- (i) The Authorized Commission or Authorized Person shall promptly notify the Office of the Interconnection, who shall, in turn, promptly notify any Affected Member of any inadvertent or intentional release, or possible release, of confidential information provided pursuant to this section.

- (ii) The Office of the Interconnection shall terminate the right of such Authorized Commission to receive confidential information under this section upon written notice to such Authorized Commission unless: (i) there was no harm or damage suffered by the Affected Member; or (ii) similar good cause is shown. Any appeal of the Office of the Interconnection's and/or the PJM Market Monitor's actions under this section shall be to FERC. An Authorized Commission shall be entitled to reestablish its certification as set forth in Section 18.17.4(a) by submitting a filing with the Commission showing that it has taken appropriate corrective action. If the Commission does not act upon an Authorized Commission's re-certification filing with sixty (60) days of the date of the filing, the re-certification shall be deemed approved and the Authorized Commission shall be permitted to receive confidential information pursuant to this section.
- (iii) The Office of the Interconnection and/or the Affected Member shall have the right to seek and obtain at least the following types of relief: (a) an order from FERC requiring any breach to cease and preventing any future breaches; (b) temporary, preliminary, and/or permanent injunctive relief with respect to any breach; and (c) the immediate return of all confidential information to the Office of the Interconnection.
- (iv) No Authorized Person or Authorized Commission shall have responsibility or liability whatsoever under this section for any and all liabilities, losses, damages, demands, fines, monetary judgments, penalties, costs and expenses caused by, resulting from, or arising out of or in connection with the release of confidential information to persons not authorized to receive it, provided that such Authorized Person is an agent, servant, employee or member of an Authorized Commission at the time of such unauthorized release. Nothing in this Section (d)(iv) is intended to limit the liability of any person who is not an agent, servant, employee or member of an Authorized Commission at the time of such unauthorized release for any and all economic losses, damages, demands, fines, monetary judgments, penalties, costs and expenses caused by, resulting from, or arising out of or in connection with such unauthorized release.
- (v) Any dispute or conflict requesting the relief in section (d)(ii) or (d)(iii)(a) above, shall be submitted to FERC for hearing and resolution. Any dispute or conflict requesting the relief in section (d)(iii)(c) above may be submitted to FERC or any court of competent jurisdiction for hearing and resolution.

18.17.5 Market Monitoring.

- a) Subject to the requirements of section 18.17.5(b), PJM may release confidential information of Public Service Electric & Gas Company ("PSE&G"), Consolidated Edison

Company of New York (“ConEd”), and their affiliates, and the confidential information of any Member regarding generation and/or transmission facilities located within the PSE&G Zone to the New York Independent System Operator, Inc. (“New York ISO”), the market monitoring unit of the New York ISO and the New York ISO Market Advisor to the limited extent that PJM or its Market Monitoring Unit determines necessary to carry out the responsibilities of PJM, the New York ISO and the market monitoring units of PJM and the New York ISO under FERC Opinion No. 476 (see Consolidated Edison Company v. Public Service Electric and Gas Company, et al., 108 FERC ¶ 61,120, at P 215 (2004)) to conduct joint investigations to ensure that gaming, abuse of market power, or similar activities do not take place with regard to power transfers under the contracts that are the subject of FERC Opinion No. 476.

b) PJM may release a Member’s confidential information pursuant to section 18.17.5(a) to the New York ISO, the market monitoring unit of the New York ISO and the New York ISO Market Advisor only if the New York ISO, the market monitoring unit of the New York ISO and the New York ISO Market Advisor are subject to obligations limiting the disclosure of such information that are equivalent to or greater than the limitations on disclosure specified in this section 18.17. Information received from the New York ISO, the market monitoring unit of the New York ISO, or the New York ISO Market Advisor under section 18.17.5(a) that is designated as confidential shall be protected from disclosure in accordance with this section 18.17.

18.17.6 Disclosure of EMS Data to Transmission Owners

a) While the Office of the Interconnection has overall power system reliability in the Office of the Interconnection region, Transmission Owners within the Office of the Interconnection region perform certain reliability functions with respect to their individual Transmission Facilities and distribution systems. In order to facilitate reliable operations between the Office of the Interconnection and the Transmission Owners, the Office of the Interconnection may, without written authorization from any Member, install a read-only terminal in any Transmission Owner’s secure control room facility, with access to Office of the Interconnection’s Energy Management System (EMS) and its associated data transmission and generation data under the terms and conditions set forth in this section 18.17.6.

b) The data and information produced by the Office of the Interconnection’s EMS are confidential and/or commercially sensitive because it will display the real-time status of electric transmission lines and generation facilities, the disclosure of which could impact the market and the commercial interests of its participants. In addition, the responsive information will contain detailed information about real-time grid conditions, transmission lines, power flows, and outages, which may fall within the definition of Critical Energy Infrastructure Information (CEII) as set forth in 18 CFR § 388.112. The Office of the Interconnection shall not release any generator cost, price or other market information without written authorization pursuant to section § 18.17.1 (c) supra. The only generator information that will be made available is real-time MW/MVAR output and Minimum/Maximum MW Range.

c) The confidential or CEII information provided to the Transmission Owner on a read-only PJM EMS terminal shall only be held in the secure control room facility of the Transmission Owner. Such data shall be used for informational and operational purposes within the control

room by Transmission Function employees as defined in the FERC's rules and regulations, 18 C.F.R. § 358.3 (j). No "screen-scraping" or other data transfer of information from the read-only terminal to other Transmission Owner systems or databases shall be permitted. No storage of information from the read-only terminal shall be permitted. The data shall be held confidential within the transmission function environment and not be disclosed to other personnel within the Transmission Owners' company, subsidiaries, marketing organizations, energy affiliates or independent third parties. The Transmission Owner may use the confidential or CEII information only for the purpose of performing Transmission Owner's Reliability Function and shall not otherwise use the confidential information for its own benefit or for the benefit of any other person.

d) In the event of any breach:

- (i) The Transmission Owners shall promptly notify the Office of the Interconnection, which shall, in turn, promptly notify FERC and any Affected Member(s) of any inadvertent or intentional release, or possible release, of confidential or CEII information disclosed as provided above.
- (ii) The Office of the Interconnection shall terminate all rights of the Transmission Owner to receive confidential or CEII information as provided in this section 18.17.6; provided, however, that the Office of the Interconnection may restore a Transmission Owners' status after consulting with the Affected Member(s) and to the extent that: (a) the Office of the Interconnection determines that the disclosure was not due to the intentional, reckless or negligent action or omission of the Authorized Person; (b) there were no harm or damages suffered by the Affected Member(s); or (c) similar good cause shown. Any appeal of the Office of the Interconnection's actions under this section shall be to FERC.
- (iii) The Office of the Interconnection and/or the Affected Member(s) shall have the right to seek and obtain at least the following types of relief: (a) an order from FERC requiring any breach to cease and preventing any future breaches; (b) temporary, preliminary, and/or permanent injunctive relief and/or damages with respect to any breach; and (c) the immediate return of all confidential or CEII information to the Office of the Interconnection.
- (iv) Any dispute or conflict requesting the relief in section (d)(ii) or (d)(iii)(a) above, shall be submitted to FERC for hearing and resolution. Any dispute or conflict requesting the relief in section (d)(iii)(b) and (c) above may be submitted to FERC or any court of competent jurisdiction for hearing and resolution.

1.3 Definitions.

1.3.1 Acceleration Request.

“Acceleration Request” shall mean a request pursuant to section 1.9.4A of this Schedule to accelerate or reschedule a transmission outage scheduled pursuant to sections 1.9.2 or 1.9.4.

1.3.1A Auction Revenue Rights.

“Auction Revenue Rights” or “ARRs” shall mean the right to receive the revenue from the Financial Transmission Right auction, as further described in Section 7.4 of this Schedule.

1.3.1B Auction Revenue Rights Credits.

“Auction Revenue Rights Credits” shall mean the allocated share of total FTR auction revenues or costs credited to each holder of Auction Revenue Rights, calculated and allocated as specified in Section 7.4.3 of this Schedule.

1.3.1B.01 Batch Load Demand Resource.

“Batch Load Demand Resource” shall mean a Demand Resource that has a cyclical production process such that at most times during the process it is consuming energy, but at consistent regular intervals, ordinarily for periods of less than ten minutes, it reduces its consumption of energy for its production processes to minimal or zero megawatts.

1.3.1B.02 Congestion Price.

“Congestion Price” shall mean the congestion component of the Locational Marginal Price, which is the effect on transmission congestion costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing the consumption by a Demand Resource, based on the effect of increased generation from or consumption by the resource on transmission line loadings, calculated as specified in Section 2 of Schedule 1 of this Agreement.

1.3.1B.03 Curtailment Service Provider.

“Curtailment Service Provider” or “CSP” shall mean a Member or a Special Member, which action on behalf of itself or one or more other Members or non-Members, participates in the PJM Interchange Energy Market, *Ancillary Services markets, and/or Reliability Pricing Model* by causing a reduction in demand.

1.3.1B.04 Day-ahead Congestion Price.

“Day-ahead Congestion Price” shall mean the Congestion Price resulting from the Day-ahead Energy Market.

1.3.1C Day-ahead Energy Market.

“Day-ahead Energy Market” shall mean the schedule of commitments for the purchase or sale of energy and payment of Transmission Congestion Charges developed by the Office of the Interconnection as a result of the offers and specifications submitted in accordance with Section 1.10 of this Schedule.

1.3.1C.01 Day-ahead Loss Price.

“Day-ahead Loss Price” shall mean the Loss Price resulting from the Day-ahead Energy Market.

1.3.1D Day-ahead Prices.

“Day-ahead Prices” shall mean the Locational Marginal Prices resulting from the Day-ahead Energy Market.

1.3.1D.01 Day-ahead Scheduling Reserves.

“Day-ahead Scheduling Reserves” shall mean thirty-minute reserves as defined by the Reliability *First* Corporation and SERC.

1.3.1D.02 Day-ahead Scheduling Reserves Requirement.

“Day-ahead Scheduling Reserves Requirement” shall mean the thirty-minute reserve requirement for the PJM Region established consistent with the Applicable Standards, plus any additional thirty-minute reserves scheduled in response to an RTO-wide Hot or Cold Weather Alert or other reasons for conservative operations.

1.3.1D.03 Day-ahead Scheduling Reserves Resources.

“Day-ahead Scheduling Reserves Resources” shall mean synchronized and non-synchronized generation resources and Demand Resources electrically located within the PJM Region that are capable of providing Day-ahead Scheduling Reserves.

1.3.1D.04 Day-ahead Scheduling Reserves Market.

“Day-ahead Scheduling Reserves Market” shall mean the schedule of commitments for the purchase or sale of Day-ahead Scheduling Reserves developed by the Office of the Interconnection as a result of the offers and specifications submitted in accordance with Section 1.10 of this Schedule.

1.3.1D.05 Day-ahead System Energy Price.

“Day-ahead System Energy Price” shall mean the System Energy Price resulting from the Day-ahead Energy Market.

1.3.1E Decrement Bid.

“Decrement Bid” shall mean a bid to purchase energy at a specified location in the Day-ahead Energy Market. An accepted Decrement Bid results in scheduled load at the specified location in the Day-ahead Energy Market.

1.31E.01 Demand Resource.

“Demand Resource” shall mean a resource with the capability to provide a reduction in demand.

1.3.1F Dispatch Rate.

“Dispatch Rate” shall mean the control signal, expressed in dollars per megawatt-hour, calculated and transmitted continuously and dynamically to direct the output level of all generation resources dispatched by the Office of the Interconnection in accordance with the Offer Data.

1.3.1G Energy Storage Resource.

“Energy Storage Resource” shall mean flywheel or battery storage facility solely used for short term storage and injection of energy at a later time to participate in the PJM energy and/or Ancillary Services markets as a Market Seller.

1.3.2 Equivalent Load.

“Equivalent Load” shall mean the sum of a Market Participant’s net system requirements to serve its customer load in the PJM Region, if any, plus its net bilateral transactions.

1.3.2A Economic Load Response Participant.

“Economic Load Response Participant” shall mean a Member or Special Member that qualifies under Section 1.5A of this Schedule to participate in the PJM Interchange Energy Market *and/or Ancillary Services markets* through reductions in demand.

1.3.2A.01 Economic Minimum.

“Economic Minimum” shall mean the lowest incremental MW output level a unit can achieve while following economic dispatch

1.3.2B Energy Market Opportunity Cost.

“Energy Market Opportunity Cost” shall mean the difference between (a) the forecasted cost to operate a specific generating unit when the unit only has a limited number of available run hours due to limitations imposed on the unit by Applicable Laws and Regulations (as defined in PJM Tariff), and (b) the forecasted future hourly Locational Marginal Price at which the generating unit could run while not violating such limitations. Energy Market Opportunity Cost therefore is the value associated with a specific generating unit’s lost opportunity to produce energy during a

higher valued period of time occurring within the same compliance period, which compliance period is determined by the applicable regulatory authority and is reflected in the rules set forth in PJM Manual 15. Energy Market Opportunity Costs shall be limited to those resources which are specifically delineated in Schedule 2 of the Operating Agreement.

1.3.3 External Market Buyer.

“External Market Buyer” shall mean a Market Buyer making purchases of energy from the PJM Interchange Energy Market for consumption by end-users outside the PJM Region, or for load in the PJM Region that is not served by Network Transmission Service.

1.3.4 External Resource.

“External Resource” shall mean a generation resource located outside the metered boundaries of the PJM Region.

1.3.5 Financial Transmission Right.

“Financial Transmission Right” or “FTR” shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2 of this Schedule.

1.3.5A Financial Transmission Right Obligation.

“Financial Transmission Right Obligation” shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2(b) of this Schedule.

1.3.5B Financial Transmission Right Option.

“Financial Transmission Right Option” shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2(c) of this Schedule.

1.3.6 Generating Market Buyer.

“Generating Market Buyer” shall mean an Internal Market Buyer that is a Load Serving Entity that owns or has contractual rights to the output of generation resources capable of serving the Market Buyer’s load in the PJM Region, or of selling energy or related services in the PJM Interchange Energy Market or elsewhere.

1.3.7 Generator Forced Outage.

“Generator Forced Outage” shall mean an immediate reduction in output or capacity or removal from service, in whole or in part, of a generating unit by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the facility, as specified in the relevant portions of the PJM Manuals. A reduction in output or removal from service of a generating unit in response to changes in market conditions shall not constitute a Generator Forced Outage.

1.3.8 Generator Maintenance Outage.

“Generator Maintenance Outage” shall mean the scheduled removal from service, in whole or in part, of a generating unit in order to perform necessary repairs on specific components of the facility, if removal of the facility meets the guidelines specified in the PJM Manuals.

1.3.9 Generator Planned Outage.

“Generator Planned Outage” shall mean the scheduled removal from service, in whole or in part, of a generating unit for inspection, maintenance or repair with the approval of the Office of the Interconnection in accordance with the PJM Manuals.

1.3.9A Increment Bid.

“Increment Bid” shall mean an offer to sell energy at a specified location in the Day-ahead Energy Market. An accepted Increment Bid results in scheduled generation at the specified location in the Day-ahead Energy Market.

1.3.9B Interface Pricing Point.

“Interface Pricing Point” shall have the meaning specified in section 2.6A.

1.3.10 Internal Market Buyer.

“Internal Market Buyer” shall mean a Market Buyer making purchases of energy from the PJM Interchange Energy Market for ultimate consumption by end-users inside the PJM Region that are served by Network Transmission Service.

1.3.11 Inadvertent Interchange.

“Inadvertent Interchange” shall mean the difference between net actual energy flow and net scheduled energy flow into or out of the individual Control Areas operated by PJM.

1.3.11.01 Load Management.

“Load Management” shall mean either a Demand Resource (“DR”) or an Interruptible Load for Reliability (“ILR”) resource, both as defined in the Reliability Assurance Agreement.

1.3.11A Load Reduction Event.

“Load Reduction Event” shall mean a reduction in demand by a Member or Special Member for the purpose of participating in the PJM Interchange Energy Market.

1.3.11A.01 Location.

“Location” as used in the Economic Load Response rules shall mean an end-use customer site as defined by the relevant electric distribution company account number.

1.3.11B Loss Price.

“Loss Price” shall mean the loss component of the Locational Marginal Price, which is the effect on transmission loss costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing the consumption by a Demand Resource based on the effect of increased generation from or consumption by the resource on transmission losses, calculated as specified in Section 2 of Schedule 1 of this Agreement.

1.3.12 Market Operations Center.

“Market Operations Center” shall mean the equipment, facilities and personnel used by or on behalf of a Market Participant to communicate and coordinate with the Office of the Interconnection in connection with transactions in the PJM Interchange Energy Market or the operation of the PJM Region.

1.3.12A Maximum Emergency.

“Maximum Emergency” shall mean the designation of all or part of the output of a generating unit for which the designated output levels may require extraordinary procedures and therefore are available to the Office of the Interconnection only when the Office of the Interconnection declares a Maximum Generation Emergency and requests generation designated as Maximum Emergency to run. The Office of the Interconnection shall post on the PJM website the aggregate amount of megawatts that are classified as Maximum Emergency.

1.3.13 Maximum Generation Emergency.

“Maximum Generation Emergency” shall mean an Emergency declared by the Office of the Interconnection to address either a generation or transmission emergency in which the Office of the Interconnection anticipates requesting one or more Generation Capacity Resources, or Non-Retail Behind The Meter Generation resources to operate at its maximum net or gross electrical power output, subject to the equipment stress limits for such Generation Capacity Resource or Non-Retail Behind The Meter resource in order to manage, alleviate, or end the Emergency.

1.3.14 Minimum Generation Emergency.

“Minimum Generation Emergency” shall mean an Emergency declared by the Office of the Interconnection in which the Office of the Interconnection anticipates requesting one or more generating resources to operate at or below Normal Minimum Generation, in order to manage, alleviate, or end the Emergency.

1.3.14A NERC Interchange Distribution Calculator.

“NERC Interchange Distribution Calculator” shall mean the NERC mechanism that is in effect and being used to calculate the distribution of energy, over specific transmission interfaces, from energy transactions.

1.3.14B Net Benefits Test.

“Net Benefits Test” shall mean a calculation to determine whether the benefits of a reduction in price resulting from the dispatch of Economic Load Response exceeds the cost to other loads resulting from the billing unit effects of the load reduction, as specified in Section 3.3A.4 of this Schedule.

1.3.15 Network Resource.

“Network Resource” shall have the meaning specified in the PJM Tariff.

1.3.16 Network Service User.

“Network Service User” shall mean an entity using Network Transmission Service.

1.3.17 Network Transmission Service.

“Network Transmission Service” shall mean transmission service provided pursuant to the rates, terms and conditions set forth in Part III of the PJM Tariff, or transmission service comparable to such service that is provided to a Load Serving Entity that is also a Transmission Owner.

1.3.17A Non-Regulatory Opportunity Cost.

“Non-Regulatory Opportunity Cost” shall mean the difference between (a) the forecasted cost to operate a specific generating unit when the unit only has a limited number of starts or available run hours resulting from (i) the physical equipment limitations of the unit, for up to one year, due to original equipment manufacturer recommendations or insurance carrier restrictions, (ii) a fuel supply limitation, for up to one year, resulting from an event of force majeure; and, (b) the forecasted future hourly Locational Marginal Price at which the generating unit could run while not violating such limitations. Non-Regulatory Opportunity Cost therefore is the value associated with a specific generating unit’s lost opportunity to produce energy during a higher valued period of time occurring within the same period of time in which the unit is bound by the referenced restrictions, and is reflected in the rules set forth in PJM Manual 15. Non-Regulatory Opportunity Costs shall be limited to those resources which are specifically delineated in Schedule 2 of the Operating Agreement.

1.3.17B Non-Variable Loads.

“Non-Variable Loads” shall have the meaning specified in section 1.5A.6 of this Schedule.

1.3.18 Normal Maximum Generation.

“Normal Maximum Generation” shall mean the highest output level of a generating resource under normal operating conditions.

1.3.19 Normal Minimum Generation.

“Normal Minimum Generation” shall mean the lowest output level of a generating resource under normal operating conditions.

1.3.20 Offer Data.

“Offer Data” shall mean the scheduling, operations planning, dispatch, new resource, and other data and information necessary to schedule and dispatch generation resources and Demand Resource(s) for the provision of energy and other services and the maintenance of the reliability and security of the transmission system in the PJM Region, and specified for submission to the PJM Interchange Energy Market for such purposes by the Office of the Interconnection.

1.3.21 Office of the Interconnection Control Center.

“Office of the Interconnection Control Center” shall mean the equipment, facilities and personnel used by the Office of the Interconnection to coordinate and direct the operation of the PJM Region and to administer the PJM Interchange Energy Market, including facilities and equipment used to communicate and coordinate with the Market Participants in connection with transactions in the PJM Interchange Energy Market or the operation of the PJM Region.

1.3.21A On-Site Generators.

“On-Site Generators” shall mean generation facilities (including Behind The Meter Generation) that (i) are not Capacity Resources, (ii) are not injecting into the grid, (iii) are either synchronized or non-synchronized to the Transmission System, and (iv) can be used to reduce demand for the purpose of participating in the PJM Interchange Energy Market.

1.3.22 Operating Day.

“Operating Day” shall mean the daily 24 hour period beginning at midnight for which transactions on the PJM Interchange Energy Market are scheduled.

1.3.23 Operating Margin.

“Operating Margin” shall mean the incremental adjustments, measured in megawatts, required in PJM Region operations in order to accommodate, on a first contingency basis, an operating contingency in the PJM Region resulting from operations in an interconnected Control Area. Such adjustments may result in constraints causing Transmission Congestion Charges, or may result in Ancillary Services charges pursuant to the PJM Tariff.

1.3.24 Operating Margin Customer.

“Operating Margin Customer” shall mean a Control Area purchasing Operating Margin pursuant to an agreement between such other Control Area and the LLC.

1.3.25 PJM Interchange.

“PJM Interchange” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load exceeds, or is exceeded by, the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup; or (c) the hourly scheduled deliveries of Spot Market Energy by a Market Seller from an External Resource; or (d) the hourly net metered output of any other Market Seller; or (e) the hourly scheduled deliveries of Spot Market Energy to an External Market Buyer; or (f) the hourly scheduled deliveries to an Internal Market Buyer that is not a Network Service User.

1.3.26 PJM Interchange Export.

“PJM Interchange Export” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load is exceeded by the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup sales; or (c) the hourly scheduled deliveries of Spot Market Energy by a Market Seller from an External Resource; or (d) the hourly net metered output of any other Market Seller.

1.3.27 PJM Interchange Import.

“PJM Interchange Import” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load exceeds the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup purchases; or (c) the hourly scheduled deliveries of Spot Market Energy to an External Market Buyer; or (d) the hourly scheduled deliveries to an Internal Market Buyer that is not a Network Service User.

1.3.28 PJM Open Access Same-time Information System.

“PJM Open Access Same-time Information System” shall mean the electronic communication system for the collection and dissemination of information about transmission services in the PJM Region, established and operated by the Office of the Interconnection in accordance with FERC standards and requirements.

1.3.28A Planning Period Quarter.

“Planning Period Quarter” shall mean any of the following three month periods in the Planning Period: June, July and August; September, October and November; December, January and February; or March, April and May.

1.3.28B Planning Period Balance.

“Planning Period Balance” shall mean the entire period of time remaining in the Planning Period following the month that a monthly auction is conducted.

1.3.29 Point-to-Point Transmission Service.

“Point-to-Point Transmission Service” shall mean transmission service provided pursuant to the rates, terms and conditions set forth in Part II of the PJM Tariff.

1.3.29A PRD Curve

PRD Curve shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29B PRD Provider

PRD Provider shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29C PRD Reservation Price

PRD Reservation Price shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29D PRD Substation

PRD Substation shall have the meaning provided in the Reliability Assurance Agreement.

1.3.29E Price Responsive Demand

Price Responsive Demand shall have the meaning provided in the Reliability Assurance Agreement.

1.3.30 Ramping Capability.

“Ramping Capability” shall mean the sustained rate of change of generator output, in megawatts per minute.

1.3.30.01 Real-time Congestion Price.

“Real-time Congestion Price” shall mean the Congestion Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.30.02 Real-time Loss Price.

“Real-time Loss Price” shall mean the Loss Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.30A Real-time Prices.

“Real-time Prices” shall mean the Locational Marginal Prices resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.30B Real-time Energy Market.

“Real-time Energy Market” shall mean the purchase or sale of energy and payment of Transmission Congestion Charges for quantity deviations from the Day-ahead Energy Market in the Operating Day.

1.3.30B.01 Real-time System Energy Price.

“Real-time System Energy Price” shall mean the System Energy Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

1.3.31 Regulation.

“Regulation” shall mean the capability of a specific generation resource or Demand Resource with appropriate telecommunications, control and response capability to increase or decrease its output or adjust load in response to a regulating control signal, in accordance with the specifications in the PJM Manuals.

1.3.31.01 Residual Auction Revenue Rights.

“Residual Auction Revenue Rights” shall mean incremental stage 1 Auction Revenue Rights created within a Planning Period by an increase in transmission system capability or a change in any other relevant factor that was not modeled pursuant to section 7.5 of Schedule 1 of this Agreement in compliance with section 7.4.2(h) of Schedule 1 of this Agreement, and, if modeled, would have increased the amount of stage 1 Auction Revenue Rights allocated pursuant to section 7.4.2 of Schedule 1 of this Agreement; provided that, the foregoing notwithstanding, Residual Auction Revenue Rights shall exclude: 1) Incremental Auction Revenue Rights allocated pursuant to Part VI of the Tariff; and 2) Auction Revenue Rights allocated to entities that are assigned cost responsibility pursuant to Schedule 6 of this Agreement for transmission upgrades that create such rights.

1.3.31.02 Special Member.

“Special Member” shall mean an entity that satisfies the requirements of Section 1.5A.02 of this Schedule or the special membership provisions established under the Emergency Load Response Program.

1.3.31A [Reserved.]

1.3.31B [Reserved.]

1.3.32 Spot Market Backup.

“Spot Market Backup” shall mean the purchase of energy from, or the delivery of energy to, the PJM Interchange Energy Market in quantities sufficient to complete the delivery or receipt obligations of a bilateral contract that has been curtailed or interrupted for any reason.

1.3.33 Spot Market Energy.

“Spot Market Energy” shall mean energy bought or sold by Market Participants through the PJM Interchange Energy Market at System Energy Prices determined as specified in Section 2 of this Schedule.

1.3.33A State Estimator.

“State Estimator” shall mean the computer model of power flows specified in Section 2.3 of this Schedule.

1.3.33B Station Power.

“Station Power” shall mean energy used for operating the electric equipment on the site of a generation facility located in the PJM Region or for the heating, lighting, air-conditioning and office equipment needs of buildings on the site of such a generation facility that are used in the operation, maintenance, or repair of the facility. Station Power does not include any energy (i) used to power synchronous condensers; (ii) used for pumping at a pumped storage facility; (iii) used for compressors at a compressed air energy storage facility; (iv) used for charging an Energy Storage Resource; or (v) used in association with restoration or black start service.

1.3.33B.001 Sub-meter.

“Sub-meter” shall mean a metering point for electricity consumption that does not include all electricity consumption for the end-use customer as defined by the electric distribution company account number. PJM shall only accept sub-meter load data from end-use customers for measurement and verification of Regulation service as set forth in the Economic Load Response rules and PJM Manuals.

1.3.33B.01 Synchronized Reserve.

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

1.3.33B.02 Synchronized Reserve Event.

“Synchronized Reserve Event” shall mean a request from the Office of the Interconnection to generation resources and/or Demand Resources able, assigned or self-scheduled to provide Synchronized Reserve, within ten minutes, to increase the energy output or reduce load by the amount of assigned or self-scheduled Synchronized Reserve capability.

1.3.33B.03 System Energy Price.

“System Energy Price” shall mean the energy component of the Locational Marginal Price, which is the price at which the Market Seller has offered to supply an additional increment of energy from a resource, calculated as specified in Section 2 of Schedule 1 of this Agreement.

1.3.33C Target Allocation.

“Target Allocation” shall mean the allocation of Transmission Congestion Credits as set forth in Section 5.2.3 of this Schedule or the allocation of Auction Revenue Rights Credits as set forth in Section 7.4.3 of this Schedule.

1.3.34 Transmission Congestion Charge.

“Transmission Congestion Charge” shall mean a charge attributable to the increased cost of energy delivered at a given load bus when the transmission system serving that load bus is operating under constrained conditions, or as necessary to provide energy for third-party transmission losses in accordance with Section 9.3, which shall be calculated and allocated as specified in Section 5.1 of this Schedule.

1.3.35 Transmission Congestion Credit.

“Transmission Congestion Credit” shall mean the allocated share of total Transmission Congestion Charges credited to each holder of Financial Transmission Rights, calculated and allocated as specified in Section 5.2 of this Schedule.

1.3.36 Transmission Customer.

“Transmission Customer” shall mean an entity using Point-to-Point Transmission Service.

1.3.37 Transmission Forced Outage.

“Transmission Forced Outage” shall mean an immediate removal from service of a transmission facility by reason of an Emergency or threatened Emergency, unanticipated failure, or other

cause beyond the control of the owner or operator of the transmission facility, as specified in the relevant portions of the PJM Manuals. A removal from service of a transmission facility at the request of the Office of the Interconnection to improve transmission capability shall not constitute a Forced Transmission Outage.

1.3.37A Transmission Loading Relief.

“Transmission Loading Relief” shall mean NERC’s procedures for preventing operating security limit violations, as implemented by PJM as the security coordinator responsible for maintaining transmission security for the PJM Region.

1.3.37B Transmission Loading Relief Customer.

“Transmission Loading Relief Customer” shall mean an entity that, in accordance with Section 1.10.6A, has elected to pay Transmission Congestion Charges during Transmission Loading Relief in order to continue energy schedules over contract paths outside the PJM Region that are increasing the cost of energy in the PJM Region.

1.3.37C Transmission Loss Charge.

“Transmission Loss Charge” shall mean the charges to each Market Participant, Network Customer, or Transmission Customer for the cost of energy lost in the transmission of electricity from a generation resource to load as specified in Section 5 of this Schedule.

1.3.38 Transmission Planned Outage.

“Transmission Planned Outage” shall mean any transmission outage scheduled in advance for a pre-determined duration and which meets the notification requirements for such outages specified in this Agreement or the PJM Manuals.

1.3.38A Variable Loads.

“Variable Loads” shall have the meaning specified in section 1.5A.6 of this Schedule.

1.3.39 Zonal Base Load.

“Zonal Base Load” shall mean the lowest daily zonal peak load from the twelve month period ending October 21 of the calendar year immediately preceding the calendar year in which an annual Auction Revenue Right allocation is conducted, increased by the projected load growth rate for the relevant Zone.

1.6 Office of the Interconnection.

1.6.1 Operation of the PJM Interchange Energy Market.

The Office of the Interconnection shall operate the PJM Interchange Energy Market in accordance with this Agreement.

1.6.2 Scope of Services.

The Office of the Interconnection shall perform the services pertaining to the PJM Interchange Energy Market specified in this Agreement, including but not limited to the following:

- i) Administer the PJM Interchange Energy Market as part of the PJM Region, including scheduling and dispatching of generation resources, accounting for transactions, maintaining appropriate records, and monitoring the compliance of Market Participants with the provisions of this Agreement, all in accordance with applicable provisions of the Operating Agreement, and the Schedules to this Agreement;
- ii) Review and evaluate the qualification of entities to be Market Buyers, Market Sellers, or Economic Load Response Participants under applicable provisions of this Agreement;
- iii) Coordinate, in accordance with applicable provisions of this Agreement, the Reliability Assurance Agreement, and the Consolidated Transmission Owners Agreement, maintenance schedules for generation and transmission resources operated as part of the PJM Region;
- iv) Provide or coordinate the provision of ancillary services necessary for the operation of the PJM Region or the PJM Interchange Energy Market;
- v) Determine and declare that an Emergency is expected to exist, exists, or has ceased to exist, in all or any part of the PJM Region, or in another directly or indirectly interconnected Control Area and serve as a primary point of contact for interested state or federal agencies;
- vi) Administer (a) agreements for the transfer of energy in conditions constituting an Emergency in the PJM Region or in an interconnected Control Area, and the mutual provision of other support in such Emergency conditions with other interconnected Control Areas, and (b) purchases of Emergency energy offered by Members from resources that are not Capacity Resources in conditions constituting an Emergency in the PJM Region;
- vii) Coordinate the curtailment or shedding of load, or other measures appropriate to alleviate an Emergency, in order to preserve reliability in accordance with NERC, or Applicable Regional Entity principles, guidelines and standards, and to ensure the operation of the PJM Region in accordance with Good Utility Practice and this Agreement;
- viii) Protect confidential information as specified in this Agreement; and

ix) Send a representative to meetings of the Members Committee or other Committees, subcommittees, or working groups specified in this Agreement or formed by the Members Committee when requested to do so by the chair or other head of such committee or other group.

1.6.3 Records and Reports.

The Office of the Interconnection shall prepare and maintain such records and prepare such reports, including, but not limited to quarterly budget reports, as are required to document the performance of its obligations to the Market Participants hereunder in a form adopted by the Office of the Interconnection upon consideration of the advice and recommendations of the Members Committee. The Office of the Interconnection shall also produce special reports reasonably requested by the Members Committee and consistent with FERC's standards of conduct; provided, however, the Market Participants shall reimburse the Office of the Interconnection for the costs of producing any such report. Notwithstanding the foregoing, the Office of the Interconnection shall not be required to disclose confidential or commercially sensitive information in any such report.

1.6.4 PJM Manuals.

The Office of the Interconnection shall prepare, maintain and update the PJM Manuals consistent with this Agreement. The PJM Manuals shall be available for inspection by the Market Participants, regulatory authorities with jurisdiction over the LLC or any Member, and the public.

1.7 General.

1.7.1 Market Sellers.

Only Market Sellers shall be eligible to submit offers to the Office of the Interconnection for the sale of electric energy or related services in the PJM Interchange Energy Market. Market Sellers shall comply with the prices, terms, and operating characteristics of all Offer Data submitted to and accepted by the PJM Interchange Energy Market.

1.7.2 Market Buyers.

Only Market Buyers shall be eligible to purchase energy or related services in the PJM Interchange Energy Market. Market Buyers shall comply with all requirements for making purchases from the PJM Interchange Energy Market.

1.7.2A Economic Load Response Participants.

Only Economic Load Response Participants shall be eligible to participate in the Real-time Energy Market and the Day-ahead Energy Market by submitting offers to the Office of the Interconnection to reduce demand.

1.7.3 Agents.

A Market Participant may participate in the PJM Interchange Energy Market through an agent, provided that the Market Participant informs the Office of the Interconnection in advance in writing of the appointment of such agent. A Market Participant participating in the PJM Interchange Energy Market through an agent shall be bound by all of the acts or representations of such agent with respect to transactions in the PJM Interchange Energy Market, and shall ensure that any such agent complies with the requirements of this Agreement.

1.7.4 General Obligations of the Market Participants.

(a) In performing its obligations to the Office of the Interconnection hereunder, each Market Participant shall at all times (i) follow Good Utility Practice, (ii) comply with all applicable laws and regulations, (iii) comply with the applicable principles, guidelines, standards and requirements of FERC, NERC and each Applicable Regional Entity, (iv) comply with the procedures established for operation of the PJM Interchange Energy Market and PJM Region and (v) cooperate with the Office of the Interconnection as necessary for the operation of the PJM Region in a safe, reliable manner consistent with Good Utility Practice.

(b) Market Participants shall undertake all operations in or affecting the PJM Interchange Energy Market and the PJM Region including but not limited to compliance with all Emergency procedures, in accordance with the power and authority of the Office of the Interconnection with respect to the operation of the PJM Interchange Energy Market and the PJM Region as established in this Agreement, and as specified in the Schedules to this Agreement and the PJM Manuals. Failure to comply with the foregoing operational requirements shall subject a Market

Participant to such reasonable charges or other remedies or sanctions for non-compliance as may be established by the PJM Board, including legal or regulatory proceedings as authorized by the PJM Board to enforce the obligations of this Agreement.

(c) The Office of the Interconnection may establish such committees with a representative of each Market Participant, and the Market Participants agree to provide appropriately qualified personnel for such committees, as may be necessary for the Office of the Interconnection and PJMSettlement to perform its obligations hereunder.

(d) All Market Participants shall provide to the Office of the Interconnection the scheduling and other information specified in the Schedules to this Agreement, and such other information as the Office of the Interconnection may reasonably require for the reliable and efficient operation of the PJM Region and PJM Interchange Energy Market, and for compliance with applicable regulatory requirements for posting market and related information. Such information shall be provided as much in advance as possible, but in no event later than the deadlines established by the Schedules to this Agreement, or by the Office of the Interconnection in conformance with such Schedules. Such information shall include, but not be limited to, maintenance and other anticipated outages of generation or transmission facilities, scheduling and related information on bilateral transactions and self-scheduled resources, and implementation of active load management, interruption of load, Price Responsive Demand, and other load reduction measures. The Office of the Interconnection shall abide by appropriate requirements for the non-disclosure and protection of any confidential or proprietary information given to the Office of the Interconnection by a Market Participant. Each Market Participant shall maintain or cause to be maintained compatible information and communications systems, as specified by the Office of the Interconnection, required to transmit scheduling, dispatch, or other time-sensitive information to the Office of the Interconnection in a timely manner.

(e) Subject to the requirements for Economic Load Response participants in section 1.5A above, each Market Participant shall install and operate, or shall otherwise arrange for, metering and related equipment capable of recording and transmitting all voice and data communications reasonably necessary for the Office of the Interconnection and PJMSettlement to perform the services specified in this Agreement. A Market Participant that elects to be separately billed for its PJM Interchange shall, to the extent necessary, be individually metered in accordance with Section 14 of this Agreement, or shall agree upon an allocation of PJM Interchange between it and the Market Participant through whose meters the unmetered Market Participant's PJM Interchange is delivered. The Office of the Interconnection shall be notified of the allocation by the foregoing Market Participants.

(f) Each Market Participant shall operate, or shall cause to be operated, any generating resources owned or controlled by such Market Participant that are within the PJM Region or otherwise supplying energy to or through the PJM Region in a manner that is consistent with the standards, requirements or directions of the Office of the Interconnection and that will permit the Office of the Interconnection to perform its obligations under this Agreement; provided, however, no Market Participant shall be required to take any action that is inconsistent with Good Utility Practice or applicable law.

(g) Each Market Participant shall follow the directions of the Office of the Interconnection to take actions to prevent, manage, alleviate or end an Emergency in a manner consistent with this Agreement and the procedures of the PJM Region as specified in the PJM Manuals.

(h) Each Market Participant shall obtain and maintain all permits, licenses or approvals required for the Market Participant to participate in the PJM Interchange Energy Market in the manner contemplated by this Agreement.

(i) Consistent with Section 36.1.1 of the PJM Tariff, to the extent its generating facility is dispatchable, a Market Participant shall submit an Economic Minimum in the Real-time Energy Market that is no greater than the higher of its physical operating minimum or its Capacity Interconnection Rights, as that term is defined in the PJM Tariff, associated with such generating facility under its Interconnection Service Agreement under Attachment O of the PJM Tariff or a wholesale market participation agreement.

1.7.5 Market Operations Center.

Each Market Participant shall maintain a Market Operations Center, or shall make appropriate arrangements for the performance of such services on its behalf. A Market Operations Center shall meet the performance, equipment, communications, staffing and training standards and requirements specified in this Agreement for the scheduling and completion of transactions in the PJM Interchange Energy Market and the maintenance of the reliable operation of the PJM Region, and shall be sufficient to enable (i) a Market Seller or an Economic Load Response Participant to perform all terms and conditions of its offers to the PJM Interchange Energy Market, and (ii) a Market Buyer or an Economic Load Response Participant to conform to the requirements for purchasing from the PJM Interchange Energy Market.

1.7.6 Scheduling and Dispatching.

(a) The Office of the Interconnection shall schedule and dispatch in real-time generation resources and/or Demand Resources economically on the basis of least-cost, security-constrained dispatch and the prices and operating characteristics offered by Market Sellers, continuing until sufficient generation resources and/or Demand Resources are dispatched to serve the PJM Interchange Energy Market energy purchase requirements under normal system conditions of the Market Buyers (taking into account any reductions to such requirements in accordance with PRD Curves properly submitted by PRD Providers), as well as the requirements of the PJM Region for ancillary services provided by generation resources and/or Demand Resources, in accordance with this Agreement. Such scheduling and dispatch shall recognize transmission constraints on coordinated flowgates external to the Transmission System in accordance with Appendix A to the Joint Operating Agreement between the Midwest Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. (PJM Rate Schedule FERC No. 38) and on other such flowgates that are coordinated in accordance with agreements between the LLC and other entities. Scheduling and dispatch shall be conducted in accordance with this Agreement.

(b) The Office of the Interconnection shall undertake to identify any conflict or incompatibility between the scheduling or other deadlines or specifications applicable to the PJM

Interchange Energy Market, and any relevant procedures of another Control Area, or any tariff (including the PJM Tariff). Upon determining that any such conflict or incompatibility exists, the Office of the Interconnection shall propose tariff or procedural changes, and undertake such other efforts as may be appropriate, to resolve any such conflict or incompatibility.

(c) To protect its generation or distribution facilities, or local Transmission Facilities not under the monitoring responsibility and dispatch control of the Office of the Interconnection, an entity may request that the Office of the Interconnection schedule and dispatch generation or reductions in demand to meet a limit on Transmission Facilities different from that which the Office of the Interconnection has determined to be required for reliable operation of the Transmission System. To the extent consistent with its other obligations under this Agreement, the Office of the Interconnection shall schedule and dispatch generation and reductions in demand in accordance with such request. An entity that makes a request pursuant to this section 1.7.6(c) shall be responsible for all generation and other costs resulting from its request that would not have been incurred by operating the Transmission System and scheduling and dispatching generation in the manner that the Office of the Interconnection otherwise has determined to be required for reliable operation of the Transmission System.

1.7.7 Pricing.

The price paid for energy bought and sold in the PJM Interchange Energy Market and for demand reductions will reflect the hourly Locational Marginal Price at each load and generation bus, determined by the Office of the Interconnection in accordance with this Agreement. Transmission Congestion Charges and Transmission Loss Charges, which shall be determined by differences in Congestion Prices and Loss Prices in an hour, shall be calculated by the Office of the Interconnection, and collected by PJMSettlement, and the revenues therefrom shall be disbursed by PJMSettlement in accordance with this Schedule.

1.7.8 Generating Market Buyer Resources.

A Generating Market Buyer may elect to self-schedule its generation resources up to that Generating Market Buyer's Equivalent Load, in accordance with and subject to the procedures specified in this Schedule, and the accounting and billing requirements specified in Section 3 to this Schedule. PJMSettlement shall not be a contracting party with respect to such self-scheduled or self-supplied transactions.

1.7.9 Delivery to an External Market Buyer.

A purchase of Spot Market Energy by an External Market Buyer shall be delivered to a bus or buses at the electrical boundaries of the PJM Region specified by the Office of the Interconnection, or to load in such area that is not served by Network Transmission Service, using Point-to-Point Transmission Service paid for by the External Market Buyer. Further delivery of such energy shall be the responsibility of the External Market Buyer.

1.7.10 Other Transactions.

(a) Bilateral Transactions.

- (i) In addition to transactions in the PJM Interchange Energy Market, Market Participants may enter into bilateral contracts for the purchase or sale of electric energy to or from each other or any other entity, subject to the obligations of Market Participants to make Generation Capacity Resources available for dispatch by the Office of the Interconnection. Such bilateral contracts shall be for the physical transfer of energy to or from a Market Participant and shall be reported to and coordinated with the Office of the Interconnection in accordance with this Schedule and pursuant to the LLC's rules relating to its eSchedules and Enhanced Energy Scheduler tools.
- (ii) For purposes of clarity, with respect to all bilateral contracts for the physical transfer of energy to a Market Participant inside the PJM Region, title to the energy that is the subject of the bilateral contract shall pass to the buyer at the source specified for the bilateral contract, and the further transmission of the energy or further sale of the energy into the PJM Interchange Energy Market shall be transacted by the buyer under the bilateral contract. With respect to all bilateral contracts for the physical transfer of energy to an entity outside the PJM Region, title to the energy shall pass to the buyer at the border of the PJM Region and shall be delivered to the border using transmission service. In no event shall the purchase and sale of energy between Market Participants under a bilateral contract constitute a transaction in the PJM Interchange Energy Market or be construed to define PJMSettlement as a contracting party to any bilateral transactions between Market Participants.
- (iii) Market Participants that are parties to bilateral contracts for the purchase and sale and physical transfer of energy reported to and coordinated with the Office of the Interconnection under this Schedule shall use all reasonable efforts, consistent with Good Utility Practice, to limit the megawatt hours of such reported transactions to amounts reflecting the expected load and other physical delivery obligations of the buyer under the bilateral contract.
- (iv) All payments and related charges for the energy associated with a bilateral contract shall be arranged between the parties to the bilateral contract and shall not be billed or settled by the Office of the Interconnection or PJMSettlement. The LLC, PJMSettlement, and the Members will not assume financial responsibility for the failure of a party to perform obligations owed to the other party under a bilateral contract reported and coordinated with the Office of the Interconnection under this Schedule.
- (v) A buyer under a bilateral contract shall guarantee and indemnify the LLC, PJMSettlement, and the Members for the costs of any Spot Market Backup

used to meet the bilateral contract seller's obligation to deliver energy under the bilateral contract and for which payment is not made to PJMSettlement by the seller under the bilateral contract, as determined by the Office of the Interconnection. Upon any default in obligations to the LLC or PJMSettlement by a Market Participant, the Office of the Interconnection shall (i) not accept any new eSchedules or Enhanced Energy Scheduler reporting by the Market Participant and (ii) terminate all of the Market Participant's eSchedules and Enhanced Energy Schedules associated with its bilateral contracts previously reported to the Office of the Interconnection for all days where delivery has not yet occurred. All claims regarding a buyer's default to a seller under a bilateral contract shall be resolved solely between the buyer and the seller. In such circumstances, the seller may instruct the Office of the Interconnection to terminate all of the eSchedules and Enhanced Energy Schedules associated with bilateral contracts between buyer and seller previously reported to the Office of the Interconnection. PJMSettlement shall assign its claims against a seller with respect to a seller's nonpayment for Spot Market Backup to a buyer the extent that the buyer has made an indemnification payment to PJMSettlement with respect to the seller's nonpayment.

- (vi) Bilateral contracts that do not contemplate the physical transfer of energy to or from a Market Participant are not subject to this Schedule, shall not be reported to and coordinated with the Office of the Interconnection, and shall not in any way constitute a transaction in the PJM Interchange Energy Market.

(b) Market Participants shall have Spot Market Backup with respect to all bilateral transactions that contemplate the physical transfer of energy to or from a Market Participant, that are not dynamically scheduled pursuant to Section 1.12 and that are curtailed or interrupted for any reason (except for curtailments or interruptions through active load management for load located within the PJM Region).

(c) To the extent the Office of the Interconnection dispatches a Generating Market Buyer's generation resources, such Generating Market Buyer may elect to net the output of such resources against its hourly Equivalent Load. Such a Generating Market Buyer shall be deemed a buyer from the PJM Interchange Energy Market to the extent of its PJM Interchange Imports, and shall be deemed a seller to the PJM Interchange Energy Market to the extent of its PJM Interchange Exports.

(d) A Market Seller may self-supply Station Power for its generation facility in accordance with the following provisions:

- (i) A Market Seller may self-supply Station Power for its generation facility during any month (1) when the net output of such facility is positive, or (2) when the net output of such facility is negative and the Market Seller

during the same month has available at other of its generation facilities positive net output in an amount at least sufficient to offset fully such negative net output. For purposes of this subsection (d), “net output” of a generation facility during any month means the facility’s gross energy output, less the Station Power requirements of such facility, during that month. The determination of a generation facility’s or a Market Seller’s monthly net output under this subsection (d) will apply only to determine whether the Market Seller self-supplied Station Power during the month and will not affect the price of energy sold or consumed by the Market Seller at any bus during any hour during the month. For each hour when a Market Seller has positive net output and delivers energy into the Transmission System, it will be paid the LMP at its bus for that hour for all of the energy delivered. Conversely, for each hour when a Market Seller has negative net output and has received Station Power from the Transmission System, it will pay the LMP at its bus for that hour for all of the energy consumed.

- (ii) Transmission Provider will determine the extent to which each affected Market Seller during the month self-supplied its Station Power requirements or obtained Station Power from third-party providers (including affiliates) and will incorporate that determination in its accounting and billing for the month. In the event that a Market Seller self-supplies Station Power during any month in the manner described in subsection (1) of subsection (d)(i) above, Market Seller will not use, and will not incur any charges for, transmission service. In the event, and to the extent, that a Market Seller self-supplies Station Power during any month in the manner described in subsection (2) of subsection (d)(i) above (hereafter referred to as “remote self-supply of Station Power”), Market Seller shall use and pay for transmission service for the transmission of energy in an amount equal to the facility’s negative net output from Market Seller’s generation facility(ies) having positive net output. Unless the Market Seller makes other arrangements with Transmission Provider in advance, such transmission service shall be provided under Part II of the PJM Tariff and shall be charged the hourly rate under Schedule 8 of the PJM Tariff for Non-Firm Point-to-Point Transmission Service with an election to pay congestion charges, provided, however, that no reservation shall be necessary for such transmission service and the terms and charges under Schedules 1, 1A, 2 through 6, 9 and 10 of the PJM Tariff shall not apply to such service. The amount of energy that a Market Seller transmits in conjunction with remote self-supply of Station Power will not be affected by any other sales, purchases, or transmission of capacity or energy by or for such Market Seller under any other provisions of the PJM Tariff.
- (iii) A Market Seller may self-supply Station Power from its generation facilities located outside of the PJM Region during any month only if such

generation facilities in fact run during such month and Market Seller separately has reserved transmission service and scheduled delivery of the energy from such resource in advance into the PJM Region.

1.7.11 Emergencies.

(a) The Office of the Interconnection, with the assistance of the Members' dispatchers as it may request, shall be responsible for monitoring the operation of the PJM Region, for declaring the existence of an Emergency, and for directing the operations of Market Participants as necessary to manage, alleviate or end an Emergency. The standards, policies and procedures of the Office of the Interconnection for declaring the existence of an Emergency, including but not limited to a Minimum Generation Emergency, and for managing, alleviating or ending an Emergency, shall apply to all Members on a non-discriminatory basis. Actions by the Office of the Interconnection and the Market Participants shall be carried out in accordance with this Agreement, the NERC Operating Policies, Applicable Regional Entity reliability principles and standards, Good Utility Practice, and the PJM Manuals. A declaration that an Emergency exists or is likely to exist by the Office of the Interconnection shall be binding on all Market Participants until the Office of the Interconnection announces that the actual or threatened Emergency no longer exists. Consistent with existing contracts, all Market Participants shall comply with all directions from the Office of the Interconnection for the purpose of managing, alleviating or ending an Emergency. The Market Participants shall authorize the Office of the Interconnection and PJMSettlement to purchase or sell energy on their behalf to meet an Emergency, and otherwise to implement agreements with other Control Areas interconnected with the PJM Region for the mutual provision of service to meet an Emergency, in accordance with this Agreement.

(b) To the extent load must be shed to alleviate an Emergency in a Control Zone, the Office of the Interconnection shall, to the maximum extent practicable, direct the shedding of load within such Control Zone. The Office of the Interconnection may shed load in one Control Zone to alleviate an Emergency in another Control Zone under its control only as necessary after having first shed load to the maximum extent practicable in the Control Zone experiencing the Emergency and only to the extent that PJM supports other control areas (not under its control) in those situations where load shedding would be necessary, such as to prevent isolation of facilities within the Eastern Interconnection, to prevent voltage collapse, or to restore system frequency following a system collapse; provided, however, that the Office of the Interconnection may not order a manual load dump in a Control Zone solely to address capacity deficiencies in another Control Zone. This subsection shall be implemented consistent with North American Electric Reliability Council and applicable reliability council standards.

1.7.12 Fees and Charges.

Each Market Participant, except for Special Members, shall pay all fees and charges of the Office of the Interconnection for operation of the PJM Interchange Energy Market as determined by and allocated to the Market Participant by the Office of the Interconnection in accordance with Schedule 3.

1.7.13 Relationship to the PJM Region.

The PJM Interchange Energy Market operates within and subject to the requirements for the operation of the PJM Region.

1.7.14 PJM Manuals.

The Office of the Interconnection shall be responsible for maintaining, updating, and promulgating the PJM Manuals as they relate to the operation of the PJM Interchange Energy Market. The PJM Manuals, as they relate to the operation of the PJM Interchange Energy Market, shall conform and comply with this Agreement, NERC operating policies, and Applicable Regional Entity reliability principles, guidelines and standards, and shall be designed to facilitate administration of an efficient energy market within industry reliability standards and the physical capabilities of the PJM Region.

1.7.15 Corrective Action.

Consistent with Good Utility Practice, the Office of the Interconnection shall be authorized to direct or coordinate corrective action, whether or not specified in the PJM Manuals, as necessary to alleviate unusual conditions that threaten the integrity or reliability of the PJM Region, or the regional power system.

1.7.16 Recording.

Subject to the requirements of applicable State or federal law, all voice communications with the Office of the Interconnection Control Center may be recorded by the Office of the Interconnection and any Market Participant communicating with the Office of the Interconnection Control Center, and each Market Participant hereby consents to such recording.

1.7.17 Operating Reserves.

(a) The following procedures shall apply to any generation unit subject to the dispatch of the Office of the Interconnection for which construction commenced before July 9, 1996, or any Demand Resource subject to the dispatch of the Office of the Interconnection.

(b) The Office of the Interconnection shall schedule to the Operating Reserve and load-following objectives of the Control Zones of the PJM Region and the PJM Interchange Energy Market in scheduling generation resources and/or Demand Resources pursuant to this Schedule. A table of Operating Reserve objectives for each Control Zone is calculated and published annually in the PJM Manuals. Reserve levels are probabilistically determined based on the season's historical load forecasting error and forced outage rates.

(c) Nuclear generation resources shall not be eligible for Operating Reserve payments unless: 1) the Office of the Interconnection directs such resources to reduce output, in which case, such units shall be compensated in accordance with section 3.2.3(f) of this Schedule; or 2) the resource submits a request for a risk premium to the Market Monitoring Unit under the

procedures specified in Section II.B of Attachment M - Appendix. A nuclear generation resource (i) must submit a risk premium consistent with its agreement under such process, or, (ii) if it has not agreed with the Market Monitoring Unit on an appropriate risk premium, may submit its own determination of an appropriate risk premium to the Office of the Interconnection, subject to acceptance by the Office of the Interconnection, with or without prior approval from the Commission.

(d) PJMSettlement shall be the Counterparty to the purchases and sales of Operating Reserve in the PJM Interchange Energy Market.

1.7.18 Regulation.

(a) Regulation to meet the Regulation objective of each Regulation Zone shall be supplied from generation resources and/or *demand resources* located within the metered electrical boundaries of such Regulation Zone. Generating Market Buyers, and Market Sellers offering Regulation, shall comply with applicable standards and requirements for Regulation capability and dispatch specified in the PJM Manuals.

(b) The Office of the Interconnection shall obtain and maintain for each Regulation Zone an amount of Regulation equal to the Regulation objective for such Regulation Zone as specified in the PJM Manuals.

(c) The Regulation range of a generation unit or *demand resource* shall be at least twice the amount of Regulation assigned.

(d) A generation unit capable of automatic energy dispatch that is also providing Regulation shall have its energy dispatch range reduced by twice the amount of the Regulation provided. The amount of Regulation provided by a generation unit shall serve to redefine the Normal Minimum Generation and Normal Maximum Generation energy limits of that generation unit, in that the amount of Regulation shall be added to the generation unit's Normal Minimum Generation energy limit, and subtracted from its Normal Maximum Generation energy limit.

(e) Qualified Regulation must satisfy the verification tests described in the PJM Manuals.

1.7.19 Ramping.

A generator dispatched by the Office of the Interconnection pursuant to a control signal appropriate to increase or decrease the generator's megawatt output level shall be able to change output at the ramping rate specified in the Offer Data submitted to the Office of the Interconnection for that generator.

1.7.19A Synchronized Reserve.

(a) Synchronized Reserve shall be supplied from generation resources and/or Demand Resources located within the metered boundaries of the PJM Region. Generating Market Buyers, and Market Sellers offering Synchronized Reserve shall comply with applicable

standards and requirements for Synchronized Reserve capability and dispatch specified in the PJM Manuals.

(b) The Office of the Interconnection shall obtain and maintain for each Synchronized Reserve Zone an amount of Synchronized Reserve equal to the Synchronized Reserve objective for such Synchronized Reserve Zone, as specified in the PJM Manuals.

(c) The Synchronized Reserve capability of a generation resource and Demand Resource shall be the increase in energy output or load reduction achievable by the generation resource and Demand Resource within a continuous 10-minute period.

(d) A generation unit capable of automatic energy dispatch that also is providing Synchronized Reserve shall have its energy dispatch range reduced by the amount of the Synchronized Reserve provided. The amount of Synchronized Reserve provided by a generation unit shall serve to redefine the Normal Maximum Generation energy limit of that generation unit in that the amount of Synchronized Reserve provided shall be subtracted from its Normal Maximum Generation energy limit.

1.7.19B Bilateral Transactions Regarding Regulation, Synchronized Reserve and Day-ahead Scheduling Reserves.

(a) In addition to transactions in the Regulation market, Synchronized Reserve market, and Day-ahead Scheduling Reserves Market, Market Participants may enter into bilateral contracts for the purchase or sale of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to or from each other or any other entity. Such bilateral contracts shall be for the physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to or from a Market Participant and shall be reported to and coordinated with the Office of the Interconnection in accordance with this Schedule and pursuant to the LLC's rules relating to its eMarket tools.

(b) For purposes of clarity, with respect to all bilateral contracts for the physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to a Market Participant in the PJM Region, title to the product that is the subject of the bilateral contract shall pass to the buyer at the source specified for the bilateral contract, and any further transactions associated with such products or further sale of such Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves in the markets for Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves, respectively, shall be transacted by the buyer under the bilateral contract. In no event shall the purchase and sale of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves between Market Participants under a bilateral contract constitute a transaction in PJM's markets for Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves, or otherwise construed to define PJMSettlement as a contracting party to any bilateral transactions between Market Participants.

(c) Market Participants that are parties to bilateral contracts for the purchase and sale and physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves reported to and coordinated with the Office of the Interconnection under this Schedule shall use

all reasonable efforts, consistent with Good Utility Practice, to limit the amounts of such reported transactions to amounts reflecting the expected requirements for Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves of the buyer pursuant to such bilateral contracts.

(d) All payments and related charges for the Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves associated with a bilateral contract shall be arranged between the parties to the bilateral contract and shall not be billed or settled by the Office of the Interconnection. The LLC, PJM Settlement, and the Members will not assume financial responsibility for the failure of a party to perform obligations owed to the other party under a bilateral contract reported and coordinated with the Office of the Interconnection under this Schedule.

(e) A buyer under a bilateral contract shall guarantee and indemnify the LLC, PJMSettlement, and the Members for the costs of any purchases by the seller under the bilateral contract in the markets for Regulations, Synchronized Reserve, or Day-ahead Scheduling Reserves used to meet the bilateral contract seller's obligation to deliver Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves under the bilateral contract and for which payment is not made to PJMSettlement by the seller under the bilateral contract, as determined by the Office of the Interconnection. Upon any default in obligations to the LLC or PJMSettlement by a Market Participant, the Office of the Interconnection shall (i) not accept any new eMarket reporting by the Market Participant and (ii) terminate all of the Market Participant's reporting of eMarkets schedules associated with its bilateral contracts previously reported to the Office of the Interconnection for all days where delivery has not yet occurred. All claims regarding a buyer's default to a seller under a bilateral contract shall be resolved solely between the buyer and the seller. In such circumstances, the seller may instruct the Office of the Interconnection to terminate all of the reported eMarkets schedules associated with bilateral contracts between buyer and seller previously reported to the Office of the Interconnection.

(f) Market Participants shall purchase Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves from PJM's markets for Regulation, Synchronized Reserve, Day-ahead Scheduling Reserves, in quantities sufficient to complete the delivery or receipt obligations of a bilateral contract that has been curtailed or interrupted for any reason, with respect to all bilateral transactions that contemplate the physical transfer of Regulation, Synchronized Reserve, or Day-ahead Scheduling Reserves to or from a Market Participant.

1.7.20 Communication and Operating Requirements.

(a) Market Participants. Each Market Participant shall have, or shall arrange to have, its transactions in the PJM Interchange Energy Market subject to control by a Market Operations Center, with staffing and communications systems capable of real-time communication with the Office of the Interconnection during normal and Emergency conditions and of control of the Market Participant's relevant load or facilities sufficient to meet the requirements of the Market Participant's transactions with the PJM Interchange Energy Market, including but not limited to the following requirements as applicable.

(b) Market Sellers selling from generation resources and/or Demand Resources within the PJM Region shall: report to the Office of the Interconnection sources of energy and Demand Resources available for operation; supply to the Office of the Interconnection all applicable Offer Data; report to the Office of the Interconnection generation resources and Demand Resources that are self-scheduled; with respect to generation resources, report to the Office of the Interconnection bilateral sales transactions to buyers not within the PJM Region; confirm to the Office of the Interconnection bilateral sales to Market Buyers within the PJM Region; respond to the Office of the Interconnection's directives to start, shutdown or change output levels of generation units, or change scheduled voltages or reactive output levels of generation units, or reduce load from Demand Resources; continuously maintain all Offer Data concurrent with on-line operating information; and ensure that, where so equipped, generating equipment and Demand Resources are operated with control equipment functioning as specified in the PJM Manuals.

(c) Market Sellers selling from generation resources outside the PJM Region shall: provide to the Office of the Interconnection all applicable Offer Data, including offers specifying amounts of energy available, hours of availability and prices of energy and other services; respond to Office of the Interconnection directives to schedule delivery or change delivery schedules; and communicate delivery schedules to the Market Seller's Control Area.

(d) Market Participants that are Load Serving Entities or purchasing on behalf of Load Serving Entities shall: respond to Office of the Interconnection directives for load management steps; report to the Office of the Interconnection Generation Capacity Resources to satisfy capacity obligations that are available for pool operation; report to the Office of the Interconnection all bilateral purchase transactions; respond to other Office of the Interconnection directives such as those required during Emergency operation.

(e) Market Participants that are not Load Serving Entities or purchasing on behalf of Load Serving Entities shall: provide to the Office of the Interconnection requests to purchase specified amounts of energy for each hour of the Operating Day during which it intends to purchase from the PJM Interchange Energy Market, along with Dispatch Rate levels above which it does not desire to purchase; respond to other Office of the Interconnection directives such as those required during Emergency operation.

(f) Economic Load Response Participants are responsible for maintaining demand reduction information, including the amount and price at which demand may be reduced. The Economic Load Response Participant shall provide this information to the Office of the Interconnection by posting it on the Load Response Program Registration link of the PJM website as required by the PJM Manuals. The Economic Load Response Participant shall notify the Office of the Interconnection of a demand reduction concurrent with, or prior to, the beginning of such demand reduction in accordance with the PJM Manuals. In the event that an Economic Load Response Participant chooses to measure load reductions using a Customer Baseline Load, the Economic Load Response Participant shall inform the Office of the Interconnection of a change in its operations or the operations of the end-use customer that would affect a relevant Customer Baseline Load as required by the PJM Manuals.

(g) PRD Providers shall be responsible for ensuring automated reductions to their Price Responsive Demand in response to price in accordance with their PRD Curves submitted to the Office of the Interconnection.

2.2 Interpretation.

To the extent permitted by applicable law, the PJM Dispute Resolution Procedures are to be interpreted to effectuate the objectives set forth in Section 2.1. To the extent permitted by these PJM Dispute Resolution Procedures, the Alternate Dispute Resolution Coordinator shall coordinate with the established dispute resolution committee of an Applicable Regional Entity, where appropriate, in order to conserve administrative resources and to avoid duplication of dispute resolution staffing.

3.2 Procedures.

3.2.1 Initiation.

If a dispute that is subject to the mediation procedures specified herein has not been resolved through good-faith negotiation, a party to the dispute shall notify the Alternate Dispute Resolution Coordinator in writing of the existence and nature of the dispute prior to commencing any other form of proceeding for resolution of the dispute. The Alternate Dispute Resolution Coordinator shall have ten calendar days from the date it first receives notification of the existence of a dispute from any of the parties to the dispute in which to distribute to the parties a list of mediators.

3.2.2 Selection of Mediator.

The Alternate Dispute Resolution Coordinator shall distribute to the parties by facsimile or other electronic means a list containing the names of seven mediators with mediation experience, or with technical or business experience in the electric power industry, or both, as it shall deem appropriate to the dispute. The Alternate Dispute Resolution Coordinator may draw from the lists of mediators maintained by the established dispute resolution committee of an Applicable Regional Entity, as the Alternate Dispute Resolution Coordinator shall deem appropriate. In the event the Office of the Interconnection is one of the parties to the dispute, the Alternate Dispute Resolution Coordinator shall distribute the names of all qualified mediators on the Alternate Dispute Resolution Coordinator's list. The persons on the proposed list of mediators shall have no official, financial, or personal conflict of interest with respect to the issues in controversy, unless the interest is fully disclosed in writing to all participants in the mediation process and all such participants waive in writing any objection to the interest. The parties shall then alternate in striking names from the list with the last name on the list becoming the mediator. The determination of which party shall have the first strike off the list shall be determined by lot. The parties shall have ten calendar days to complete the mediator selection process, unless the time is extended by mutual agreement.

3.2.3 Advisory Mediator.

If the Alternate Dispute Resolution Coordinator deems it appropriate, it shall distribute two lists, one containing the names of seven mediators with mediation experience (or a list containing the names of all current mediators in the event of a dispute involving the Office of the Interconnection), and one containing the names of seven mediators with technical or business experience in the electric power industry. In connection with circulating the foregoing lists, the Alternate Dispute Resolution Coordinator shall specify one of the lists as containing the proposed mediators, and the other as a list of proposed advisors to assist the mediator in resolving the dispute. The parties shall then utilize the alternative strike procedure set forth above until one name remains on each list, with the last named persons serving as the mediator and advisor.

3.2.4 Mediation Process.

The disputing parties shall attempt in good faith to resolve their dispute in accordance with procedures and a timetable established by the mediator. In furtherance of the mediation efforts, the mediator may:

- (a) Require the parties to meet for face-to-face discussions, with or without the mediator;
- (b) Act as an intermediary between the disputing parties;
- (c) Require the disputing parties to submit written statements of issues and positions;
- (d) If requested by the disputing parties at any time in the mediation process, provide a written recommendation on resolution of the dispute including, if requested, the assessment by the mediator of the merits of the principal positions being advanced by each of the disputing parties; and
- (e) Adopt, when appropriate, the Center for Public Resources Model ADR Procedures for the Mediation of Business Disputes (as revised from time to time) to the extent such Procedures are not inconsistent with any rule, standard, or procedure adopted by the Office of the Interconnection or with any provision of this Agreement.

3.2.5 Mediator's Assessment.

(a) If a resolution of the dispute is not reached by the thirtieth day after the appointment of the mediator or such later date as may be agreed to by the parties, if not previously requested to do so the mediator shall promptly provide the disputing parties with a written, confidential, non-binding recommendation on resolution of the dispute, including the assessment by the mediator of the merits of the principal positions being advanced by each of the disputing parties. The recommendation may incorporate or append, if and as the mediator may deem appropriate, any recommendations or any assessment of the positions of the parties by the advisor, if any. Upon request, the mediator shall provide any additional recommendations or assessments the mediator shall deem appropriate.

(b) At a time and place specified by the mediator after delivery of the foregoing recommendation, the disputing parties shall meet in a good faith attempt to resolve the dispute in light of the recommendation of the mediator. Each disputing party shall be represented at the meeting by a person with authority to settle the dispute, along with such other persons as each disputing party shall deem appropriate. If the disputing parties are unable to resolve the dispute at or in connection with this meeting, then: (i) any disputing party may commence such arbitral, judicial, regulatory or other proceedings as may be appropriate as provided in the PJM Dispute Resolution Procedures; and (ii) the recommendation of the mediator, and any statements made by any party in the mediation process, shall have no further force or effect, and shall not be admissible for any purpose, in any subsequent arbitral, administrative, judicial, or other proceeding.

4.4 Selection of Arbitrator(s).

The parties to a dispute for which arbitration has been demanded may agree on any person to serve as a single arbitrator, or shall endeavor in good faith to agree on a single arbitrator from a list of arbitrators prepared for the dispute by the Alternate Dispute Resolution Coordinator and delivered to the parties by facsimile or other electronic means promptly after receipt by the Alternate Dispute Resolution Coordinator of a demand for arbitration. The Alternate Dispute Resolution Coordinator may draw from the lists of arbitrators maintained by the established dispute resolution committee of an Applicable Regional Entity, as the Alternate Dispute Resolution Coordinator deems appropriate. In the event the Office of the Interconnection is one of the parties to the dispute, the Alternate Dispute Resolution Coordinator shall distribute the names of all qualified arbitrators on the Alternate Dispute Resolution Coordinator's list. If the parties are unable to agree on a single arbitrator by the fourteenth day following delivery of the foregoing list of arbitrators or such other date as agreed to by the parties, then not later than the end of the seventh business day thereafter the party or parties demanding arbitration on the one hand, and the party or parties responding to the demand for arbitration on the other, shall each designate an arbitrator from a list for the dispute prepared by the Alternate Dispute Resolution Coordinator. The arbitrators so chosen shall then choose a third arbitrator.

1.2 Conformity with NERC *Reliability Standards* and Other Applicable Reliability Criteria.

- (a) NERC establishes Reliability Standards to promote the reliability, adequacy and security of the North American bulk power supply as related to the operation and planning of electric systems.
- (b) ReliabilityFirst Corporation is responsible for ensuring the reliability, adequacy and security of the bulk electric supply systems in the geographic region described in the applicable agreements between NERC and ReliabilityFirst Corporation, as approved by the FERC, through coordinated operations and planning of generation and transmission facilities. Toward that end, it has adopted the NERC Reliability Standards and has established detailed Reliability Principles and Standards for Planning the Bulk Electric Supply System of the ReliabilityFirst Corporation.
- (c) [Reserved]
- (c.01) [Reserved]
- (c.02) SERC is responsible for ensuring the reliability, adequacy and security of the bulk electric supply systems in the VACAR subregion of SERC. Toward that end, it has adopted the NERC Reliability Standards and has established detailed Reliability Principles and Standards for Planning the Bulk Electric Supply System for SERC.
- (d) The Regional Transmission Expansion Plan shall conform at a minimum to the applicable reliability principles, guidelines and standards of NERC, ReliabilityFirst Corporation and SERC, and other Applicable Regional Entities in accordance with the planning and operating criteria and other procedures detailed in the PJM Manuals.
- (e) The Regional Transmission Expansion Plan planning criteria shall include, Office of the Interconnection planning procedures, NERC Reliability Standards, Regional Entity reliability principles and standards, and the individual Transmission Owner FERC filed planning criteria as filed in FERC Form No. 715, and posted on the PJM website. FERC Form No. 715 material will be posted to the PJM website, subject to applicable Critical Energy Infrastructure Information (CEII) requirements.
- (f) The Office of the Interconnection will also provide access through the PJM website, to the planning criteria and assumptions used by the Transmission Owners for the development of the current Local Plan.

1.2 Obligations.

- (a) Each Electric Distributor in the PJM Mid-Atlantic Region shall install or contractually arrange for underfrequency relays to interrupt at least 30 percent of its peak load with 10 percent of the load interrupted at each of three frequency levels: 59.3 Hz, 58.9 Hz and 58.5 Hz. Upon the request of the Members Committee, each Electric Distributor in the PJM Mid-Atlantic Region shall document that it has complied with the requirement for underfrequency load shedding relays.
- (b) Each Electric Distributor in the PJM West Region shall install or contractually arrange for underfrequency relays to interrupt at least 25 percent of its peak load with 5 percent of the load interrupted at each of five frequency levels: 59.5 Hz, 59.3 Hz, 59.1 Hz, 58.9 Hz, and 58.7 Hz; provided, however, that each Electric Distributor in the Commonwealth Edison Company Zone shall install or contractually arrange for underfrequency relays to interrupt at least 30 percent of its peak load with 10 percent of the load interrupted at each of three frequency levels: 59.3 Hz, 59.0 Hz, and 58.7 Hz. Upon the request of the Markets and Reliability Committee established by the Reliability Assurance Agreement, each Electric Distributor in the PJM West Region shall document that it has complied with the requirement for underfrequency load shedding relays.
- (c) Each Electric Distributor in the PJM South Region shall install or contractually arrange for underfrequency relays to interrupt at least 30 percent of its peak load with 10 percent of the load interrupted at each of 3 frequency levels: 59.3 Hz, 59.0 Hz, 58.5 Hz. Upon the request of the Markets and Reliability Committee established by the Reliability Assurance Agreement, each Electric Distributor in the PJM South Region shall document that it has complied with the requirement for underfrequency load shedding relays.

**Section(s) of the
PJM Reliability Assurance Agreement
(Clean Version)**

RELIABILITY ASSURANCE AGREEMENT

RELIABILITY ASSURANCE AGREEMENT, dated as of this 1st day of June, 2007 by and among the entities set forth in Schedule 17 hereto, hereinafter referred to collectively as the "Parties" and individually as a "Party."

WITNESSETH:

WHEREAS, each Party to this Agreement is a Load Serving Entity within the PJM Region;

WHEREAS, each Party is committing to share its Capacity Resources with the other Parties to reduce the overall reserve requirements for the Parties while maintaining reliable service; and

WHEREAS, each Party is committing to provide mutual assistance to the other Parties during Emergencies;

WHEREAS, each Party is committing to coordinate its planning of Capacity Resources to satisfy the Reliability Principles and Standards; and

NOW THEREFORE, for and in consideration of the covenants and mutual agreements set forth herein and intending to be legally bound hereby, the Parties agree as follows:

ARTICLE 1 -- DEFINITIONS

ARTICLE 1 -- DEFINITIONS

Unless the context otherwise specifies or requires, capitalized terms used herein shall have the respective meanings assigned herein or in the Schedules hereto for all purposes of this Agreement (such definitions to be equally applicable to both the singular and the plural forms of the terms defined). Unless otherwise specified, all references herein to Articles, Sections or Schedules, are to Articles, Sections or Schedules of this Agreement. As used in this Agreement:

1.1 Agreement

Agreement shall mean this Reliability Assurance Agreement, together with all Schedules hereto, as amended from time to time.

1.1A Annual Demand Resource

Annual Demand Resource shall mean a resource that is placed under the direction of the Office of the Interconnection during the Delivery Year, and will be available for an unlimited number of interruptions during such Delivery Year by the Office of the Interconnection, and will be capable of maintaining each such interruption for at least a 10-hour duration between the hours of 10:00AM to 10:00PM Eastern Prevailing Time for the months of June through October and the following May, and 6:00AM through 9:00PM Eastern Prevailing Time for the months of November through April unless there is an Office of the Interconnection approved maintenance outage during October through April. The Annual Demand Resource must be available in the corresponding Delivery year to be offered for sale or Self-Supplied in an RPM Auction, or included as an Annual Demand Resource in an FRR Capacity Plan for the corresponding Delivery Year.

1.2 Applicable Regional Entity

Applicable Regional Entity shall have the same meaning as in the PJM Tariff.

1.3 Base Residual Auction

Base Residual Auction shall have the same meaning as in Attachment DD to the PJM Tariff.

1.4 Behind The Meter Generation

Behind The Meter Generation shall mean a generating unit that delivers energy to load without using the Transmission System or any distribution facilities (unless the entity that owns or leases the distribution facilities consented to such use of the distribution facilities and such consent has been demonstrated to the satisfaction of the Office of the Interconnection; provided, however, that Behind The Meter Generation does not include (i) at any time, any portion of such generating unit's capacity that is designated as a Capacity Resource or (ii) in any hour, any

portion of the output of such generating unit that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market.

1.5 Black Start Capability

Black Start Capability shall mean the ability of a generating unit or station to go from a shutdown condition to an operating condition and start delivering power without assistance from the power system.

1.6 Capacity Emergency Transfer Objective (“CETO”)

Capacity Emergency Transfer Objective (“CETO”) shall mean the amount of electric energy that a given area must be able to import in order to remain within a loss of load expectation of one event in 25 years when the area is experiencing a localized capacity emergency, as determined in accordance with the PJM Manuals. Without limiting the foregoing, CETO shall be calculated based in part on EFORD determined in accordance with Paragraph C of Schedule 5.

1.7 Capacity Emergency Transmission Limit (“CETL”)

Capacity Emergency Transmission Limit (“CETL”) shall mean the capability of the transmission system to support deliveries of electric energy to a given area experiencing a localized capacity emergency as determined in accordance with the PJM Manuals.

1.8 Capacity Resources

Capacity Resources shall mean megawatts of (i) net capacity from existing or Planned Generation Capacity Resources meeting the requirements of Schedules 9 and 10 that are or will be owned by or contracted to a Party and that are or will be committed to satisfy that Party's obligations under this Agreement, or to satisfy the reliability requirements of the PJM Region, for a Delivery Year; (ii) net capacity from existing or Planned Generation Capacity Resources within the PJM Region not owned or contracted for by a Party which are accredited to the PJM Region pursuant to the procedures set forth in Schedules 9 and 10; and (iii) load reduction capability provided by Demand Resources, Energy Efficiency Resources, or ILR that are accredited to the PJM Region pursuant to the procedures set forth in Schedule 6.

1.9 Capacity Transfer Right

Capacity Transfer Right shall have the meaning specified in Attachment DD to the PJM Tariff.

1.10 Control Area

Control Area shall mean an electric power system or combination of electric power systems bounded by interconnection metering and telemetry to which a common generation control scheme is applied in order to:

(a) match the power output of the generators within the electric power system(s) and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s);

(b) maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice;

(c) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice and the criteria of NERC and each Applicable Regional Entity;

(d) maintain power flows on transmission facilities within appropriate limits to preserve reliability; and

(e) provide sufficient generating capacity to maintain operating reserves in accordance with Good Utility Practice.

1.11 Daily Unforced Capacity Obligation

Daily Unforced Capacity Obligation shall have the meaning set forth in Schedule 8 or, as to an FRR Entity, in Schedule 8.1.

1.12 Delivery Year

Delivery Year shall mean a Planning Period for which a Capacity Resource is committed pursuant to the auction procedures specified in Attachment DD to the Tariff or pursuant to an FRR Capacity Plan.

1.13 Demand Resource

Demand Resource or “DR” shall mean a Limited Demand Resource, Extended Summer Demand Resource, or Annual Demand Resource with a demonstrated capability to provide a reduction in demand or otherwise control load in accordance with the requirements of Schedule 6 that offers and that clears load reduction capability in a Base Residual Auction or Incremental Auction or that is committed through an FRR Capacity Plan. As set forth in Schedule 6, a Limited Demand Resource, Extended Summer Demand Resource or Annual Demand Resource may be an existing demand response resource or a Planned Demand Resource.

1.14 Demand Resource Provider

Demand Resource Provider shall have the meaning specified in Attachment DD to the PJM Tariff.

1.15 DR Factor

DR Factor shall mean that factor approved from time to time by the PJM Board used to determine the unforced capacity value of a Demand Resource or ILR in accordance with Schedule 6.

1.16 [Reserved for Future Use]

1.17 Electric Cooperative

Electric Cooperative shall mean an entity owned in cooperative form by its customers that is engaged in the generation, transmission, and/or distribution of electric energy.

1.18 Electric Distributor

Electric Distributor shall mean an entity that owns or leases with rights equivalent to ownership electric distribution facilities that are providing electric distribution service to electric load within the PJM Region.

1.19 Emergency

Emergency shall mean (i) an abnormal system condition requiring manual or automatic action to maintain system frequency, or to prevent loss of firm load, equipment damage, or tripping of system elements that could adversely affect the reliability of an electric system or the safety of persons or property; or (ii) a fuel shortage requiring departure from normal operating procedures in order to minimize the use of such scarce fuel; or (iii) a condition that requires implementation of emergency procedures as defined in the PJM Manuals.

1.20 End-Use Customer

End-Use Customer shall mean a Member that is a retail end-user of electricity within the PJM Region.

1.20A Energy Efficiency Resource

Energy Efficiency Resource shall mean a project, including installation of more efficient devices or equipment or implementation of more efficient processes or systems, meeting the requirements of Schedule 6 of this Agreement and exceeding then-current building codes, appliance standards, or other relevant standards, designed to achieve a continuous (during peak periods as described in Schedule 6 and the PJM Manuals) reduction in electric energy consumption that is not reflected in the peak load forecast prepared for the Delivery Year for which the Energy Efficiency Resource is proposed, and that is fully implemented at all times during such Delivery Year, without any requirement of notice, dispatch, or operator intervention.

1.20B Existing Generation Capacity Resource

Existing Generation Capacity Resource shall mean, for purposes of the must-offer requirement and mitigation of offers for any RPM Auction for a Delivery Year, a Generation

Capacity Resource that, as of the date on which bidding commences for such auction: (a) is in service; or (b) is not yet in service, but has cleared any RPM Auction for any prior Delivery Year. Notwithstanding the foregoing, a Generation Capacity Resource for which construction has not commenced and which would otherwise have been treated as a Planned Generation Capacity Resource but for the fact that it was bid into RPM Auctions for at least two consecutive Delivery Years, and cleared the last such auction only because it was considered existing and its mitigated offer cap was accepted when its price offer would not have otherwise been accepted, shall be deemed to be a Planned Generation Capacity Resource. A Generation Capacity Resource shall be deemed to be in service if interconnection service has ever commenced (for resources located in the PJM Region), or if it is physically and electrically interconnected to an external Control Area and is in full commercial operation (for resources not located in the PJM Region). The additional megawatts of a Generation Capacity Resource that is being, or has been, modified to increase the number of megawatts of available installed capacity thereof shall not be deemed to be an Existing Generation Capacity Resource until such time as those megawatts (a) are in service; or (b) are not yet in service, but have cleared any RPM Auction for any prior Delivery Year.

1.20C Extended Summer Demand Resource

Extended Summer Demand Resource shall mean a resource that is placed under the direction of the Office of the Interconnection and that will be available June through October and the following May, and will be available for an unlimited number of interruptions during such months by the Office of the Interconnection, and will be capable of maintaining each such interruption for at least a 10-hour duration between the hours of 10:00AM to 10:00PM Eastern Prevailing Time. The Extended Summer Demand Resource must be available June through October and the following May in the corresponding Delivery Year to be offered for sale or Self-Supplied in an RPM Auction, or included as an Extended Summer Demand Resource in an FRR Capacity Plan for the corresponding Delivery Year.

1.21 Facilities Study Agreement

Facilities Study Agreement shall have the same meaning as in the PJM Tariff

1.22 FERC

FERC shall mean the Federal Energy Regulatory Commission or any successor federal agency, commission or department.

1.23 Firm Point-To-Point Transmission Service

Firm Point-To-Point Transmission Service shall mean Firm Transmission Service provided pursuant to the rates, terms and conditions set forth in Part II of the PJM Tariff.

1.24 Firm Transmission Service

Firm Transmission Service shall mean transmission service that is intended to be available at all times to the maximum extent practicable, subject to an Emergency, an unanticipated failure of a facility, or other event beyond the control of the owner or operator of the facility or the Office of the Interconnection.

1.25 Fixed Resource Requirement Alternative or FRR Alternative

Fixed Resource Requirement Alternative or FRR Alternative shall mean an alternative method for a Party to satisfy its obligation to provide Unforced Capacity hereunder, as set forth in Schedule 8.1 to this Agreement.

1.26 Forecast Pool Requirement

Forecast Pool Requirement or FPR shall mean the amount equal to one plus the unforced reserve margin (stated as a decimal number) for the PJM Region required pursuant to this Agreement, as approved by the PJM Board pursuant to Schedule 4.1.

1.27 Forecast RTO ILR Obligation

Forecast RTO ILR Obligation shall have the same meaning as in the PJM Tariff.

1.28 Forecast Zonal ILR Obligation

Forecast Zonal ILR Obligation shall have the same meaning as in the PJM Tariff.

1.29 FRR Capacity Plan

FRR Capacity Plan shall mean a long-term plan for the commitment of Capacity Resources to satisfy the capacity obligations of a Party that has elected the FRR Alternative, as more fully set forth in Schedule 8.1 to this Agreement.

1.30 FRR Entity

FRR Entity shall mean, for the duration of such election, a Party that has elected the FRR Alternative hereunder.

1.31 FRR Service Area

FRR Service Area shall mean (a) the service territory of an IOU as recognized by state law, rule or order; (b) the service area of a Public Power Entity or Electric Cooperative as recognized by franchise or other state law, rule, or order; or (c) a separately identifiable geographic area that is: (i) bounded by wholesale metering, or similar appropriate multi-site aggregate metering, that is visible to, and regularly reported to, the Office of the Interconnection, or that is visible to, and regularly reported to an Electric Distributor and such Electric Distributor agrees to aggregate the load data from such meters for such FRR Service Area and regularly report such aggregated information, by FRR Service Area, to the Office of the Interconnection;

and (ii) for which the FRR Entity has or assumes the obligation to provide capacity for all load (including load growth) within such area. In the event that the service obligations of an Electric Cooperative or Public Power Entity are not defined by geographic boundaries but by physical connections to a defined set of customers, the FRR Service Area in such circumstances shall be defined as all customers physically connected to transmission or distribution facilities of such Electric Cooperative or Public Power Entity within an area bounded by appropriate wholesale aggregate metering as described above.

1.32 Full Requirements Service

Full Requirements Service shall mean wholesale service to supply all of the power needs of a Load Serving Entity to serve end-users within the PJM Region that are not satisfied by its own generating facilities.

1.33 Generation Capacity Resource

Generation Capacity Resource shall mean a generation unit, or the right to capacity from a specified generation unit, that meets the requirements of Schedules 9 and 10 of this Agreement. A Generation Capacity Resource may be an *Existing* Generation Capacity Resource or a *Planned* Generation Capacity Resource.

1.34 Generation Owner

Generation Owner shall mean a Member that owns or leases with rights equivalent to ownership facilities for the generation of electric energy that are located within the PJM Region. Purchasing all or a portion of the output of a generation facility shall not be sufficient to qualify a Member as a Generation Owner.

1.35 Generator Forced Outage

Generator Forced Outage shall mean an immediate reduction in output or capacity or removal from service, in whole or in part, of a generating unit by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the facility, as specified in the relevant portions of the PJM Manuals. A reduction in output or removal from service of a generating unit in response to changes in market conditions shall not constitute a Generator Forced Outage.

1.36 Generator Maintenance Outage

Generator Maintenance Outage shall mean the scheduled removal from service, in whole or in part, of a generating unit in order to perform repairs on specific components of the facility, if removal of the facility qualifies as a maintenance outage pursuant to the PJM Manuals.

1.37 Generator Planned Outage

Generator Planned Outage shall mean the scheduled removal from service, in whole or in part, of a generating unit for inspection, maintenance or repair with the approval of the Office of the Interconnection in accordance with the PJM Manuals.

1.38 Good Utility Practice

Good Utility Practice shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather is intended to include acceptable practices, methods, or acts generally accepted in the region.

1.39 ILR Provider

ILR Provider shall have the meaning specified in Attachment DD to the PJM Tariff.

1.40 Incremental Auction

Incremental Auction shall mean the First Incremental Auction, the Second Incremental Auction, the Third Incremental Auction, or the Conditional Incremental Auction, each as defined in Attachment DD to the PJM Tariff.

1.41 Interconnection Agreement

Interconnection Agreement shall have the same meaning as in the PJM Tariff.

1.42 Interruptible Load for Reliability, or ILR

Interruptible Load for Reliability, or ILR, shall mean a resource with a demonstrated capability to provide a reduction in demand or otherwise control load in accordance with the requirements of Schedule 6 that is certified by PJM no later than three months prior to a Delivery Year. At a minimum, ILR shall be available for interruption for at least 10 times during the summer period of June through September in the Delivery Year, and will be capable of maintaining each such interruption for at least a 6-hour duration. At a minimum, the ILR shall be available for such interruptions on weekdays, other than NERC holidays, from 12:00PM (noon) to 8:00PM Eastern Prevailing Time in the corresponding Delivery Year.

1.43 IOU

IOU shall mean an investor-owned utility with substantial business interest in owning and/or operating electric facilities in any two or more of the following three asset categories: generation, transmission, distribution.

1.43A Limited Demand Resource

Limited Demand Resource shall mean a resource that is placed under the direction of the Office of the Interconnection and that will, at a minimum, be available for interruption for at least 10 times during the summer period of June through September in the Delivery Year, and will be capable of maintaining each such interruption for at least a 6-hour duration. At a minimum, the Limited Demand Resource shall be available for such interruptions on weekdays, other than NERC holidays, from 12:00PM (noon) to 8:00PM Eastern Prevailing Time. The Limited Demand Resource must be available during the summer period of June through September in the corresponding Delivery Year to be offered for sale or Self-Supplied in an RPM Auction, or included as a Limited Demand Resource in an FRR Capacity Plan for the corresponding Delivery Year.

1.44 Load Serving Entity or LSE

Load Serving Entity or LSE shall mean any entity (or the duly designated agent of such an entity), including a load aggregator or power marketer, (i) serving end-users within the PJM Region, and (ii) that has been granted the authority or has an obligation pursuant to state or local law, regulation or franchise to sell electric energy to end-users located within the PJM Region. Load Serving Entity shall include any end-use customer that qualifies under state rules or a utility retail tariff to manage directly its own supply of electric power and energy and use of transmission and ancillary services.

1.45 Locational Reliability Charge

Locational Reliability Charge shall mean the charge determined pursuant to Schedule 8.

1.46 Markets and Reliability Committee

Markets and Reliability Committee shall mean the committee established pursuant to the Operating Agreement as a Standing Committee of the Members Committee.

1.46A Maximum Emergency Service Level

Maximum Emergency Service Level or MESL of Price Responsive Demand shall mean the level, determined at a PRD Substation level, to which Price Responsive Demand shall be reduced during the Delivery Year when a Maximum Generation Emergency is declared and the Locational Marginal Price exceeds the price associated with such Price Responsive Demand identified by the PRD Provider in its PRD Plan.

1.47 Member

Member shall mean an entity that satisfies the requirements of Sections 1.24 and 11.6 of the PJM Operating Agreement. In accordance with Article 4 of this Agreement, each Party to this Agreement also is a Member.

1.48 Members Committee

Members Committee shall mean the committee specified in Section 8 of the PJM Operating Agreement composed of the representatives of all the Members.

1.49 NERC

NERC shall mean the North American Electric Reliability Council or any successor thereto.

1.50 Network Resources

Network Resources shall have the meaning set forth in the PJM Tariff.

1.51 Network Transmission Service

Network Transmission Service shall mean transmission service provided pursuant to the rates, terms and conditions set forth in Part III of the PJM Tariff or transmission service comparable to such service that is provided to a Load Serving Entity that is also a Transmission Owner (as that term is defined in the PJM Tariff).

1.51A Nominal PRD Value

Nominal PRD Value shall mean, as to any PRD Provider, an adjustment, determined in accordance with Schedule 6.1 of this Agreement, to the peak-load forecast used to determine the quantity of capacity sought through an RPM Auction, reflecting the aggregate effect of Price Responsive Demand on peak load resulting from the Price Responsive Demand to be provided by such PRD Provider.

1.52 Nominated Demand Resource Value

Nominated Demand Resource Value shall have the meaning specified in Attachment DD to the PJM Tariff.

1.53 Nominated ILR Value

Nominated ILR Value shall have the meaning specified in Attachment DD to the PJM Tariff.

1.54 Non-Retail Behind the Meter Generation

Non-Retail Behind the Meter Generation shall mean Behind the Meter Generation that is used by municipal electric systems, electric cooperatives, and electric distribution companies to serve load.

1.55 Obligation Peak Load

Obligation Peak Load shall have the meaning specified in Schedule 8 of this Agreement.

1.56 Office of the Interconnection

Office of the Interconnection shall mean the employees and agents of PJM Interconnection, L.L.C., subject to the supervision and oversight of the PJM Board, acting pursuant to the Operating Agreement.

1.57 Operating Agreement of PJM Interconnection, L.L.C. or Operating Agreement

Operating Agreement of PJM Interconnection, L.L.C. or Operating Agreement shall mean that certain agreement, dated April 1, 1997 and as amended and restated June 2, 1997 and as amended from time to time thereafter, among the members of the PJM Interconnection, L.L.C.

1.58 Operating Reserve

Operating Reserve shall mean the amount of generating capacity scheduled to be available for a specified period of an operating day to ensure the reliable operation of the PJM Region, as specified in the PJM Manuals.

1.59 Other Supplier

Other Supplier shall mean a Member that is (i) a seller, buyer or transmitter of electric capacity or energy in, from or through the PJM Region, and (ii) is not a Generation Owner, Electric Distributor, Transmission Owner or End-Use Customer.

1.60 Partial Requirements Service

Partial Requirements Service shall mean wholesale service to supply a specified portion, but not all, of the power needs of a Load Serving Entity to serve end-users within the PJM Region that are not satisfied by its own generating facilities.

1.61 Percentage Internal Resources Required

Percentage Internal Resources Required shall mean, for purposes of an FRR Capacity Plan, the percentage of the LDA Reliability Requirement for an LDA that must be satisfied with Capacity Resources located in such LDA.

1.62 Party

Party shall mean an entity bound by the terms of this Agreement.

1.63 PJM

PJM shall mean the PJM Board and the Office of the Interconnection.

1.64 PJM Board

PJM Board shall mean the Board of Managers of the PJM Interconnection, L.L.C., acting pursuant to the Operating Agreement.

1.65 PJM Manuals

PJM Manuals shall mean the instructions, rules, procedures and guidelines established by the Office of the Interconnection for the operation, planning and accounting requirements of the PJM Region.

1.66 PJM Open Access Transmission Tariff or PJM Tariff

PJM Open Access Transmission Tariff or PJM Tariff shall mean the tariff for transmission service within the PJM Region, as in effect from time to time, including any schedules, appendices, or exhibits attached thereto.

1.67 PJM Region

PJM Region shall have the same meaning as provided in the Operating Agreement.

1.68 PJM Region Installed Reserve Margin

PJM Region Installed Reserve Margin shall mean the percent installed reserve margin for the PJM Region required pursuant to this Agreement, as approved by the PJM Board pursuant to Schedule 4.1.

1.69 Planned Demand Resource

Planned Demand Resource shall mean a Demand Resource that does not currently have the capability to provide a reduction in demand or to otherwise control load, but that is scheduled to be capable of providing such reduction or control on or before the start of the Delivery Year for which such resource is to be committed, as determined in accordance with the requirements of Schedule 6.

1.69A Planned External Generation Capacity Resource

Planned External Generation Capacity Resource shall mean a proposed Generation Capacity Resource, or a proposed increase in the capability of a Generation Capacity Resource, that (a) is to be located outside the PJM Region, (b) participates in the generation interconnection process of a Control Area external to PJM, (c) is scheduled to be physically and electrically interconnected to the transmission facilities of such Control Area on or before the first day of the Delivery Year for which such resource is to be committed to satisfy the reliability requirements of the PJM Region, and (d) is in full commercial operation prior to the first day of such Delivery

Year, such that it is sufficient to provide the Installed Capacity set forth in the Sell Offer forming the basis of such resource's commitment to the PJM Region. Prior to participation in any Reliability Pricing Model Auction for such Delivery Year, the Capacity Market Seller must demonstrate that it has executed an interconnection agreement (functionally equivalent to a System Impact Study Agreement under the PJM Tariff for Base Residual Auction and an Interconnection Service Agreement under the PJM Tariff for Incremental Auction) with the transmission owner to whose transmission facilities or distribution facilities the resource is being directly connected, and if applicable the transmission provider. A Planned External Generation Capacity Resource must provide evidence to PJM that it has been studied as a Network Resource, or such other similar interconnection product in such external Control Area, must provide contractual evidence that it has applied for or purchased transmission service to be deliverable to the PJM border, and must provide contractual evidence that it has applied for transmission service to be deliverable to the bus at which energy is to be delivered, the agreements for which must have been executed prior to participation in any Reliability Pricing Model Auction for such Delivery Year. An External Generation Capacity Resource shall cease to be considered a Planned External Generation Capacity Resource as of the earlier of (i) the date that interconnection service commences as to such resource; or (ii) the resource has cleared an RPM Auction, in which case it shall become an Existing Generation Capacity Resource for purposes of the mitigation of offers for any RPM Auction for all subsequent Delivery Years.

1.70 Planned Generation Capacity Resource

Planned Generation Capacity Resource shall mean a Generation Capacity Resource participating in the generation interconnection process under Part IV, Subpart A of the PJM Tariff, for which: (i) Interconnection Service is scheduled to commence on or before the first day of the Delivery Year for which such resource is to be committed to RPM or to an FRR Plan; (ii) a System Impact Study Agreement has been executed prior to the Base Residual Auction for such Delivery Year; (iii) an Interconnection Service Agreement has been executed prior to any Incremental Auction for such Delivery Year in which such resource plans to participate; and (iv) no megawatts of capacity have cleared an RPM Auction for any prior Delivery Year. For purposes of the must-offer requirement and mitigation of offers for any RPM Auction for a Delivery Year, a Generation Capacity Resource shall cease to be considered a Planned Generation Capacity Resource as of the earlier of (i) the date that Interconnection Service commences as to such resource; or (ii) the resource has cleared an RPM Auction for any Delivery Year, in which case it shall become an Existing Generation Capacity Resource for any RPM Auction for all subsequent Delivery Years. Notwithstanding the foregoing, a Generation Capacity Resource for which construction has not commenced and which would otherwise have been treated as a Planned Generation Capacity Resource but for the fact that it was bid into RPM Auctions for at least two consecutive Delivery Years, and cleared the last such auction only because it was considered existing and its mitigated offer cap was accepted when its price offer would not have otherwise been accepted, shall be deemed to be a Planned Generation Capacity Resource.

1.71 Planning Period

Planning Period shall mean the 12 months beginning June 1 and extending through May 31 of the following year, or such other period approved by the Members Committee.

1.71A PRD Curve

PRD Curve shall mean a price-consumption curve at a PRD Substation level, if available, and otherwise at a Zonal (or sub-Zonal LDA, if applicable) level, that details the base consumption level of Price Responsive Demand and the decreasing consumption levels at increasing prices.

1.71B PRD Provider

PRD Provider shall mean (i) a Load Serving Entity that provides PRD; or (ii) an entity without direct load serving responsibilities that has entered contractual arrangements with end-use customers served by a Load Serving Entity that satisfy the eligibility criteria for Price Responsive Demand.

1.71C PRD Provider's Zonal Expected Peak Load Value of PRD

PRD Provider's Zonal Expected Peak Load Value of PRD shall mean the expected contribution to Delivery Year peak load of a PRD Provider's Price Responsive Demand, were such demand not to be reduced in response to price, based on the contribution of the end-use customers comprising such Price Responsive Demand to the most recent prior Delivery Year's peak demand, escalated to the Delivery Year in question, as determined in a manner consistent with the Office of the Interconnection's load forecasts used for purposes of the RPM Auctions.

1.71D PRD Reservation Price

PRD Reservation Price shall mean an RPM Auction clearing price identified in a PRD Plan for Price Responsive Demand load below which the PRD Provider desires not to commit the identified load as Price Responsive Demand.

1.71E PRD Substation

PRD Substation shall mean an electrical substation that is located in the same Zone or in the same sub-Zonal LDA as the end-use customers identified in a PRD Plan or PRD registration and that, in terms of the electrical topography of the Transmission Facilities comprising the PJM Region, is as close as practicable to such loads.

1.71F Price Responsive Demand

Price Responsive Demand or PRD shall mean end-use customer load registered by a PRD Provider pursuant to Schedule 6.1 of the PJM Reliability Assurance Agreement that have, as set forth in more detail in the PJM Manuals, the metering capability to record electricity consumption at an interval of one hour or less, supervisory control capable of curtailing such load (consistent with applicable RERRA requirements) at each PRD Substation identified in the

relevant PRD Plan or PRD registration in response to a Maximum Generation Emergency declared by the Office of the Interconnection, and a retail rate structure, or equivalent contractual arrangement, capable of changing retail rates as frequently as an hourly basis, that is linked to or based upon changes in real-time Locational Marginal Prices at a PRD Substation level and that results in a predictable automated response to varying wholesale electricity prices.

1.71G Price Responsive Demand Credit

Price Responsive Demand Credit shall mean a credit, based on committed Price Responsive Demand, as determined under Schedule 6.1 of this Agreement.

1.71H Price Responsive Demand Plan or PRD Plan

Price Responsive Demand Plan or PRD Plan shall mean a plan, submitted by a PRD Provider and received by the Office of the Interconnection in accordance with Schedule 6.1 of this Agreement and procedures specified in the PJM Manuals, claiming a peak demand limitation due to Price Responsive Demand to support the determination of such PRD Provider's Nominal PRD Value.

1.72 Public Power Entity

Public Power Entity shall mean any agency, authority, or instrumentality of a state or of a political subdivision of a state, or any corporation wholly owned by any one or more of the foregoing, that is engaged in the generation, transmission, and/or distribution of electric energy.

1.73 Qualifying Transmission Upgrades

Qualifying Transmission Upgrades shall have the meaning specified in Attachment DD to the PJM Tariff.

1.74 [Reserved for Future Use]

1.74A Relevant Electric Retail Regulatory Authority

Relevant Electric Retail Regulatory Authority or RERRA shall have the meaning specified in the PJM Operating Agreement.

1.75 Reliability Principles and Standards

Reliability Principles and Standards shall mean the principles and standards established by NERC or an Applicable Regional Entity to define, among other things, an acceptable probability of loss of load due to inadequate generation or transmission capability, as amended from time to time.

1.76 Required Approvals

Required Approvals shall mean all of the approvals required for this Agreement to be modified or to be terminated, in whole or in part, including the acceptance for filing by FERC and every other regulatory authority with jurisdiction over all or any part of this Agreement.

1.77 Self-Supply

Self Supply shall have the meaning provided in Attachment DD to the PJM Tariff.

1.78 [Reserved for Future Use]

1.79 [Reserved for Future Use]

1.80 State Consumer Advocate

State Consumer Advocate shall mean a legislatively created office from any State, all or any part of the territory of which is within the PJM Region, and the District of Columbia established, inter alia, for the purpose of representing the interests of energy consumers before the utility regulatory commissions of such states and the District of Columbia and the FERC.

1.81 State Regulatory Structural Change

State Regulatory Structural Change shall mean as to any Party, a state law, rule, or order that, after September 30, 2006, initiates a program that allows retail electric consumers served by such Party to choose from among alternative suppliers on a competitive basis, terminates such a program, expands such a program to include classes of customers or localities served by such Party that were not previously permitted to participate in such a program, or that modifies retail electric market structure or market design rules in a manner that materially increases the likelihood that a substantial proportion of the customers of such Party that are eligible for retail choice under such a program (a) that have not exercised such choice will exercise such choice; or (b) that have exercised such choice will no longer exercise such choice, including for example, without limitation, mandating divestiture of utility-owned generation or structural changes to such Party's default service rules that materially affect whether retail choice is economically viable.

1.82 Threshold Quantity

Threshold Quantity shall mean, as to any FRR Entity for any Delivery Year, the sum of (a) the Unforced Capacity equivalent (determined using the Pool-Wide Average EFORD) of the Installed Reserve Margin for such Delivery Year multiplied by the Preliminary Forecast Peak Load for which such FRR Entity is responsible under its FRR Capacity Plan for such Delivery Year, plus (b) the lesser of (i) 3% of the Unforced Capacity amount determined in (a) above or (ii) 450 MW. If the FRR Entity is not responsible for all load within a Zone, the Preliminary Forecast Peak Load for such entity shall be the FRR Entity's Obligation Peak Load last

determined prior to the Base Residual Auction for such Delivery Year, times the Base FRR Scaling Factor (as determined in accordance with Schedule 8.1).

1.83 Transmission Facilities

Transmission Facilities shall mean facilities that: (i) are within the PJM Region; (ii) meet the definition of transmission facilities pursuant to FERC's Uniform System of Accounts or have been classified as transmission facilities in a ruling by FERC addressing such facilities; and (iii) have been demonstrated to the satisfaction of the Office of the Interconnection to be integrated with the PJM Region transmission system and integrated into the planning and operation of the PJM Region to serve all of the power and transmission customers within the PJM Region.

1.84 Transmission Owner

Transmission Owner shall mean a Member that owns or leases with rights equivalent to ownership Transmission Facilities. Taking transmission service shall not be sufficient to qualify a Member as a Transmission Owner.

1.85 Transmission Owners Agreement

Transmission Owners Agreement shall mean that certain Consolidated Transmission Owners Agreement, dated as of December 15, 2005 and as amended from time to time, among transmission owners within the PJM Region.

1.86 Unforced Capacity

Unforced Capacity shall mean installed capacity rated at summer conditions that is not on average experiencing a forced outage or forced derating, calculated for each Capacity Resource on the 12-month period from October to September without regard to the ownership of or the contractual rights to the capacity of the unit.

1.87 [Reserved for Future Use]

1.88 Zonal Capacity Price

Zonal Capacity Price shall mean the price of Unforced Capacity in a Zone that an LSE that has not elected the FRR Alternative is obligated to pay for a Delivery Year as determined pursuant to Attachment DD to the PJM Tariff.

1.89 Zone or Zonal

Zone or Zonal shall refer to an area within the PJM Region, as set forth in Schedule 15, or as such areas may be (i) combined as a result of mergers or acquisitions or (ii) added as a result of the expansion of the boundaries of the PJM Region. A Zone shall include any Non-Zone Network Load (as defined in the PJM Tariff) located outside the PJM Region that is served from such Zone under Schedule H-A of the PJM Tariff.

3.2 [Reserved for Future Use]

9.1 Overall Coordination.

Each Party shall cooperate with the other Parties in the coordinated planning and operation of their owned or contracted for Capacity Resources to obtain a degree of reliability consistent with the Reliability Principles and Standards. In furtherance of such cooperation each Party shall:

- (a) cooperate with the members and associate members of such Party's Applicable Regional Entity to ensure the reliability of the region;
- (b) make available its Capacity Resources to the other Parties through the Office of the Interconnection for coordinated operation and to supply the needs of the PJM Region for Operating Reserves;
- (c) provide or arrange for Network Transmission Service or Firm Point-to-Point Transmission Service for service to the projected load of the Party and include all Capacity Resources as Network Resources designated pursuant to the PJM Tariff or Points of Receipt for Firm Point-to-Point Transmission Service;
- (d) provide or arrange for sufficient reactive capability and voltage control facilities to meet Good Utility Practice and to be consistent with the Reliability Principles and Standards;
- (e) implement emergency procedures and take such other coordination actions as may be necessary in accordance with the directions of the Office of the Interconnection in times of Emergencies; and
- (f) maintain or arrange for Black Start Capability for a portion of its Capacity Resources at least equal to that established from time-to-time by the Office of the Interconnection.

SCHEDULE 10.1

LOCATIONAL DELIVERABILITY AREAS AND REQUIREMENTS

The capacity obligations imposed under this Agreement recognize the locational value of Capacity Resources. To ensure that such locational value is properly recognized and quantified, the Office of the Interconnection shall follow the procedures in this Schedule.

A. The Locational Deliverability Areas for the purposes of determining locational capacity obligations hereunder, but not necessarily for the purposes of the Regional Transmission Expansion Planning Protocol, shall consist of the following Zones (as defined in Schedule 15), combinations of such Zones, and portions of such Zones:

- ATSI
- DEOK
- Dominion
- Penelec
- ComEd
- AEP
- Dayton
- Duquesne
- APS
- AE
- BGE
- DPL
- PECO
- PEPCO
- PSEG
- JCPL
- MetEd
- PPL
- Mid-Atlantic Region (MAR) (consisting of all the zones listed below for Eastern MAR (EMAR), Western MAR (WMAR), and Southwestern MAR (SWMAR))
- ComEd, AEP, Dayton, APS, Duquesne, ATSI, and DEOK
- EMAR (PSE&G, JCP&L, PECO, AE, DPL & RE)
- SWMAR (PEPCO & BG&E)
- WMAR (Penelec, MetEd, PPL)
- PSEG northern region (north of Linden substation); and
- DPL southern region (south of Chesapeake and Delaware Canal)

The Locational Deliverability Areas for the purposes of determining locational capacity obligations hereunder, but not necessarily for the purposes for the Regional Transmission Expansion Planning Protocol, shall also include any new Zones expected to be integrated into PJM prior to the commencement of the Base Residual Auction for the Delivery Year for which the locational capacity obligation is being determined.

B. For purposes of evaluating the need for any changes to the foregoing list, Locational Deliverability Areas shall be those areas, identified by the load deliverability analyses conducted pursuant to the Regional Transmission Expansion Planning Protocol and the PJM Manuals that have a limited ability to import capacity due to physical limitations of the transmission system, voltage limitations or stability limitations. Such limits on import capability shall not reflect the effect of Qualifying Transmission Upgrades offered in the Base Residual Auction. The Locational Deliverability Areas identified in Paragraph A above (as it may be amended from time to time) for a Delivery Year shall be modeled in the Base Residual Auction and any Incremental Auction conducted for such Delivery Year. If the Office of the Interconnection includes a new Locational Deliverability Area in the Regional Transmission Expansion Planning Protocol, it shall make a filing with FERC to amend this Schedule to add a new Locational Deliverability Area (including a new aggregate LDA), if such new Locational Deliverability Area is projected to have a capacity emergency transfer limit less than 1.15 times the capacity emergency transfer objective of such area, or if warranted by other reliability concerns consistent with the Reliability Principles and Standards. In addition, any Party may propose, and the Office of the Interconnection shall evaluate, consistent with the same CETO/CETO comparison or other reliability concerns, possible new Locational Deliverability Areas (including aggregate LDAs) for inclusion under the Regional Transmission Expansion Planning Protocol and for purposes of determining locational capacity obligations hereunder.

C. For each Locational Deliverability Area for which a separate VRR Curve was established for a Delivery Year, the Office of the Interconnection shall determine, pursuant to procedures set forth in the PJM Manuals, the Percentage of Internal Resources Required, that must be committed during such Delivery Year from Capacity Resources physically located in such Locational Deliverability Area.

SCHEDULE 14

DELEGATION TO THE OFFICE OF THE INTERCONNECTION

The following responsibilities shall be delegated by the Parties to the Office of the Interconnection:

1. New Parties. With regard to the addition, withdrawal or removal of a Party the Office of the Interconnection shall:
 - (a) Receive and evaluate the information submitted by entities that plan to serve loads within the PJM Region, including entities whose participation in the Agreement will expand the boundaries of the PJM Region. Such evaluation shall be conducted in accordance with the requirements of the Agreement.
 - (b) Evaluate the effects of the withdrawal or removal of a Party from this Agreement.
2. Implementation of Reliability Assurance Agreement. With regard to the implementation of the provisions of this Agreement the Office of the Interconnection shall:
 - (a) Receive all required data and forecasts from the Parties and other owners or providers of Capacity Resources;
 - (b) Perform all calculations and analyses necessary to determine the Forecast Pool Requirement and the capacity obligations imposed under the Reliability Assurance Agreement, including periodic reviews of the capacity benefit margin for consistency with the Reliability Principles and Standards;
 - (c) Monitor the compliance of each Party with its obligations under the Agreement;
 - (d) Keep cost records, and bill and collect any costs or charges due from the Parties and distribute those charges in accordance with the terms of the Agreement;
 - (e) Assist with the development of rules and procedures for determining and demonstrating the capability of Capacity Resources;
 - (f) Establish the capability and deliverability of Generation Capacity Resources consistent with the requirements of the Reliability Assurance Agreement;

- (g) Establish standards and procedures for Planned Demand Resources;
- (h) Collect and maintain generator availability data;
- (i) Perform any other forecasts, studies or analyses required to administer the Agreement;
- (j) Coordinate maintenance schedules for generation resources operated as part of the PJM Region;
- (k) Determine and declare that an Emergency exists or has ceased to exist in all or any part of the PJM Region or announce that an Emergency exists or ceases to exist in a Control Area interconnected with the PJM Region;
- (l) Enter into agreements for (i) the transfer of energy in Emergencies in the PJM Region or in a Control Area interconnected with the PJM Region and (ii) mutual support in such Emergencies with other Control Areas interconnected with the PJM Region; and
- (m) Coordinate the curtailment or shedding of load, or other measures appropriate to alleviate an Emergency, to preserve reliability in accordance with FERC, NERC or Applicable Regional Entity principles, guidelines, standards, requirements and the PJM Manuals, and to ensure the operation of the PJM Region in accordance with Good Utility Practice.