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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. ER19-1958-002  
Order No. 845 Second Compliance Filing*

Dear Secretary Bose:

On December 19, 2019,<sup>1</sup> the Federal Energy Regulatory Commission (“Commission”) issued an order addressing the May 22, 2019 compliance filing<sup>2</sup> submitted on behalf of PJM Interconnection, L.L.C. (“PJM”) in response to Order No. 845, Order No. 845-A and Order No. 845-B.<sup>3</sup> In the December 19 Order, the Commission accepted the May 22 Compliance Filing in part, effective April 1, 2020 and rejected it in part. PJM was directed to submit a further compliance filing within sixty (60) days of the December 19 Order.<sup>4</sup>

In this compliance filing, PJM addresses the Commission’s directives relating to four of the 10 reforms adopted in Order No. 845 to improve the generator interconnection process. Specifically, PJM includes proposed modifications to its Open Access Transmission Tariff

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<sup>1</sup> *PJM Interconnection, L.L.C.*, 169 FERC ¶ 61,226 (Dec. 19, 2019) (“December 19 Order”).

<sup>2</sup> *PJM Interconnection, L.L.C.*, Order Nos. 845 and 845-A Compliance Filing, Docket No. ER19-1958-000 (May 22, 2019) (“May 22 Compliance Filing”).

<sup>3</sup> *Reform of Generator Interconnection Procedures and Agreements*, Order 845, 163 FERC ¶ 61,043 (2018), *errata notice*, 167 FERC ¶ 61,123, *order on reh’g*, Order No. 845-A, 166 FERC ¶ 61,137, *errata notice*, 167 FERC ¶ 61,124, *order on reh’g*, Order No. 845-B, 168 FERC ¶ 61,092 (2019) (collectively, “Order No. 845”).

<sup>4</sup> The Commission granted PJM’s request for an extension to submit this compliance filing to today. *See PJM Interconnection, L.L.C.*, Notice Granting Extension of Time to Submit Compliance Filing, Docket No. ER19-1958-000 (Feb. 21, 2020).

(“Tariff”) relative to the following reforms: (i) Contingent Facilities; (ii) Provisional Interconnection Service; (iii) Surplus Interconnection Service; and (iv) Material Modifications and Incorporation of Advanced Technologies. In addition to the December 19 Order compliance directives, PJM also proposes clean-up revisions as a result of PJM’s May 22 Compliance Filing as well as some non-substantive, ministerial revisions.

As explained in detail below in Section IV of this filing letter, PJM respectfully requests that the proposed revisions for Surplus Interconnection Service become effective 180 days following issuance of a Commission order accepting PJM’s proposed revisions. For all other proposed revisions included herewith, PJM respectfully requests an effective date 60 days following issuance of a Commission order accepting such revisions

## **I. COMPLIANCE FILING**

In compliance with the December 19 Order, PJM proposes the following revisions to the Tariff, as shown in the Attachment A redline comparison.

### ***A. Contingent Facilities***

In response to Order No. 845, PJM proposed revisions to add (i) a new definition of Contingent Facilities; (ii) a new section detailing a method for identifying the Contingent Facilities to be included in the Interconnection Customer’s System Impact Study and Interconnection Service Agreement; and (iii) a requirement that transmission providers provide, upon the interconnection customer’s request, the estimated network upgrade costs and estimated in service completion date associated with each identified Contingent Facility when the information is readily available and not commercially sensitive.

In the December 19 Order, the Commission found that PJM's proposed definition of Contingent Facilities complies with the requirements of Order No. 845<sup>5</sup> and that the revised and existing Tariff provisions proposed by PJM to identify and describe its method for determining Contingent Facilities partially comply with Order No. 845.<sup>6</sup> Specifically, the Commission found that PJM's revisions to Tariff, section 205.2.1 lacked the sufficient transparency required by Order No. 845 because it did not "detail the specific technical screens or analyses and the specific thresholds or criteria that PJM will use as part of its method to identify Contingent Facilities."<sup>7</sup>

As such, the Commission directed PJM to include the following language from Manual 14A in its Tariff to describe the technical screens or analyses that it will use as part of its method to identify Contingent Facilities:

The System Impact Study includes AC power flow analysis, short circuit analysis, and stability analysis. The power flow and stability analysis can include different sets of analyses at various load levels such as summer peak, light load, and winter peak.<sup>8</sup>

Rather than adding this manual language to describe the analyses used to perform the System Impact Study, PJM proposes to clarify that the stability analysis will be performed during the Facilities Study, not the System Impact Study. In order to make that clarification, PJM proposes to revise Tariff, sections 205.2 and 207, Attachments N-1 (System Impact Study Agreement) and N-2 (Facilities Study Agreement). This clarification will aid in providing the requisite transparency to the Interconnection Customer as to exactly when the stability analyses will be performed, if necessary. These revisions are also needed to allow PJM to comply with the

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<sup>5</sup> December 19 Order at P 43.

<sup>6</sup> *Id.* at P 44.

<sup>7</sup> *Id.* at P 45.

<sup>8</sup> *Id.* at P 46.

requirements of Order No. 845 to allow an Interconnection Customer to incorporate certain technological advancements to its Interconnection Request prior to returning the executed Facilities Study Agreement without risking loss of its queue position. PJM performs its stability analysis on an individual project basis and such studies generally take four to six weeks to complete. Therefore, by moving its stability analysis to the Facilities Study, PJM will be able to afford the Interconnection Customer greater flexibility to make Permissible Technological Advancements up until the return of the Facilities Study Agreement and still determine whether or not a technological advancement is a material modification within thirty (30) calendar days of receipt of the initial request.

In addition, PJM proposes to include the following language taken from the System Impact Study Agreement at Tariff, Attachment N-1 (as modified)<sup>9</sup> to include a more detailed description of the scope of the System Impact Study, already set forth in the System Impact Study Agreement at Tariff, Attachment N-1, paragraph 6:

The scope of the System Impact Study may include (a) an assessment of sub-area import deliverability, (b) an assessment of sub-area export deliverability, (c) an assessment of project related short circuit duty issues, (d) a contingency analysis consistent with NERC's and each Applicable Regional Entity's reliability criteria, (e) an assessment of regional transmission upgrades that most effectively meet identified needs, and (f) an analysis to determine cost allocation responsibility for required facilities and upgrades.

Because this description is already included in the Tariff at Attachment N-1, which details the specific analyses performed by PJM under a System Impact Study, including this language in the description of the System Impact Study at section 205.2 will augment the transparency required

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<sup>9</sup> The modification to Attachment N-1, Paragraph 6, proposes to remove the reference to the "assessment of project related system stability issues" at Attachment N-1, Paragraph 6(c).

by the Commission in its December 19 Order. PJM also proposes to revise Tariff, section 207 and Attachment N-2 to add the stability analysis, if necessary, to the scope of the Facilities Study.

Additionally, the Commission directed PJM to include in its Tariff the specific thresholds or criteria that PJM will use as part of the technical screens and analyses.<sup>10</sup> In compliance with such directive, PJM proposes to include the requisite detail regarding the specific thresholds or criteria that PJM will use as part of its method to identify Contingent Facilities. Accordingly, PJM proposes to revise Tariff, section 205.2 to include the following information:

. . . [E]ach System Impact Study shall identify the system constraints, identified with specificity by transmission element or flowgate in accordance with the distribution factor effect, megawatt contribution, or fault duty contribution, relating to the New Service Requests being evaluated in the study and, as applicable to each included request, the redispatch options, additional Direct Assignment Facilities, necessary Merchant Network Upgrades, Attachment Facilities, Local Upgrades, Network Upgrades and/or Contingent Facilities necessary to accommodate such request. . . .

These revisions provide Interconnection Customers with the specific detail regarding the thresholds PJM will utilize so that the Interconnection Customer can understand why a contingent facility would be included in the System Impact Study and which analysis test was used to identify the Contingent Facility in an Interconnection Customer's System Impact Study.

Finally, the December 19 Order at Paragraph 48 also directed PJM to revise Tariff, section 205.2.1 to add the words: “[T]he method shall be sufficiently transparent to determine’ why a specific Contingent Facility was identified and how it relates to the Interconnection Request.”<sup>11</sup> In compliance with this directive, PJM proposes to add the following revision to Tariff, section 205.2.1:

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<sup>10</sup> December 19 Order at P 47.

<sup>11</sup> *Id.* at P 48.

Transmission Provider shall identify the Contingent Facilities to be provided to Interconnection Customer in the System Impact Study by reviewing unbuilt Interconnection Facilities and/or Network Upgrades (including those still subject to cost allocation in accordance with the PJM Manuals) associated with another Interconnection Customer with a higher queue priority upon which the Interconnection Customer’s cost, timing and study findings are dependent and, if delayed or not built, could cause a need for interconnection restudies of the Interconnection Request or reassessment of the unbuilt Interconnection Facilities and/or Network Upgrades. The method for identifying Contingent Facilities shall be sufficiently transparent to determine why a specific Contingent Facility was identified and how it relates to the Interconnection Request. Transmission Provider shall include the list of the Contingent Facilities in the System Impact Study, Facilities Study, if applicable, and the Interconnection Service Agreement, including why a specific Contingent Facility was identified and how it relates to the Interconnection Request. Transmission Provider shall also provide, upon request of the Interconnection Customer, the estimated Interconnection Facility and/or Network Upgrade costs and estimated in-service completion time of each identified Contingent Facility when this information is readily available and non-commercially sensitive.

In spite of these additional clarifications, PJM’s method for identifying Contingent Facilities, as detailed in the System Impact Study report, is already transparent and allows the Interconnection Customer to determine why a specific Contingent Facility was identified and how it relates to the Interconnection Request. By way of example, Illustration #1 below is taken from an actual System Impact Study Report issued to an Interconnection Customer. Illustration #1 shows the violations identified during PJM’s Generator Deliverability test. Summarized below are the key details that led to the violation along with the impacts of this specific project.

**ILLUSTRATION #1:**

**Generator Deliverability**

*(Single or N-1 contingencies for the Capacity portion only of the interconnection)*

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC/DC	MW IMPACT
343757	227905	SCULL#1	AE	227903	MILL #1	AE	1	AE_P1-2 BLE-SC-ML2	single	306.0	85.36	105.8	AC	64.42
343758	227905	SCULL#1	AE	227904	MILL #2	AE	1	AE_P1-2 BLE-SC-ML2	single	306.0	85.36	105.8	AC	64.42

Illustration #2 below shows the contingency description included in a System Impact Study report. This information provides the Interconnection Customer with a further understanding of the scenario that led to the violation(s).

**ILLUSTRATION #2:**

AE_P1-2 BLE-SC-ML2	CONTINGENCY 'AE_P1-2 BLE-SC-ML2' DISCONNECT BUS 227906 / DISCONNECT BUS 227930 / CLOSE LINE FROM BUS 227929 TO BUS 227930 CIRCUIT 1 / END
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Finally, Illustration #3 depicts the section of the System Impact Study Report specific to Network Upgrades links each individual upgrade back to a flowgate ID. As you can see, this information included in PJM’s System Impact Study report helps to inform each Interconnection Customer as to why each and every required upgrade is listed in their System Impact Study reports, including Contingent Facilities.

**ILLUSTRATION #3:**

ID	Index	Facility	Upgrade Description	Cost	Cost Allocated to AE1-104	NUN
342893,343757	1	SCULL#1 138.0 kV - MILL #1 138.0 kV Ckt 1	<p>To mitigate the (ACE) Scull#1 to Mill#1 138 kV line (from bus 227905 to bus 227903 ckt 1) overload, it will require increasing the emergency rating of the Scull#1 to Mill#1 138 kV line by rebuilding the circuit. The rebuild will include the installation of new poles, foundations, insulators, and conductor. In addition, various terminal reinforcements at both, Mill#1 &amp; Scull#1.</p> <p>Project Type : FAC</p> <p>Cost : \$12,800,000</p> <p>Time Estimate : 36-60 Months</p> <p>New Ratings:            Rate A: 549            Rate B: 621            Rate C: 621</p>	\$12,800,000	\$12,800,000	n6195

**B. Provisional Interconnection Service**

In the December 19 Order, the Commission found that PJM’s existing Tariff language providing for provisional interconnection service, as amended, partially complies with the requirements of Order No. 845.<sup>12</sup> Specifically, the Commission accepted PJM’s proposed definition for provisional interconnection service and PJM’s proposal, including revisions to PJM’s *pro forma* interconnection service agreement, to provide for any provisional interconnection service, along with any regular interconnection service, under one interconnection service agreement.<sup>13</sup> However, in its December 19 Order the Commission found that PJM’s proposed revisions to its *pro forma* Interconnection Service Agreement at Tariff, Attachment O, Appendix 2, section 1.4A.2 failed to comply with the requirement that PJM replace the bracketed placeholder in the Commission’s *pro forma* Large Generating Interconnection Agreement (“LGIA”) in Article 5.9.2 with language “specifying the frequency with which PJM will study and update the maximum output of a generating facility in an interconnection service agreement that includes provisional interconnection service.”<sup>14</sup>

In compliance with the Commission’s directive, PJM proposes to include the following additional language in the *pro forma* Interconnection Service Agreement at Appendix 2, section 1.4A.2 to specify the frequency with which PJM will study and update a generating facility’s provisional interconnection service:

. . . The maximum permissible output of the Generating Facility shall be studied and updated ~~on a frequency determined by Transmission Provider~~ annually and at the Interconnection Customer’s expense. The results will be communicated to the Interconnection Customer in writing upon completion of the study. . . .

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<sup>12</sup> December 19 Order at P 84.

<sup>13</sup> *Id.* at P 85.

<sup>14</sup> *Id.* at P 86.



**C. *Surplus Interconnection Service***

Order No. 845 established Surplus Interconnection Service, which was defined to mean “any unneeded portion of interconnection service established in [an LGIA], such that if the Surplus Interconnection Service is utilized the total amount of Interconnection Service at the Point of Interconnection would remain the same.”<sup>15</sup> In order to accommodate Surplus Interconnection Service, transmission providers were directed to revise their respective tariffs to provide for an expedited interconnection process outside the interconnection queue for Surplus Interconnection Service.<sup>16</sup>

In the December 19 Order, the Commission found that PJM’s proposed Tariff revisions regarding Surplus Interconnection Service partially complied with Order No. 845. However, the Commission specifically rejected PJM’s two independent entity variations: (i) the proposal to conduct the expedited process for Surplus Interconnection Service requests within its existing interconnection queue process; and (ii) the variance that allowed an Interconnection Customer that did not qualify for Surplus Interconnection Service to retain its queue position and proceed through the interconnection study process as a zero MW Generating Facility.<sup>17</sup> Thus, the Commission directed PJM to submit a compliance filing that revises its Surplus Interconnection Service proposal so that it provides an expedited interconnection process for Surplus Interconnection Service requests outside the existing interconnection queue process.<sup>18</sup>

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<sup>15</sup> Order No. 845 at Appendix B.

<sup>16</sup> *Id.*

<sup>17</sup> *Id.* at P 102.

<sup>18</sup> *Id.* at P 106.

PJM, therefore, proposes the following revisions to establish a Surplus Interconnection Service process consistent with the directives in the December 19 Order.

*1. Addition of Two New Definitions for Surplus Interconnection Service*

Preliminarily, PJM proposes to add two new Tariff definitions specific to Surplus Interconnection Service. PJM proposes a definition for the term “Surplus Interconnection Customer” to clarify that such customer can be either an existing Interconnection Customer whose Generating Facility is already interconnected to the PJM transmission system or one of the existing Interconnection Customer’s affiliates, or an unaffiliated entity, that submits a Surplus Interconnection Request with a Surplus Interconnection Study Agreement.

PJM also clarifies in the definition that a Surplus Interconnection Customer is not a New Service Customer. This clarification is necessary to ensure that there is no confusion between the term New Service Customer, which is specific to an entity that submits an Interconnection Request, a Completed Application, or an Upgrade Request in the New Services Queue, and a Surplus Interconnection Customer whose Surplus Interconnection Request is separate from the Interconnection Requests in the New Services Queue.

Since a Surplus Interconnection Request is specific to an expedited interconnection process outside the interconnection queue, PJM also proposes to add a definition for Surplus Interconnection Request to clarify that such request is specific to Surplus Interconnection Service and must be submitted through a Surplus Interconnection Study Agreement proposed with this compliance filing as Tariff, Attachment RR. For all of the reasons stated above, PJM also clarifies in this definition that a Surplus Interconnection Request is not a New Service Request.

2. *Proposed New Tariff Section for a Surplus Interconnection Request*

Because the Commission rejected PJM's proposal to conduct the expedited process for Surplus Interconnection Requests within its existing interconnection queue process, PJM removed all references to Surplus Interconnection Service included under Generation Interconnection Requests at section 36.1.01 and Interconnection Feasibility Study at section 36.2.3.<sup>19</sup>

PJM proposes to modify the title to section 36.1.1B to clarify that such section refers to a Surplus Interconnection Service Request. PJM also proposes to add two new sections to section 36.1.1B to detail the requirements specific to a Surplus Interconnection Request. Specifically, PJM proposes section 36.1.1B(1) to detail requirements similar to those specified at section 36.1.01 for a generator interconnection request with some modification specific to a Surplus Interconnection Request. For example, PJM requires that a Surplus Interconnection Customer must also provide: (i) a description of the circumstances under which Surplus Interconnection Service will be available at the existing Generating Facility's point of interconnection; (ii) a deposit in the amount of \$10,000 plus \$100 per MW requested but not to exceed \$110,000; (iii) details regarding the existing Generating Facility already interconnected to the PJM Transmission System providing Surplus Interconnection Service, including specifics as to whether the Surplus Interconnection Customer requesting Surplus Interconnection Service is the owner or affiliate of the existing Generating Facility or an unaffiliated third party;<sup>20</sup> and (iv) if the surplus generating unit is an energy storage resource, a requirement that the Surplus

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<sup>19</sup> See Tariff, section 36.1.01 and 36.1.01(c) and removal of proposed section 36.1.01(k).

<sup>20</sup> If the owner of the surplus generating unit is an unaffiliated third party, evidence of permission from the owner of the existing Generating Facility to utilize the existing Generating Facility's unused portion of Interconnection Service established in its Interconnection Service Agreement is required. See Tariff, section 36.1.1B(1)(k)(i) *proposed*.

Interconnection Customer submit primary frequency response operating range for the surplus generating unit.

PJM also proposes section 36.1.1B(2) to detail the deficiency review specific to a Surplus Interconnection Request. Similar to the deficiency review for a generator interconnection request, if the Surplus Interconnection Customer fails to cure the deficiency, the Surplus Interconnection Request will be terminated and withdrawn.

3. *Proposed New Tariff Section Detailing the Interconnection Process Specific to a Surplus Interconnection Request*

Regarding the Surplus Interconnection Study process, PJM proposes to delete the detail proposed to be added to section 36.2.3 and add a new section 36.4 to detail the process to be used by PJM for Surplus Interconnection Requests outside the tariffed New Services Queue study processes set forth at Tariff, sections 36.2 (Feasibility Study), 205.2 (System Impact Study) and 207 (Facilities Study).<sup>21</sup> To that end, PJM proposes to detail the study of a Surplus Interconnection Request at section 36.4(1). Consistent with Order No. 845, such study will consist of reactive power, short circuit/fault duty and stability analyses and any other appropriate analyses.<sup>22</sup> PJM also proposes that steady-state (thermal/voltage) analyses may be performed as necessary to ensure that all required reliability conditions are studied under off-peak conditions and that off-peak steady-state analyses shall be performed to the required level necessary to demonstrate reliable operation of the Surplus Interconnection Service requested.

PJM also proposes that it will use reasonable efforts to complete the Surplus Interconnection Study within 180 days of receipt of a valid Surplus Interconnection Request.

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<sup>21</sup> See Tariff, section 36.4(1) *proposed*.

<sup>22</sup> Order No. 845 at PP 455, 467.

Consistent with the Commission’s directive to provide for an expedited study process, this six-month study process is significantly shorter than the 11-month process for Interconnection Requests submitted through the New Services Queue.

PJM further provides that if it is unable to complete the study within such timeframe, it will notify the Surplus Interconnection Customer and provide an estimated completion date and an explanation of the reasons why additional time is required. These provisions conform to other provisions in both the PJM Tariff, as well as the *pro forma* LGIP.<sup>23</sup>

New Tariff, section 36.4(2) further details what happens if after completion of the Surplus Interconnection Study, PJM confirms that: (i) no new Network Upgrades are required to accommodate the Surplus Interconnection Request, (ii) there are no impacts affecting the determination of what upgrades are necessary for New Service Customers in the New Services Queue, and (iii) the surplus generating unit causes no reliability concerns (i.e., it does not materially impact the transmission system with regard to short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability and response). Under such circumstances, PJM will issue a Surplus Interconnection Study to the Surplus Interconnection Customer or, if the Surplus Interconnection Customer is an unaffiliated third party, PJM also shall issue a Surplus Interconnection Study to the owner of the existing generating facility.

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<sup>23</sup> See, e.g., Tariff, section 205.3 (providing for New Service Requests submitted on or after April 1, 2017, PJM will use due diligence to complete System Impact Studies within 120 days of the date the study commences; however, in the event PJM is unable to complete a System Impact Study within the 120 day timeframe, “it shall so notify the affected New Service Customers and the affected Transmission Owner(s) and provide an estimated completion date, along with an explanation of the reasons why additional time is needed to complete the study.”); see also, Tariff, section 207 (providing that if PJM determines it is unable to complete and issue the Facilities Study within 180 days, “it shall notify the Interconnection Customer and provide an estimated completion date and an explanation of the reasons why additional time is required.”)

Because the Surplus Interconnection Service is tied to the existing Generating Facility, PJM will prepare and issue a revised Interconnection Service Agreement to the owner of the existing Generating Facility within 60 days of issuance of the Surplus Interconnection Study including the terms and conditions for Surplus Interconnection Service.<sup>24</sup> The 60-day timeframe during which PJM will prepare and issue a revised Interconnection Service Agreement will allow both the owner of the existing Generating Facility or its affiliate or the owner of the existing Generating Facility and the unaffiliated third party, if applicable, to review the study and, if necessary, prepare and execute a bilateral agreement detailing their respective roles and responsibilities relative to the Surplus Interconnection Service.

Within (sixty) 60 days of receipt by the owner of the existing Generating Facility of the revised Interconnection Service Agreement, the owner of the existing Generating Facility will execute the revised Interconnection Service Agreement, request dispute resolution or request that the Interconnection Service Agreement be filed unexecuted in accordance with Tariff, Part VI, Subpart A, section 212.4.

Section 36.4(3) proposes that if, based on the Surplus Interconnection Study, PJM determines that Network Upgrades may be required or there may be impacts affecting the determination of what upgrades are necessary for New Service Customers in the New Services

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<sup>24</sup> Pursuant to Order No. 845 at P 495, “original interconnection customers will retain the ability to use, either for themselves, for an affiliate, or for sale to a third party of their choosing, any surplus interconnection service that may exist under their LGIAs, until their original generating facility retires.” If the Surplus Interconnection Customer is an unaffiliated third party, PJM contemplates that the Surplus Interconnection Customer and the owner of the existing Generating Facility must enter into a bilateral agreement, such as a shared facility agreement, under which they must detail the terms and condition of such Surplus Interconnection Service. This requirement is consistent with the practice used regularly in PJM for multiple Generating Facilities that interconnect behind the same Point of Interconnection, who must enter into a shared facilities agreement prior to executing an Interconnection Service Agreement. This construct has been accepted by the Commission. *See, e.g., PJM Interconnection, L.L.C., Amendment of Original ISA, SA No. 5220, Docket No. ER20-549-000 at 8, 9 (accepted by letter order issued Feb. 7, 2020).*

Queue, or there may be material impacts on short circuit capability limits, steady-state thermal and voltage limits or dynamic system stability and response, PJM will terminate and withdraw the Surplus Interconnection Request upon issuance of the Surplus Interconnection Study.

Finally, details specific to a Surplus Interconnection Request relative to deactivation of an existing Generating Facility were originally included with PJM's May 22 Compliance Filing at Tariff, section 36.2.3(4). PJM proposes to move that section to Tariff, section 36.4(4) so that all provisions relative to the Surplus Interconnection process are included under section 36.4.

These changes conform to the Commission's December 19 Order, as they provide for an expedited process for Surplus Interconnection Requests outside PJM's existing generator interconnection queue process and they allow PJM to process Surplus Interconnection Service without impacting existing New Service Requests in the New Services Queue.

#### *4. Proposed New Surplus Interconnection Study Agreement*

Because the Surplus Interconnection Service Request is outside PJM's interconnection queue, PJM cannot use Attachment N for Surplus Interconnection Requests. Thus, PJM proposes a new Attachment RR by which a Surplus Interconnection Customer may submit its Surplus Interconnection Request. Attachment RR was modeled after Attachment N. However, consistent with Surplus Interconnection Service, Attachment RR requires the Surplus Interconnection Customer to provide additional detail specific to both the surplus generating unit, as well as the existing Generating Facility interconnected to the PJM Transmission System from which the Surplus Interconnection Customer seeks to utilize the existing Generating Facility's unused portion of its interconnection service.

#### *D. Material Modifications and Incorporation of Advanced Technologies*

As noted by the Commission in its December 19 Order, the description of PJM's proposed tariff language in its transmittal letter varied materially from the language contained in the Tariff records. Given the inconsistencies and resulting confusion, the Commission rejected PJM's proposal.<sup>25</sup> In this filing, PJM will clarify the revisions requested, as well as include additional revisions to comply with the December 19 Order.

First, PJM proposes the following revisions to the definition of Permissible Technological Advancements.

“Permissible Technological Advancement” shall mean a proposed technological change such as an advancement to turbines, inverters, plant supervisory controls or other similar advancements to the technology proposed in the Interconnection Request that is submitted to the Transmission Provider no later than the return of an executed Facilities Study Agreement (or, if a Facilities Study is not required, prior to the return of an executed Interconnection Service Agreement) provided such change does not: (i) increase the capability of the Generating Facility as specified in the original Interconnection Request; (ii) represent a different fuel type from the original Interconnection Request; or (iii) cause any material adverse impact(s) on the Transmission System with regard to short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability and response. If the proposed technological advancement is a Permissible Technological Advancement, no additional study will be necessary and the proposed technological advancement will not be considered a Material Modification.

As stated in the above revisions, PJM intended to use the word “or” not “and” in describing when a technology change may not qualify as a Permissible Technological Advancement. The use of the word “or” is consistent with Order No. 845.<sup>26</sup>

Additionally, PJM proposes to clarify with this language that, in order to qualify as a Permissible Technological Advancement, a proposed technological change must be submitted to PJM “no later than the return of an executed Facilities Study Agreement (or, if a Facilities Study

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<sup>25</sup> December 19 Order at P 120.

<sup>26</sup> *Id.* at P 122.



is not required, prior to the return of an executed Interconnection Service Agreement).”<sup>27</sup> And, the Interconnection Customer must submit the new machine modeling data associated with such Permissible Technological Advancement on or before the Interconnection Customer submits its executed Facilities Study Agreement.<sup>28</sup> PJM further clarifies in section 36.2A.2.1 that the machine modeling data associated with the requested technological change must be submitted via the PJM website.<sup>29</sup>

This definition complies with the requirement of Order No. 845. The three exclusions are consistent with the guidance of Order No. 845 and are necessary to ensure that a technological advancement that qualifies as a Permissible Technological Advancement does not adversely impact the Transmission System and is generally not a material modification.

In addition to the above, PJM also proposes to include a new section 36.2A.2.2 that was described in its May 22 Compliance Filing Letter as section 36.2A.2.1 but inadvertently omitted from the proposed Tariff records included in Attachment A to the May 22 Compliance Filing. This provision incorporates a procedure for all technological advancement requests submitted to PJM no later than the return of the executed Facilities Study Agreement (or, if a Facilities Study Agreement is not necessary, prior to the return of an executed Interconnection Service Agreement) that do not qualify as a Permissible Technological Advancement.

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<sup>27</sup> Tariff, section 36.2A.2.1 *proposed*.

<sup>28</sup> *Id.*

<sup>29</sup> The data required to be submitted is detailed in the System Impact Study Data Form included in Manual 14G. The System Impact Study Data Form is a Smart Form, *i.e.*, it is a dynamic electronic form that accommodates the specific request. For example, once the Interconnection Customer begins to add data to the form it will ask for data specific to the data submitted. The actual form is accessed through Queue Point on the PJM website.

Additionally, section 36.2A.2.2 specifies the following additional procedures for a technological change request that does not qualify as a Permissible Technological Advancement:

. . . [A]n Interconnection Customer may request in writing to modify its Interconnection Request to add a technological advancement. Such request must also include machine modeling data as specified in the PJM Manuals and submitted via the PJM website. If PJM determines the data submitted with such request is incomplete or incorrect, PJM will reject such technological change request and the Interconnection Customer may resubmit its technological change request with the complete and/or accurate data. All technological advancement requests not qualifying as a Permissible Technological Advancement will require a study and be evaluated by the Transmission Provider to determine whether such change would constitute a Material Modification. Such evaluation will include an analysis of the short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability and response on subsequent-queued Interconnection Requests. If the Transmission Provider determines that the technological advancement is not a Material Modification, the Interconnection Customer may modify its Interconnection Request to include such technological advancement. If the Transmission Provider determines the change is a Material Modification, the Interconnection Customer must withdraw its technological advancement change request to retain its Queue Position or proceed with a new Interconnection Request with such technological change. PJM shall determine whether a technological advancement is a Material Modification within thirty (30) calendar days of receipt of the technological advancement request.<sup>30</sup>

This process requires that the Customer must (i) submit in writing to PJM its request to add a technological advancement to its Interconnection Request; and (ii) submit complete and accurate machine modeling data relative to the technology change via the System Impact Study Data Form on the PJM website.<sup>31</sup> Due to the limited time (i.e., 30 days) to determine whether a technological advancement is a material modification, PJM proposes to add to section 36.2A.2.2 that “[i]f PJM determines the machine modeling data submitted with such request is incomplete and/or incorrect, PJM will reject such technological change request and the Interconnection Customer may resubmit

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<sup>30</sup> Tariff, section 36.2A.2.2 *proposed*.

<sup>31</sup> *See supra* at 17, n. 29.

such technological change request with the complete and/or accurate data.” Without this additional language, PJM will not be able to comply with the thirty (30) calendar day timeframe as such evaluation simply cannot be performed without complete or accurate data.<sup>32</sup>

Finally, section 36.2A.2.2, not section 36.2A.4, is the appropriate tariff provision for this clarification as it is specific to the procedures for a technological advancement change, and section 36.2A.4 relates to all other modifications to an Interconnection Request.

*E. Miscellaneous Clean Up*

*1. Clean-up Revisions to Tariff, Part IV, Subpart A, Section 36.2 and Tariff, Part VI, Subpart A, section 207*

In preparing this filing, PJM noted that it inadvertently included incorrect language in sections 36.2 (Interconnection Feasibility Study) and 207 (Facilities Study Procedures). Specifically, PJM proposes to remove the following sentence from section 36.2:

The Feasibility Study will also identify all control equipment identified as necessary to requests for Interconnection Service that are lower than the full electrical generating capability of the Generating Facility.

All control equipment identified as necessary to requests for Interconnection Service that are lower than the full electrical generating capability of the Generating Facility are identified in the Facilities Study, not the Feasibility Study. Therefore, this sentence was correctly included in the Facilities Study procedures at section 207 and inadvertently added to the Feasibility Study at section 36.2.

In addition, PJM incorrectly added the following sentence in the Facilities Study Procedures at section 207:

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<sup>32</sup> The Commission permitted similar language submitted by the New York Independent System Operator, Inc., in its Order No. 845 Compliance Filing. See *New York Independent System Operator, Inc.*, 170 FERC ¶ 61,117 at P 114 (Feb. 20, 2020).

The System Impact Study will also identify all control equipment necessary to accommodate such requests for Interconnection Service that are lower than the full electrical power generating capability of the Generating Facility and cost estimates associated with such equipment.

As stated above, the Facilities Study, not the System Impact Study, identifies any control equipment for requests for Interconnection Service that are lower than the full electrical generating capability of the Generating Facility, not the System Impact Study. Therefore, PJM proposes to delete the above sentence from section 207 as well.

2. *Renumbering Revisions to Section 36.2A to Accommodate New Section 36.2A.2 for Modification of an Interconnection Request for Technological Advances*

PJM proposes to correct the numbering under Tariff, section 36.2A to add new section 36.2A.2 regarding *Modifications of an Interconnection Request for Technological Advances*. As such, the current tariff sections 36.2A.2 through 36.2A.6 have been renumbered as 36.2A.3 through 36.2A.7. PJM also corrected cross references to those sections contained in section 36.2A. Once the Commission accepts these proposed revisions, PJM will submit a clean-up filing for any other cross references in its governing documents to those changed section numbers.

## **II. CORRESPONDENCE AND COMMUNICATIONS**

Correspondence and communications with respect to this filing should be sent to, and the parties request the Secretary to include on the official service list, the following:

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### **III. CONTENTS OF THIS FILING**

The following is a list of documents submitted with this filing:

1. This transmittal letter;
2. Attachment A – Revised Tariff (redlined form); and
3. Attachment B – Revised Tariff (clean form).

### **IV. EFFECTIVE DATE**

PJM respectfully requests that the proposed revisions for Surplus Interconnection Service become effective 180 days following issuance of a Commission order accepting PJM's proposed revisions. For all other proposed revisions included herewith, PJM respectfully requests and effective date 60 days following issuance of a Commission order accepting such revisions.

Because the December 19 Order rejected PJM's original proposal to incorporate Surplus Interconnection Service within its interconnection queue process<sup>33</sup> and directed PJM to submit a further compliance filing to provide an expedited interconnection process for Surplus Interconnection Requests that is separate from the interconnection queue,<sup>34</sup> this additional time is needed to develop and test before implementing software and workflow changes specific to a separate, expedited interconnection process (including changes to the back-end databases that store and track such information). However, until such process is accepted and PJM understands what changes to software and workflow are needed, PJM must await the Commission's decision before starting the development and testing of such software and workflow changes.

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<sup>33</sup> December 19 Order at P 102.

<sup>34</sup> *Id.* at P 106.

## **V. REQUEST FOR WAIVERS**

PJM requests waiver of the Commission's notice requirements set forth in 18 C.F.R. § 35.3 to allow the requested effective date. Additionally, PJM makes this filing in compliance with the Commission's directives in the December 19 Order. By making these filings in compliance with the December 19 Order, PJM understands that it has hereby satisfied any of the Commission's filing requirements that might apply. Should any of the Commission's regulations (including filing regulations) or requirements not addressed be found to apply, PJM respectfully requests waiver of any such regulation or requirement.

## **VI. SERVICE**

PJM has served a copy of this filing on all PJM Members on all state utility regulatory commissions in the PJM Region by posting this filing electronically. In accordance with the Commission's regulations,<sup>35</sup> 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 Region<sup>36</sup> 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 24 hours of the filing. Also, a copy of this filing will be available on the FERC's eLibrary website located at the following link:

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<sup>35</sup> See 18C.F.R §§ 35.2(e) and 385.2010(f)(3) (2019).

<sup>36</sup> PJM already maintains, updates and regularly uses e-mail lists for all PJM Members and affected state commissions.


<http://www.ferc.gov/docs-filing/elibrary.asp> in accordance with the Commission's regulations and Order No. 714.

## VII. CONCLUSION

For all of the foregoing reasons, PJM respectfully requests that the Commission accept the proposed revisions to the Tariff submitted herein, effective on the dates requested herein, and grant waiver of any Commission regulations that the Commission may deem applicable to this compliance filing.

Craig Glazer  
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Respectfully submitted,

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\_\_\_\_\_  
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**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document on those parties on the official Service List compiled by the Secretary in these proceedings.

Dated at Audubon, Pennsylvania this 21<sup>st</sup> day of February, 2020.

/s/ Pauline Foley  
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# Attachment A

Revisions to the  
PJM Open Access Transmission Tariff  
(Marked / Redline Format)

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## **Definitions – O – P - Q**

### **Obligation:**

“Obligation” shall mean all amounts owed to PJM Settlement for purchases from the PJM Markets, Transmission Service, (under both Tariff, Part II and Part III), and other services or obligations pursuant to the Agreements. In addition, aggregate amounts that will be owed to PJM Settlement in the future for capacity purchases within the PJM capacity markets will be added to this figure. Should other markets be formed such that Participants may incur future Obligations in those markets, then the aggregate amount of those Obligations will also be added to the Net Obligation.

### **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.

### **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.

### **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.

### **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.

### **Open Access Same-Time Information System (OASIS) or PJM Open Access Same-Time Information System:**

“Open Access Same-Time Information System,” “PJM Open Access Same-Time Information System” or “OASIS” shall mean the electronic communication and 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 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.

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

“Operating Agreement of the PJM Interconnection, L.L.C.,” “Operating Agreement” or “PJM Operating Agreement” shall mean the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. dated as of April 1, 1997 and as amended and restated as of June 2, 1997, including all Schedules, Exhibits, Appendices, addenda or supplements hereto, as amended from time to time thereafter, among the Members of the PJM Interconnection, L.L.C., on file with the Commission.

**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.

**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.

**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.

**Operationally Deliverable:**

“Operationally Deliverable” shall mean, as determined by the Office of the Interconnection, that there are no operational conditions, arrangements or limitations experienced or required that threaten, impair or degrade effectuation or maintenance of deliverability of capacity or energy from the external Generation Capacity Resource to loads in the PJM Region in a manner comparable to the deliverability of capacity or energy to such loads from Generation Capacity Resources located inside the metered boundaries of the PJM Region, including, without limitation, an identified need by an external Balancing Authority Area for a remedial action scheme or manual generation trip protocol, transmission facility switching arrangements that would have the effect of radializing load, or excessive or unacceptable frequency of regional reliability limit violations or (outside an interregional agreed congestion management process) of



local reliability dispatch instructions and commitments.

**Opportunity Cost:**

“Opportunity Cost” shall mean a component of the Market Seller Offer Cap calculated in accordance with Tariff, Attachment DD, section 6.

**OPSI Advisory Committee:**

“OPSI Advisory Committee” shall mean the committee established under Tariff, Attachment M, section III.G.

**Option to Build:**

“Option to Build” shall mean 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.

**Optional Interconnection Study:**

“Optional Interconnection Study” shall mean a sensitivity analysis of an Interconnection Request based on assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement.

**Optional Interconnection Study Agreement:**

“Optional Interconnection Study Agreement” shall mean the form of agreement for preparation of an Optional Interconnection Study, as set forth in Tariff, Attachment N-3.

**Part I:**

“Part I” shall mean the Tariff Definitions and Common Service Provisions contained in Tariff, Part I, sections 1 through 12A.

**Part II:**

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

**Part III:**

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

**Part IV:**

“Part IV” shall mean Tariff, sections 36 through 112C pertaining to generation or merchant transmission interconnection to the Transmission System in conjunction with the applicable Common Service Provisions of Tariff, Part I and appropriate Schedules and Attachments.

**Part V:**

“Part V” shall mean Tariff, sections 113 through 122 pertaining to the deactivation of generating units in conjunction with the applicable Common Service Provisions of Tariff, Part I and appropriate Schedules and Attachments.

**Part VI:**

“Part VI” shall mean 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 Tariff, Part I and appropriate Schedules and Attachments.

**Participant:**

“Participant” shall mean a Market Participant and/or Transmission Customer and/or Applicant requesting to be an active Market Participant and/or Transmission Customer.

**Parties:**

“Parties” shall mean 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.

**Peak-Hour Dispatch:**

“Peak-Hour Dispatch” shall mean, for purposes of calculating the Energy and Ancillary Services Revenue Offset under Tariff, Attachment DD, section 5, an assumption, as more fully set forth in the PJM Manuals, that the Reference Resource is committed in the Day-Ahead Energy Market in four distinct blocks of four hours of continuous output for each block from the peak-hour period beginning with the hour ending 0800 EPT through to the hour ending 2300 EPT for any day when the average day-ahead LMP for the area for which the Net Cost of New Entry is being determined is greater than, or equal to, the cost to generate (including the cost for a complete start and shutdown cycle), *plus 10% of such costs*, for at least two hours during each four-hour block, where such blocks shall be assumed to be committed independently; provided that, if there are not at least two economic hours in any given four-hour block, then the Reference Resource shall be assumed not to be committed for such block; and to the extent not committed in any such block in the Day-Ahead Energy Market under the above conditions based on Day-Ahead LMPs, is dispatched in the Real-Time Energy Market for such block if the Real-Time LMP is greater than or equal to the cost to generate, *plus 10% of such costs*, under the same conditions as described above for the Day-Ahead Energy Market.

**Peak Market Activity:**

“Peak Market Activity” shall mean a measure of exposure for which credit is required, involving peak exposures in rolling three-week periods over a year timeframe, with two semi-annual reset points, pursuant to provisions of Tariff, Attachment Q, section V.A. Peak Market Activity shall exclude FTR Net Activity, Virtual Transactions Net Activity, and Export Transactions Net Activity.

**Peak Season:**

“Peak Season” shall mean the weeks containing the 24th through 36th Wednesdays of the calendar year. Each such week shall begin on a Monday and end on the following Sunday, except for the week containing the 36th Wednesday, which shall end on the following Friday.

**Percentage Internal Resources Required:**

“Percentage Internal Resources Required” shall have the meaning specified in the Reliability Assurance Agreement.

**Performance Assessment Interval:**

“Performance Assessment Interval” shall mean each Real-time Settlement Interval for which an Emergency Action has been declared by the Office of the Interconnection, provided, however, that Performance Assessment Intervals for a Base Capacity Resource shall not include any intervals outside the calendar months of June through September.

**Permissible Technological Advancement:**

“Permissible Technological Advancement” shall mean a proposed technological change such as an advancement to turbines, inverters, ~~or~~ plant supervisory controls or other similar advancements to the technology proposed in the Interconnection Request that is submitted to the Transmission Provider ~~with an~~ no later than the return of an executed System Impact Facilities Study Agreement (or, if a Facilities Study is not required, prior to the return of an executed Interconnection Service Agreement). ~~Provided such change does may not:~~ (i) increase the capability of the Generating Facility as specified in the original Interconnection Request; ~~or~~ (ii) represent a different fuel type from the original Interconnection Request; or (iii) cause any material adverse impact(s) on the Transmission System with regard to short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability and response. ~~Any If the proposed technological change submitted after an executed System Impact Study Agreement advancement is submitted to the Transmission Provider shall be considered a~~ Permissible Technological Advancement, no additional study will be necessary and the proposed technological advancement will if it is not deemed to be considered a Material Modification pursuant to Tariff, Part IV, Subpart A, section 36.2A.3.

**PJM:**

“PJM” shall mean PJM Interconnection, L.L.C., including the Office of the Interconnection as referenced in the PJM Operating Agreement. When such term is being used in the RAA it shall also include the PJM Board.

**PJM Administrative Service:**

“PJM Administrative Service” shall mean the services provided by PJM pursuant to Tariff, Schedule 9.

**PJM Board:**

“PJM Board” shall mean the Board of Managers of the LLC, acting pursuant to the Operating Agreement except when such term is being used in Tariff, Attachment M, in which case PJM Board shall mean the Board of Managers of PJM or its designated representative, exclusive of any members of PJM Management.

**PJM Control Area:**

“PJM Control Area” shall mean the Control Area recognized by NERC as the PJM Control Area.

**PJM Entities:**

“PJM Entities” shall mean PJM, including the Market Monitoring Unit, the PJM Board, and PJM’s officers, employees, representatives, advisors, contractors, and consultants.

**PJM Interchange:**

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

**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 Operating Agreement, Schedule 1, and the parallel provisions of Tariff, Attachment K – Appendix.

**PJM Interchange Export:**

“PJM Interchange Export” shall mean the following, as determined in accordance with the Operating Agreement and Tariff: (a) for a Market Participant that is a Network Service User, the amount by which its interval Equivalent Load is exceeded by the sum of the interval 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 interval scheduled deliveries of Spot Market Energy by a Market Seller from an External Resource; or (d) the interval net metered output of any other Market Seller.

**PJM Interchange Import:**

“PJM Interchange Import” shall mean the following, as determined in accordance with the Operating Agreement and Tariff: (a) for a Market Participant that is a Network Service User, the amount by which its interval Equivalent Load exceeds the sum of the interval 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 interval scheduled deliveries of Spot Market Energy to an External Market Buyer; or (d) the interval scheduled deliveries to an Internal Market Buyer that is not a Network Service User.

**PJM Liaison:**

“PJM Liaison” shall mean the liaison established under Tariff, Attachment M, section III.I.

**PJM Management:**

“PJM Management” shall mean the officers, executives, supervisors and employee managers of PJM.

**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.

**PJM Markets:**

“PJM Markets” shall mean the PJM Interchange Energy and capacity markets, including the RPM auctions, together with all bilateral or other wholesale electric power and energy transactions, capacity transactions, ancillary services transactions (including black start service), transmission transactions and any other market operated under the PJM Tariff or Operating Agreement within the PJM Region, wherein Market Participants may incur Obligations to PJM Settlement.

**PJM Market Rules:**

“PJM Market Rules” shall mean the rules, standards, procedures, and practices of the PJM Markets set forth in the PJM Tariff, the PJM Operating Agreement, the PJM Reliability

Assurance Agreement, the PJM Consolidated Transmission Owners Agreement, the PJM Manuals, the PJM Regional Practices Document, the PJM-Midwest Independent Transmission System Operator Joint Operating Agreement or any other document setting forth market rules.

**PJM Net Assets:**

“PJM Net Assets” shall mean the total assets per PJM’s consolidated quarterly or year-end financial statements most recently issued as of the date of the receipt of written notice of a claim less amounts for which PJM is acting as a temporary custodian on behalf of its Members, transmission developers/Designated Entities, and generation developers, including, but not limited to, cash deposits related to credit requirement compliance, study and/or interconnection receivables, member prepayments, invoiced amounts collected from Net Buyers but have not yet been paid to Net Sellers, and excess congestion (as described in Operating Agreement, Schedule 1, section 5.2.6, and the parallel provisions of Tariff, Attachment K-Appendix, section 5.2.6).

**PJM Region:**

“PJM Region” shall have the meaning specified in the Operating Agreement.

**PJM Regional Practices Document:**

“PJM Regional Practices Document” shall mean the document of that title that compiles and describes the practices in the PJM Markets and that is made available in hard copy and on the Internet.

**PJM Region Installed Reserve Margin:**

“PJM Region Installed Reserve Margin” shall mean the percent installed reserve margin for the PJM Region required pursuant to RAA, Schedule 4.1, as approved by the PJM Board.

**PJM Region Peak Load Forecast:**

“PJM Region Peak Load Forecast” shall mean the peak load forecast used by the Office of the Interconnection in determining the PJM Region Reliability Requirement, and shall be determined on both a preliminary and final basis as set forth in Tariff, Attachment DD, section 5.

**PJM Region Reliability Requirement:**

“PJM Region Reliability Requirement” shall mean, for purposes of the Base Residual Auction, the Forecast Pool Requirement multiplied by the Preliminary PJM Region Peak Load Forecast, less the sum of all Preliminary Unforced Capacity Obligations of FRR Entities in the PJM Region; and, for purposes of the Incremental Auctions, the Forecast Pool Requirement multiplied by the updated PJM Region Peak Load Forecast, less the sum of all updated Unforced Capacity Obligations of FRR Entities in the PJM Region.

**PJMSettlement:**

“PJM Settlement” or “PJM Settlement, Inc.” shall mean PJM Settlement, Inc. (or its successor), established by PJM as set forth in Operating Agreement, section 3.3.

**PJM Tariff, Tariff, O.A.T.T., OATT or PJM Open Access Transmission Tariff:**

“PJM Tariff,” “Tariff,” “O.A.T.T.,” “OATT,” or “PJM Open Access Transmission Tariff” shall mean that certain PJM Open Access Transmission Tariff, including any schedules, appendices or exhibits attached thereto, on file with FERC and as amended from time to time thereafter.

**Plan:**

“Plan” shall mean the PJM market monitoring plan set forth in Tariff, Attachment M.

**Planned Demand Resource:**

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

**Planned External Financed Generation Capacity Resource:**

“Planned External Financed Generation Capacity Resource” shall mean a Planned External Generation Capacity Resource that, prior to August 7, 2015, has an effective agreement that is the equivalent of an Interconnection Service Agreement, has submitted to the Office of the Interconnection the appropriate certification attesting achievement of Financial Close, and has secured at least 50 percent of the MWs of firm transmission service required to qualify such resource under the deliverability requirements of the Reliability Assurance Agreement.

**Planned External Generation Capacity Resource:**

“Planned External Generation Capacity Resource” shall have the meaning specified in the Reliability Assurance Agreement.

**Planned Financed Generation Capacity Resource:**

“Planned Financed Generation Capacity Resource” shall mean a Planned Generation Capacity Resource that, prior to August 7, 2015, has an effective Interconnection Service Agreement and has submitted to the Office of the Interconnection the appropriate certification attesting achievement of Financial Close.

**Planned Generation Capacity Resource:**

“Planned Generation Capacity Resource” shall have the meaning specified in the Reliability Assurance Agreement.

**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.

**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.

**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.

**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 Tariff, Part II. The Point(s) of Delivery shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

**Point of Interconnection:**

“Point of Interconnection” shall mean the point or points where the Customer Interconnection Facilities interconnect with the Transmission Owner Interconnection Facilities or the Transmission System.

**Point(s) of Receipt:**

“Point(s) of Receipt” shall mean 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 Tariff, Part II. The Point(s) of Receipt shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

**Point-To-Point Transmission Service:**

“Point-To-Point Transmission Service shall mean 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 Tariff, Part II.

**Power Purchaser:**

“Power Purchaser” shall mean the entity that is purchasing the capacity and energy to be transmitted under the Tariff.

**PRD Curve:**



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

**PRD Provider:**

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

**PRD Reservation Price:**

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

**PRD Substation:**

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

**Pre-Confirmed Application:**

“Pre-Confirmed Application” shall be 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.

**Pre-Emergency Load Response Program:**

“Pre-Emergency Load Response Program” shall be the program by which Curtailment Service Providers may be compensated by PJM for Demand Resources that will reduce load when dispatched by PJM during pre-emergency conditions, and is described in Operating Agreement, Schedule 1, section 8 and the parallel provisions of Tariff, Attachment K-Appendix, section 8.

**Pre-Expansion PJM Zones:**

“Pre-Expansion PJM Zones” shall be zones included in the 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, Mid-Atlantic Interstate Transmission, LLC (“MAIT”) (MAIT owns and operates the transmission facilities in the Metropolitan Edison Company Zone and the Pennsylvania Electric Company Zone), PECO Energy Company, Pennsylvania Power & Light Group, Potomac Electric Power Company, Public Service Electric and Gas Company, Allegheny Power, and Rockland Electric Company.

**Price Responsive Demand:**

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

**Primary Reserve:**

“Primary Reserve” shall mean the total reserve capability of generation resources that can be converted fully into energy or Demand Resources whose demand can be reduced within ten minutes of a request from the Office of the Interconnection dispatcher, and is comprised of both Synchronized Reserve and Non-Synchronized Reserve.

**Primary Reserve Alert**

“Primary Reserve Alert” shall mean a notification from PJM to alert Members of an anticipated shortage of Operating Reserve capacity for a future critical period.

**Primary Reserve Requirement:**

“Primary Reserve Requirement” shall mean the megawatts required to be maintained in a Reserve Zone or Reserve Sub-zone as Primary Reserve, absent any increase to account for additional reserves scheduled to address operational uncertainty. The Primary Reserve Requirement is calculated in accordance with the PJM Manuals.

**Prior CIL Exception External Resource:**

“Prior CIL Exception External Resource” shall mean an external Generation Capacity Resource for which (1) a Capacity Market Seller had, prior to May 9, 2017, cleared a Sell Offer in an RPM Auction under the exception provided to the definition of Capacity Import Limit as set forth in RAA, Article I or (2) an FRR Entity committed, prior to May 9, 2017, in an FRR Capacity Plan under the exception provided in the definition of Capacity Import Limit. In the event only a portion (in MW) of an external Generation Capacity Resource has a Pseudo-Tie into the PJM Region, that portion of the external Generation Capacity Resource, which can include up to the maximum megawatt amount cleared in any prior RPM auction or committed in an FRR Capacity Plan (and no other portion thereof) is eligible for treatment as a Prior CIL Exception External Resource if such portion satisfies the requirements of the first sentence of this definition.

**Project Financing:**

“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.

**Project Finance Entity:**

“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.

**Projected PJM Market Revenues:**

"Projected PJM Market Revenues" shall mean a component of the Market Seller Offer Cap calculated in accordance with Tariff, Attachment DD, section 6.

**Proportional Multi-Driver Project:**

"Proportional Multi-Driver Project" shall have the same meaning provided in the Operating Agreement.

**Provisional Interconnection Service:**

"Provisional Interconnection Service" shall mean interconnection service provided by Transmission Provider associated with interconnecting the Interconnection Customer's Generating Facility to Transmission Provider's Transmission System and enabling that Transmission System to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Interconnection Service Agreement and, if applicable, the Tariff.

**Pseudo-Tie:**

"Pseudo-Tie" shall have the same meaning provided in the Operating Agreement.

**Public Policy Objectives:**

"Public Policy Objectives" shall have the same meaning provided in the Operating Agreement.

**Public Policy Requirements:**

"Public Policy Requirements" shall have the same meaning provided in the Operating Agreement.

**Qualifying Transmission Upgrade:**

"Qualifying Transmission Upgrade" shall mean a proposed enhancement or addition to the Transmission System that: (a) will increase the Capacity Emergency Transfer Limit into an LDA by a megawatt quantity certified by the Office of the Interconnection; (b) the Office of the Interconnection has determined will be in service on or before the commencement of the first Delivery Year for which such upgrade is the subject of a Sell Offer in the Base Residual Auction; (c) is the subject of a Facilities Study Agreement executed before the conduct of the Base Residual Auction for such Delivery Year and (d) a New Service Customer is obligated to fund through a rate or charge specific to such facility or upgrade.

**Queue Position:**

“Queue Position” shall mean the priority assigned to an Interconnection Request, a Completed Application, or an Upgrade Request pursuant to applicable provisions of Tariff, Part VI.

## **Definitions – R - S**

### **Ramping Capability:**

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

### **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.

### **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.

### **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.

### **Real-time Offer:**

“Real-time Offer” shall mean a new offer or an update to a Market Seller’s existing cost-based or market-based offer for a clock hour, submitted for use after the close of the Day-ahead Energy Market.

### **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.

### **Real-time Settlement Interval:**

“Real-time Settlement Interval” shall mean the interval used by settlements, which shall be every five minutes.

### **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.

### **Reasonable Efforts:**

“Reasonable Efforts” shall mean, with respect to any action required to be made, attempted, or taken by an Interconnection Party or by a Construction Party under Tariff, Part IV or Part VI, 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.

**Receiving Party:**

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

**Referral:**

“Referral” shall mean a formal report of the Market Monitoring Unit to the Commission for investigation of behavior of a Market Participant, of behavior of PJM, or of a market design flaw, pursuant to Tariff, Attachment M, section IV.I.

**Reference Resource:**

“Reference Resource” shall mean a combustion turbine generating station, configured with a *single* General Electric Frame 7HA turbine with *evaporative cooling*, Selective Catalytic Reduction technology all CONE Areas, dual fuel capability, and a heat rate of 9.134 Mmbtu/MWh.

**Regional Entity:**

“Regional Entity” shall have the same meaning specified in the Operating Agreement.

**Regional Transmission Expansion Plan:**

“Regional Transmission Expansion Plan” shall mean the plan prepared by the Office of the Interconnection pursuant to Operating Agreement, Schedule 6 for the enhancement and expansion of the Transmission System in order to meet the demands for firm transmission service in the PJM Region.

**Regional Transmission Group (RTG):**

“Regional Transmission Group” or “RTG” shall mean 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.

**Regulation:**

“Regulation” shall mean the capability of a specific generation resource or Demand Resource with appropriate telecommunications, control and response capability to separately increase and

decrease its output or adjust load in response to a regulating control signal, in accordance with the specifications in the PJM Manuals.

**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.

**Relevant Electric Retail Regulatory Authority:**

“Relevant Electric Retail Regulatory Authority” shall mean 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.

**Reliability Assurance Agreement or PJM Reliability Assurance Agreement:**

“Reliability Assurance Agreement” or “PJM 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. 44, and as amended from time to time thereafter.

**Reliability Pricing Model Auction:**

“Reliability Pricing Model Auction” or “RPM Auction” shall mean the Base Residual Auction or any Incremental Auction, or, for the 2016/2017 and 2017/2018 Delivery Years, any Capacity Performance Transition Incremental Auction.

**Required Transmission Enhancements:**

“Regional Transmission Enhancements” shall mean enhancements and expansions of the Transmission System that (1) a Regional Transmission Expansion Plan developed pursuant to Operating Agreement, Schedule 6 or (2) any joint planning or coordination agreement between PJM and another region or transmission planning authority set forth in Tariff, Schedule 12-Appendix B (“Appendix B Agreement”) designates one or more of the Transmission Owner(s) to construct and own or finance. Required Transmission Enhancements shall also include enhancements and expansions of facilities in another region or planning authority that 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 constructed pursuant to an Appendix B Agreement cost responsibility for which has been assigned at least in part to PJM pursuant to such Appendix B Agreement.

**Reserved Capacity:**

“Reserved Capacity” shall mean 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 Tariff, Part II. Reserved Capacity shall be expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis.

**Reserve Penalty Factor:**

“Reserve Penalty Factor” shall mean the cost, in \$/MWh, associated with being unable to meet a specific reserve requirement in a Reserve Zone or Reserve Sub-zone. A Reserve Penalty Factor will be defined for each reserve requirement in a Reserve Zone or Reserve Sub-zone.

**Reserve Sub-zone:**

“Reserve Sub-zone” shall mean any of those geographic areas wholly contained within a Reserve Zone, consisting of a combination of a portion 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, reserve service.

**Reserve Zone:**

“Reserve Zone” shall mean any of those geographic areas 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, reserve service.

**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, including the return to service of existing transmission capability, that was not modeled pursuant to Operating Agreement, Schedule 1, section 7.5 and the parallel provisions of Tariff, Attachment K-Appendix, section 7.5 in compliance with Operating Agreement, Schedule 1, section 7.4.2 (h) and the parallel provisions of Tariff, Attachment K-Appendix, section 7.4.2(h), and, if modeled, would have increased the amount of stage 1 Auction Revenue Rights allocated pursuant to Operating Agreement, Schedule 1, section 7.4.2 and the parallel provisions of Tariff, Attachment K-Appendix, section 7.4.2; provided that, the foregoing notwithstanding, Residual Auction Revenue Rights shall exclude: 1) Incremental Auction Revenue Rights allocated pursuant to Tariff, Part VI; and 2) Auction Revenue Rights allocated to entities that are assigned cost responsibility pursuant to Operating Agreement, Schedule 6 for transmission upgrades that create such rights.

**Residual Metered Load:**

“Residual Metered Load” shall mean all load remaining in an electric distribution company’s fully metered franchise area(s) or service territory(ies) after all nodally priced load of entities serving load in such area(s) or territory(ies) has been carved out.



**Resource Substitution Charge:**

“Resource Substitution Charge” shall mean a charge assessed on Capacity Market Buyers in an Incremental Auction to recover the cost of replacement Capacity Resources.

**Revenue Data for Settlements:**

“Revenue Data for Settlements” shall mean energy quantities used in accounting and billing as determined pursuant to Tariff, Attachment K-Appendix and the corresponding provisions of Operating Agreement, Schedule 1.

**RPM Seller Credit:**

“RPM Seller Credit” shall mean an additional form of Unsecured Credit defined in Tariff, Attachment Q, section IV.

**Scheduled Incremental Auctions:**

“Scheduled Incremental Auctions” shall refer to the First, Second, or Third Incremental Auction.

**Schedule of Work:**

“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.

**Scope of Work:**

“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.

**Seasonal Capacity Performance Resource:**

“Seasonal Capacity Performance Resource” shall have the same meaning specified in Tariff, Attachment DD, section 5.5A.

**Secondary Systems:**

“Secondary Systems” shall mean 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.

**Second Incremental Auction:**

“Second Incremental Auction” shall mean an Incremental Auction conducted ten months before the Delivery Year to which it relates.

**Security:**

“Security” shall mean the security provided by the New Service Customer pursuant to Tariff, section 212.4 or Tariff, Part VI, section 213.4 to secure the New Service Customer’s responsibility for Costs under the Interconnection Service Agreement or Upgrade Construction Service Agreement and Tariff, Part VI, section 217.

**Segment:**

“Segment” shall have the same meaning as described in Operating Agreement, Schedule 1, section 3.2.3(e).

**Self-Supply:**

“Self-Supply” shall mean Capacity Resources secured by a Load-Serving Entity, by ownership or contract, outside a Reliability Pricing Model Auction, and used to meet obligations under this Attachment or the Reliability Assurance Agreement through submission in a Base Residual Auction or an Incremental Auction of a Sell Offer indicating such Market Seller’s intent that such Capacity Resource be Self-Supply. Self-Supply may be either committed regardless of clearing price or submitted as a Sell Offer with a price bid. A Load Serving Entity's Sell Offer with a price bid for an owned or contracted Capacity Resource shall not be deemed “Self-Supply,” unless it is designated as Self-Supply and used by the LSE to meet obligations under this Attachment or the Reliability Assurance Agreement.

**Sell Offer:**

“Sell Offer” shall mean an offer to sell Capacity Resources in a Base Residual Auction, Incremental Auction, or Reliability Backstop Auction.

**Service Agreement:**

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

**Service Commencement Date:**

“Service Commencement Date” shall mean 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 Tariff, Part II, section 15.3 or Tariff, Part III, section 29.1.

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

“Short-Term Firm Point-To-Point Transmission Service” shall mean Firm Point-To-Point Transmission Service under Tariff, Part II with a term of less than one year.

**Short-term Project:**

“Short-term Project” shall have the same meaning provided in the Operating Agreement.

**Short-Term Resource Procurement Target:**

“Short-Term Resource Procurement Target” shall mean, for Delivery Years through May 31, 2018, as to the PJM Region, for purposes of the Base Residual Auction, 2.5% of the PJM Region Reliability Requirement determined for such Base Residual Auction, for purposes of the First Incremental Auction, 2% of the of the PJM Region Reliability Requirement as calculated at the time of the Base Residual Auction; and, for purposes of the Second Incremental Auction, 1.5% of the of the PJM Region Reliability Requirement as calculated at the time of the Base Residual Auction; and, as to any Zone, an allocation of the PJM Region Short-Term Resource Procurement Target based on the Preliminary Zonal Forecast Peak Load, reduced by the amount of load served under the FRR Alternative. For any LDA, the LDA Short-Term Resource Procurement Target shall be the sum of the Short-Term Resource Procurement Targets of all Zones in the LDA.

**Short-Term Resource Procurement Target Applicable Share:**

“Short-Term Resource Procurement Target Applicable Share” shall mean, for Delivery Years through May 31, 2018: (i) for the PJM Region, as to the First and Second Incremental Auctions, 0.2 times the Short-Term Resource Procurement Target used in the Base Residual Auction and, as to the Third Incremental Auction for the PJM Region, 0.6 times such target; and (ii) for an LDA, as to the First and Second Incremental Auctions, 0.2 times the Short-Term Resource Procurement Target used in the Base Residual Auction for such LDA and, as to the Third Incremental Auction, 0.6 times such target.

**Site:**

“Site” shall mean 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.

**Small Commercial Customer:**

“Small Commercial Customer,” as used in RAA, Schedule 6 and Tariff, Attachment DD-1, shall mean a commercial retail electric end-use customer of an electric distribution company that

participates in a mass market demand response program under the jurisdiction of a RERRA and satisfies the definition of a “small commercial customer” under the terms of the applicable RERRA’s program, provided that the customer has an annual peak demand no greater than 100kW.

**Small Generation Resource:**

“Small Generation Resource” shall mean an Interconnection Customer’s device of 20 MW or less for the production and/or storage for later injection of electricity identified in an Interconnection Request, but shall not include the Interconnection Customer’s Interconnection Facilities. This term shall include Energy Storage Resources and/or other devices for storage for later injection of energy.

**Small Inverter Facility:**

“Small Inverter Facility” shall mean an Energy Resource that is a certified small inverter-based facility no larger than 10 kW.

**Small Inverter ISA:**

“Small Inverter ISA” shall mean an agreement among Transmission Provider, Interconnection Customer, and Interconnected Transmission Owner regarding interconnection of a Small Inverter Facility under Tariff, Part IV, section 112B.

**Special Member:**

“Special Member” shall mean an entity that satisfies the requirements of Operating Agreement, Schedule 1, section 1.5A.02, and the parallel provisions of Tariff, Attachment K-Appendix, section 1.5A.02, or the special membership provisions established under the Emergency Load Response and Pre-Emergency Load Response Programs.

**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.

**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 Operating Agreement, Schedule 1, section 2, and the parallel provisions of Tariff, Attachment K-Appendix, section 2.

**Start Additional Labor Costs:**

“Start Additional Labor Costs” shall mean additional labor costs for startup required above normal station manning levels.

**Start-Up Costs:**

“Start-Up Costs” shall mean the unit costs to bring the boiler, turbine and generator from shutdown conditions to the point after breaker closure which is typically indicated by telemetered or aggregated state estimator megawatts greater than zero and is determined based on the cost of start fuel, total fuel-related cost, performance factor, electrical costs (station service), start maintenance adder, and additional labor cost if required above normal station manning. Start-Up Costs can vary with the unit offline time being categorized in three unit temperature conditions: hot, intermediate and cold.

**State:**

“State” shall mean the District of Columbia and any State or Commonwealth of the United States.

**State Commission:**

“State Commission” shall mean any state regulatory agency having jurisdiction over retail electricity sales in any State in the PJM Region.

**State Estimator:**

“State Estimator” shall mean the computer model of power flows specified in Operating Agreement, Schedule 1, section 2.3 and the parallel provisions of Tariff, Attachment K-Appendix, section 2.3.

**State of Charge:**

“State of Charge” shall mean the quantity of physical energy stored in an Energy Storage Resource Model Participant in proportion to its maximum State of Charge capability. State of Charge is quantified as defined in the PJM Manuals.

**State of Charge Management:**

“State of Charge Management” shall mean the control of State of Charge of an Energy Storage Resource Market Participant using minimum and maximum charge and discharge limits, changes in operating mode, charging and discharging offer curves, and self-scheduling of non-dispatchable purchases and sales of energy in the PJM markets. State of Charge Management shall not interfere with an Energy Storage Resource Model Participant’s obligation to follow PJM dispatch, consistent with all other resources.

**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 in association with restoration or black start service; or (iv) that is Direct Charging Energy.

**Sub-Annual Resource Constraint:**

“Sub-Annual Resource Constraint” shall mean, for the 2017/2018 Delivery Year and for FRR Capacity Plans the 2017/2018 and 2018/2019 Delivery Years, for the PJM Region or for each LDA for which the Office of the Interconnection is required under Tariff, Attachment DD, section 5.10(a) to establish a separate VRR Curve for a Delivery Year, a limit on the total amount of Unforced Capacity that can be committed as Limited Demand Resources and Extended Summer Demand Resources for the 2017/2018 Delivery Year in the PJM Region or in such LDA, calculated as the Sub-Annual Resource Reliability Target for the PJM Region or for such LDA, respectively, minus the Short-Term Resource Procurement Target for the PJM Region or for such LDA, respectively.

**Sub-Annual Resource Price Decrement:**

“Sub-Annual Resource Price Decrement” shall mean, for the 2017/2018 Delivery Year, a difference between the clearing price for Extended Summer Demand Resources and the clearing price for Annual Resources, representing the cost to procure additional Annual Resources out of merit order when the Sub-Annual Resource Constraint is binding.

**Sub-Annual Resource Reliability Target:**

“Sub-Annual Reliability Target” for the PJM Region or an LDA, shall mean the maximum amount of the combination of Extended Summer Demand Resources and Limited Demand Resources in Unforced Capacity determined by PJM to be consistent with the maintenance of reliability, stated in Unforced Capacity, that shall be used to calculate the Minimum Annual Resource Requirement for Delivery Years through May 31, 2017 and the Sub-Annual Resource Constraint for the 2017/2018 and 2018/2019 Delivery Years. As more fully set forth in the PJM Manuals, PJM calculates the Sub-Annual Resource Reliability Target, by first determining a reference annual loss of load expectation (“LOLE”) assuming no Demand Resources. The calculation for the unconstrained portion of the PJM Region uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast and iteratively shifting the load distributions to result in the Installed Reserve Margin established for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Installed Reserve Margin study for the Delivery Year in question). The calculation for each relevant LDA uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Capacity Emergency Transfer Objective study for the Delivery

Year in question). For the relevant LDA calculation, the weekly capacity distributions are adjusted to reflect the Capacity Emergency Transfer Limit for the Delivery Year in question.

For both the PJM Region and LDA analyses, PJM then models the commitment of varying amounts of DR (displacing otherwise committed generation) as interruptible from May 1 through October 31 and unavailable from November 1 through April 30 and calculates the LOLE at each DR level. The Extended Summer DR Reliability Target is the DR amount, stated as a percentage of the unrestricted peak load, that produces no more than a ten percent increase in the LOLE, compared to the reference value. The Sub-Annual Resource Reliability Target shall be expressed as a percentage of the forecasted peak load of the PJM Region or such LDA and is converted to Unforced Capacity by multiplying [the reliability target percentage] times [the Forecast Pool Requirement] times [the DR Factor] times [the forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].

**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.

**Summer-Period Capacity Performance Resource:**

“Summer-Period Capacity Performance Resource” shall have the same meaning specified in Tariff, Attachment DD, section 5.5A.

**Surplus Interconnection Customer:**

“Surplus Interconnection Customer” shall mean either an Interconnection Customer whose Generating Facility is already interconnected to the PJM Transmission System or one of its affiliates, or an unaffiliated entity that submits a Surplus Interconnection Request to utilize Surplus Interconnection Service within the Transmission System in the PJM Region. A Surplus Interconnection Customer is not a New Service Customer.

**Surplus Interconnection Request:**

“Surplus Interconnection Request” shall mean a request submitted by a Surplus Interconnection Customer, pursuant to Tariff, Attachment RR, to utilize Surplus Interconnection Service within the Transmission System in the PJM Region. A Surplus Interconnection Request is not a New Service Request.

**Surplus Interconnection Service:**

“Surplus Interconnection Service” shall mean any unneeded portion of Interconnection Service established in an Interconnection Service Agreement, such that if Surplus Interconnection

Service is utilized, the total amount of Interconnection Service at the Point of Interconnection would remain the same.

**Switching and Tagging Rules:**

“Switching and Tagging Rules” shall mean the switching and tagging procedures of Interconnected Transmission Owners and Interconnection Customer as they may be amended from time to time.

**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.

**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 in one or more specified Reserve Zones or Reserve Sub-zones, within ten minutes, to increase the energy output or reduce load by the amount of assigned or self-scheduled Synchronized Reserve capability.

**Synchronized Reserve Requirement:**

“Synchronized Reserve Requirement” shall mean the megawatts required to be maintained in a Reserve Zone or Reserve Sub-zone as Synchronized Reserve, absent any increase to account for additional reserves scheduled to address operational uncertainty. The Synchronized Reserve Requirement is calculated in accordance with the PJM Manuals.

**System Condition:**

“System Condition” shall mean 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 Tariff, Part II, section 13.6. Such conditions must be identified in the Transmission Customer’s Service Agreement.

**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 Operating Agreement, Schedule 1, section 2 and the parallel provisions of Tariff, Attachment K-Appendix, section 2.



**System Impact Study:**

“System Impact Study” shall mean 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.

**System Protection Facilities:**

“System Protection Facilities” shall refer to 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.

### 36.1 General:

Generation Interconnection Requests and Transmission Interconnection Requests shall be governed by Tariff, Part IV, Subpart A, 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, to increase the capacity of generation already interconnected in, ~~or request Surplus Interconnection Service in~~ the PJM Region shall submit to the Transmission Provider a Generation Interconnection Request. The Transmission Provider shall acknowledge receipt of the Generation Interconnection Request (electronically when available to all parties, otherwise written) within five Business Days after receipt of the request and shall attach a copy of the received Generation Interconnection Request to the Transmission Provider's acknowledgment.

1. Generation Interconnection Request Requirements. To be assigned a PJM Queue Position pursuant to Tariff, Part IV, Preamble, section 201, a Generation Interconnection Customer must submit a complete and fully executed Generation Interconnection Feasibility Study Agreement, a form of which is located in the Tariff, Attachment N. To be considered complete at the time of submission, the Interconnection Customer's Generation Interconnection Feasibility Study Agreement must include, at a minimum, each of the following:
  - a. specification of the location of the proposed Generating Facility site or existing Generating Facility (include both a written description (e.g., street address, global positioning coordinates) and attach a map in PDF format depicting the property boundaries and the location of the generating unit site); and
  - b. evidence of an ownership interest in, or right to acquire or control the Generating Facility site for a minimum of three years, such as a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider; and
  - c. the MW size of the proposed Generating Facility or the amount of increase in MW capability of an existing Generating Facility, and ~~except for a request for Surplus Interconnection Service,~~ identification of any MW portion of the facility's capability that will be a Capacity Resource; and
  - d. identification of the fuel type of the proposed generating unit or upgrade thereto; and
  - e. a description of the equipment configuration, and a set of preliminary electrical design specifications, and, if the generating unit is a wind generation facility, then the set of preliminary electrical design

specifications must depict the wind plant as a single equivalent generator;  
and

- f. the planned date the proposed generating unit or increase in MW capability of an existing generating unit will be in service, where such date is to be no more than seven years from the date that a complete and fully executed Generation Interconnection Feasibility Study Agreement is received by the Transmission Provider unless the Interconnection Customer demonstrates that engineering, permitting, and construction of the generating unit or increase in capability will take more than seven years; and
- g. any additional information as may be prescribed by the Transmission Provider in the PJM Manuals, including a description of how the full electrical generating capability of the generating unit will be limited to the Maximum Facility Output requested if the Maximum Facility Output of the generating unit is less than the full electrical generating capability of the Generating Facility; and
- h. if Behind The Meter Generation is identified in the Generation Interconnection Feasibility Study Agreement, all of the requirements in Tariff, Part IV, Subpart A, section 36.1A must also be met; and
- i. Deposit.
  - i. A deposit shall be submitted to Transmission Provider, as follows:
    - (1) Provided that the maximum total deposit amount for a Generation Interconnection Request submitted in the first four calendar months of the current New Services Queue shall not exceed \$110,000, a deposit of \$10,000 plus \$100 for each MW requested if the Generation Interconnection Request is received in the first four calendar months of the current New Services Queue; or
    - (2) Provided that the maximum total deposit amount for a Generation Interconnection Request submitted in the fifth calendar month of the current New Services Queue shall not exceed \$120,000, a deposit of \$20,000 plus \$150 for each MW requested if the Generation Interconnection Request is received in the fifth calendar month of the current New Services Queue; or
    - (3) Provided that the maximum total deposit amount for a Generation Interconnection Request submitted in the sixth calendar month of the current New Services Queue shall not exceed \$130,000 a deposit of \$30,000 plus \$200 for each MW requested, if the Generation Interconnection

Request is received in the sixth calendar month of the current New Services Queue.

- ii. 10% of each total deposit amount is non-refundable. Any unused non-refundable deposit monies shall be returned to the Generation Interconnection Customer upon Initial Operation. However, if, before reaching Initial Operation, the Generation Interconnection Customer withdraws its Generation Interconnection Request, or the Generation Interconnection Request is otherwise deemed rejected or terminated and withdrawn, any unused portion of the non-refundable deposit monies shall be used to fund:
  - (1) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices due to Transmission Provider, Interconnected Transmission Owner(s) and/or third party contractors, as applicable, as a result of any failure of the Interconnection Customer to pay actual costs for the Generation Interconnection Request and/or associated Queue Position; and/or
  - (2) Any restudies required as a result of the rejection, termination and/or withdrawal of such Generation Interconnection Request; and/or
  - (3) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Generation Interconnection Requests by the Interconnection Customer.
- iii. 90% of each total deposit amount is refundable, and the Transmission Provider shall utilize, in no particular order, the refundable portion of each total deposit amount to cover the following:
  - (1) The cost of the Queue Position acceptance review; and
  - (2) The cost of the deficiency review of the Interconnection Customer's Generation Interconnection Request (to determine whether the Generation Interconnection Request is valid); and
  - (3) The dollar amount of the Interconnection Customer's cost responsibility for the Generation Interconnection Feasibility Study; and
  - (4) If the Generation Interconnection Request is deemed to be modified (pursuant to Tariff, Part IV, Subpart A, section 36.2A), rejected, terminated and/or withdrawn during the

deficiency review and/or deficiency response period (as described further below), or during the Feasibility Study period, the refundable deposit money shall be applied to cover all of the costs incurred by the Transmission Provider up to the point of such Generation Interconnection Request being modified, rejected, terminated and/or withdrawn, and any remaining refundable deposit monies shall be applied to cover:

- (a) The costs of any restudies required as a result of the modification (pursuant to Tariff, Part IV, Subpart A, section 36.2A), rejection, termination and/or withdrawal of such Generation Interconnection Request; and/or
  - (b) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices due to Transmission Provider, Interconnected Transmission Owner(s) and/or third party contractors, as applicable, as a result of any failure of the Interconnection Customer to pay actual costs for the Generation Interconnection Request and/or associated Queue Position; and/or
  - (c) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Generation Interconnection Requests by the Interconnection Customer.
  - (d) If any refundable deposit monies remain after all costs and outstanding monies owed, as described in this section, are covered, such remaining refundable deposit monies shall be returned to the Generation Interconnection Customer in accordance with the PJM Manuals.
- iv. Upon completion of the Feasibility Study, the Transmission Provider shall apply any remaining refundable deposit monies toward:
- (1) The Interconnection Customer's cost responsibility for any other studies conducted for the Generation Interconnection Request under Tariff, Part VI, which shall be applied prior to the deposit monies collected for such other studies; and/or

(2) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior Generation Interconnection Requests by the Interconnection Customer.

v. If any refundable deposit monies remain after the Feasibility Study is complete and any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Generation Interconnection Requests by the Interconnection Customer have been paid, such remaining deposit monies shall be returned to the Generation Interconnection Customer.

vi. The Interconnection Customer must submit the total required deposit amount with the Generation Interconnection Request. If the Interconnection Customer fails to submit the total required deposit amount with the Generation Interconnection Request, the Generation Interconnection Request shall be deemed to be terminated and withdrawn (i.e., the Generation Interconnection Request shall be terminated prior to reaching the deficiency review stage).

vii. Deposit monies are non-transferrable. Under no circumstances may refundable or non-refundable deposit monies for a specific Interconnection Request or Queue Position be applied in whole or in part to a different New Service Request or Interconnection Request or Queue Position.

j. Primary frequency response operating range for Energy Storage Resources.

~~k. Indication whether the Interconnection Customer is requesting Surplus Interconnection Service; and, if so, identification of the specific, existing Generating Facility providing Surplus Interconnection Service, including whether the Interconnection Customer requesting Surplus Interconnection Service is the owner or affiliate of the existing Generating Facility. If a third party, must include evidence of permission from the existing owner of the Generating Facility to utilize the existing Generating Facility's Surplus Interconnection Service must be submitted with this request.~~

2. Deficiency Review. Within five Business Days of the Interconnection Customer submitting a Generation Interconnection Request, Transmission Provider shall provide a deficiency review of the Generation Interconnection Request to determine whether the Interconnection Customer submitted a valid Generation Interconnection Request.

- a. With the exception of evidence of an ownership interest in, or right to acquire or control the generating unit site for a minimum of three years, if a Generation Interconnection Request meets all requirements set forth above the Transmission Provider shall start the deficiency review. While deficiency reviews may commence for Generation Interconnection Requests that are submitted without site control evidence that is acceptable to the Transmission Provider, such Generation Interconnection Requests shall not be assigned a Queue Position until the Transmission Provider receives site control evidence that is acceptable to the Transmission Provider.
- b. Pursuant to Section 9, Cost Responsibility, of the Generation Interconnection Feasibility Study Agreement (Tariff, Attachment N), if the Transmission Provider anticipates that the actual study costs will exceed the refundable portion of the required deposit, the Transmission Provider shall provide the Interconnection Customer with an estimate of the additional study costs. The estimated additional study costs are non-binding, and additional actual study costs may exceed the estimated additional study cost increases provided by the Transmission Provider. Regardless of whether the Transmission Provider provides the Interconnection Customer with estimated additional study costs, the Interconnection Customer is responsible for and must pay all actual study costs.
  - i. If the Transmission Provider sends the Interconnection Customer notification of estimated additional study costs during the deficiency review period (as described below), then the Interconnection Customer must either:
    - (1) Withdraw the Generation Interconnection Request during the deficiency response period (as described below); or
    - (2) Pay all estimated additional study costs prior to the expiration of the deficiency response period (as described below).
    - (3) If the Interconnection Customer fails to complete either (1) or (2) above, the Generation Interconnection Request shall be deemed to be terminated and withdrawn.
  - ii. If at any time after the deficiency review period the Transmission Provider provides the Interconnection Customer with notification of estimated additional study costs, the Interconnection Customer must pay such estimated additional study costs within ten Business Days of Transmission Provider sending the Interconnection Customer notification of such estimated additional study costs. If the Interconnection Customer fails to pay such estimated additional

study costs within ten Business Days of Transmission Provider sending the Interconnection Customer notification of such estimated additional study costs, then the Generation Interconnection Request shall be deemed to be terminated and withdrawn.

- c. If there are deficiencies in the Generation Interconnection Request for any of the requirements set forth above, the Transmission Provider shall notify the Interconnection Customer (electronically when available to all parties, otherwise written) within five Business Days of receipt of the Generation Interconnection Request that such Generation Interconnection Request is deficient. This notification is referred to as a deficiency notice.
  - i. The deficiency notice shall clearly set forth the basis upon which the deficiency determination was made.
  - ii. The Interconnection Customer shall be provided ten Business Days to respond to the deficiency notice. This ten Business Day period is referred to as the deficiency response period.
    - (1) Within the deficiency response period, the Interconnection Customer shall provide, in full, the additional information and/or evidence (such as generation site control) and/or monies that the Transmission Provider's deficiency notice identified as being required to constitute a valid Generation Interconnection Request.
    - (2) If the Interconnection Customer fails to clear within the deficiency response period all deficiencies identified by the Transmission Provider in the deficiency notice, the Generation Interconnection Request shall be deemed to be terminated and withdrawn.
  - iii. Without regard to the timing of the Interconnection Customer's deficiency response period, the Transmission Provider shall have an additional five Business Days to review each Interconnection Customer's response to the deficiency notice. If the Generation Interconnection Request is still deficient after the Transmission Provider's additional five Business Day review and the full ten Business Days of the Interconnection Customer's deficiency response period have expired, the Generation Interconnection Request shall be deemed to be terminated and withdrawn.
  - iv. If the Interconnection Customer fails to respond in full to the Transmission Provider's deficiency notice (including failing to provide all of the additional required information, evidence and/or make payments on any outstanding invoices required by the



Transmission Provider's deficiency notice), the Generation Interconnection Request shall be deemed to be terminated and withdrawn.

3. Any Queue Position for which an Interconnection Customer has not cleared the deficiencies before the close of the relevant New Services Queue shall be deemed to be terminated and withdrawn, even if the deficiency response period for such Queue Position does not expire until after the close of the relevant New Services Queue.
4. In accordance with Tariff, Part VI, Preamble, section 201, the Transmission Provider shall assign Queue Positions as of the date and time of receipt of all information required pursuant to section 36.1.01 above. If the information required pursuant to section 36.1.01 above is provided to the Transmission Provider in separate submissions, the Queue Position shall be assigned based on the date and time of receipt of the last required piece of information.
5. Deficiency notices shall be considered cleared as of the date and time the Transmission Provider receives from the Interconnection Customer the last piece of required information deemed acceptable by the Transmission Provider to clear such deficiency notice.
6. Transmission Provider Website Postings.
  - a. The Transmission Provider shall maintain on the Transmission Provider's website a list of all Generation Interconnection Requests that identifies:
    - i. the proposed maximum summer and winter megawatt electrical output;
    - ii. the location of the generation by county and state;
    - iii. the station or transmission line or lines where the interconnection will be made;
    - iv. the facility's projected date of Initial Operation;
    - v. the status of the Generation Interconnection Request, including its Queue Position;
    - vi. the type of Generation Interconnection Service requested;
    - vii. the availability of any studies related to the Interconnection Request;
    - viii. the date of the Generation Interconnection Request;

- ix. the type of Generating Facility to be constructed (combined cycle, base load or combustion turbine and fuel type); and
  - x. for each Generation Interconnection Request that has not resulted in a completed interconnection, an explanation of why it was not completed.
- b. This list will not disclose the identity of the Generation Interconnection Customer, except as otherwise provided in Tariff, Part IV. The list and the priority of Generation Interconnection Requests shall be included on the Transmission Provider's 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 Tariff, Part IV, Subpart G 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 shall submit to the Transmission Provider a Transmission Interconnection Request. The Transmission Provider shall acknowledge receipt of the Transmission Interconnection Request (electronically when available to all parties, otherwise written) within five Business Days after receipt of the request and shall attach a copy of the received Transmission Interconnection Request to the Transmission Provider's acknowledgment.

1. Transmission Interconnection Request Requirements. To be assigned a PJM Queue Position pursuant to Tariff, Part VI, Preamble, section 201, a Transmission Interconnection Customer must submit a complete and fully executed Transmission Interconnection Feasibility Study Agreement, a form of which is located in the Tariff, Attachment S. To be considered complete at the time of submission, the Interconnection Customer's Transmission Interconnection Feasibility Study Agreement must include, at a minimum, each of the following:
  - a. 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; and
  - b. a description of the proposed Merchant Transmission Facilities; and

- c. the nominal capability or increase in capability (in megawatts) of the proposed Merchant Transmission Facilities; and
- d. 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; and
- e. 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; and
  - i. Transmission Injection Rights and/or Transmission Withdrawal Rights, or
  - ii. 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;
- f. if the Transmission Interconnection Customer will be eligible to receive Incremental Deliverability Rights under Tariff, Part VI, Subpart C, section 235, 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; and
- g. any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; and
- h. Deposit.
  - i. A deposit shall be submitted to the Transmission Provider as follows:
    - (1) Provided that the maximum total deposit amount for a Transmission Interconnection Request submitted in the first four calendar months of the current New Services Queue shall not exceed \$110,000, a deposit of \$10,000 plus \$100 for each MW requested if the Transmission Interconnection Request is received in the first four calendar months of the current New Services Queue; or

- (2) Provided that the maximum total deposit amount for a Transmission Interconnection Request submitted in the fifth calendar month of the current New Services Queue shall not exceed \$120,000, a deposit of \$20,000 plus \$150 for each MW requested if the Transmission Interconnection Request is received within the fifth calendar month of the current New Services Queue; or
    - (3) Provided that the maximum total deposit amount for a Transmission Interconnection Request submitted in the sixth calendar month of the current New Services Queue shall not exceed \$130,000, a deposit of \$30,000 plus \$200 for each MW requested, if the Transmission Interconnection Request is received within the sixth calendar month of the current New Services Queue.
  - ii. 10% of each total deposit amount is non-refundable. Any unused non-refundable deposit monies shall be returned to the Transmission Interconnection Customer upon Initial Operation. However, if, before reaching Initial Operation, the Transmission Interconnection Customer withdraws its Transmission Interconnection Request, or the Transmission Interconnection Request is otherwise deemed rejected or terminated and withdrawn, any unused portion of the non-refundable deposit monies shall be used to fund:
    - (1) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices due to Transmission Provider, Interconnected Transmission Owner(s) and/or third party contractors, as applicable, as a result of any failure of the Interconnection Customer to pay actual costs for the Transmission Interconnection Request and/or associated Queue Position; and/or
    - (2) Any restudies required as a result of the rejection, termination and/or withdrawal of such Transmission Interconnection Request; and/or
    - (3) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Transmission and/or Generation Interconnection Requests by the Interconnection Customer.
  - iii. 90% of each total deposit amount is refundable, and the Transmission Provider shall utilize, in no particular order, the

refundable portion of each total deposit amount to cover the following:

- (1) The cost of the Queue Position acceptance review; and
- (2) The cost of the deficiency review of the Interconnection Customer's Transmission Interconnection Request (to determine whether the Transmission Interconnection Request is valid); and
- (3) The dollar amount of the Interconnection Customer's cost responsibility for the Transmission Interconnection Feasibility Study; and
- (4) If the Transmission Interconnection Request is deemed to be modified (pursuant to Tariff, Part IV, Subpart A, section 36.2A), rejected, terminated and/or withdrawn during the deficiency review and/or deficiency response period (as described further below), or during the Feasibility Study period, the refundable deposit money shall be applied to cover all of the costs incurred by the Transmission Provider up to the point of such Transmission Interconnection Request being modified, rejected, terminated and/or withdrawn, and any remaining refundable deposit monies shall be applied to cover:
  - (a) The costs of any restudies required as a result of the modification, rejection termination and/or withdrawal of such Transmission Interconnection Request; and/or
  - (b) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices due to Transmission Provider, Interconnected Transmission Owner(s) and/or third party contractors, as applicable, as a result of any failure of the Interconnection Customer to pay actual costs for the Transmission Interconnection Request and/or associated Queue Position; and/or
  - (c) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Transmission and/or Generation Interconnection Requests by the Interconnection Customer.

- (d) If any refundable deposit monies remain after all costs and outstanding monies owed, as described in this section, are covered, such remaining refundable deposit monies shall be returned to the Interconnection Customer in accordance with the PJM Manuals.
- iv. Upon completion of the Transmission Interconnection Feasibility Study, the Transmission Provider shall apply any remaining refundable deposit monies toward:
  - (1) The Interconnection Customer's cost responsibility for any other studies conducted for the Transmission Interconnection Request under Tariff, Part VI, which shall be applied prior to the deposit monies collected for such other studies; and/or
  - (2) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Transmission and/or Generation Interconnection Requests by the Interconnection Customer.
- v. If any refundable deposit monies remain after the Feasibility Study is complete and any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Transmission and/or Generation Interconnection Requests by the Interconnection Customer have been paid, such remaining deposit monies shall be returned to the Interconnection Customer.
- vi. The Interconnection Customer must submit the total required deposit amount with the Transmission Interconnection Request. If the Interconnection Customer fails to submit the total required deposit amount with the Transmission Interconnection Request, the Transmission Interconnection Request shall be deemed to be terminated and withdrawn (i.e., the Transmission Interconnection Request shall be terminated prior to reaching the deficiency review stage).
- vii. Deposit monies are non-transferrable. Under no circumstances may refundable or non-refundable deposit monies for a specific Interconnection Request or Queue Position be applied in whole or in part to a different New Service Request or Interconnection Request or Queue Position.

2. Deficiency Review. Within five Business Days of the Interconnection Customer submitting a Transmission Interconnection Request, the Transmission Provider shall provide a deficiency review of the Transmission Interconnection Request to determine whether the Interconnection Customer submitted a valid Transmission Interconnection Request.
  - a. If a Transmission Interconnection Request meets all requirements set forth above, the Transmission Provider shall start the deficiency review.
  - b. Pursuant to Section 9, Cost Responsibility, of the Transmission Interconnection Feasibility Study Agreement (Tariff, Attachment S), if the Transmission Provider anticipates that the actual study costs will exceed the refundable portion of the required deposit, the Transmission Provider shall provide the Interconnection Customer with an estimate of the additional study costs. The estimated additional study costs are non-binding, and additional actual study costs may exceed the estimated additional study cost increases provided by the Transmission Provider. Regardless of whether the Transmission Provider provides the Interconnection Customer with estimated additional study costs, the Interconnection Customer is responsible for and must pay all actual study costs.
    - i. If the Transmission Provider sends the Interconnection Customer notification of estimated additional study costs during the deficiency review period (as described below), then the Interconnection Customer must either:
      - (1) Withdraw the Interconnection Request during the deficiency response period (as described below); or
      - (2) Pay all estimated additional study costs prior to the expiration of the deficiency response period (as described below).
      - (3) If the Interconnection Customer fails to complete either (1) or (2) above, the Transmission Interconnection Request shall be deemed to be terminated and withdrawn.
    - ii. If at any time after the deficiency review period the Transmission Provider provides the Interconnection Customer with notification of estimated additional study costs, the Interconnection Customer must pay such estimated additional study costs within ten Business Days of Transmission Provider sending the Interconnection Customer notification of such estimated additional study costs. If the Interconnection Customer fails to pay such estimated additional study costs within ten Business Days of Transmission Provider sending the Interconnection Customer notification of such

estimated additional study costs, then the Transmission Interconnection Request shall be deemed to be terminated and withdrawn.

- c. If there are deficiencies in the Transmission Interconnection Request for any of the requirements set forth above, the Transmission Provider shall notify the Interconnection Customer (electronically when available to all parties, otherwise written) within five Business Days of receipt of the Transmission Interconnection Request that such Transmission Interconnection Request is deficient. This notification is referred to as a deficiency notice.
  - i. The deficiency notice shall clearly set forth the basis upon which the deficiency determination was made.
  - ii. The Interconnection Customer shall be provided ten Business Days to respond to the deficiency notice. This ten Business Day period is referred to as the deficiency response period.
    - (1) Within the deficiency response period, the Interconnection Customer shall provide, in full, the additional information and/or monies that the Transmission Provider's deficiency notice identified as being required to constitute a valid Transmission Interconnection Request.
    - (2) If the Interconnection Customer fails to clear within the deficiency response period all deficiencies identified by the Transmission Provider in the deficiency notice, the Transmission Interconnection Request shall be deemed to be terminated and withdrawn.
  - iii. Without regard to the timing of the Interconnection Customer's deficiency response period, the Transmission Provider shall have an additional five Business Days to review the Interconnection Customer's response to the deficiency notice. If the Transmission Interconnection Request is still deficient after the Transmission Provider's additional five Business Day review and the full ten Business Days of the Interconnection Customer's deficiency response period have expired, the Transmission Interconnection Request shall be deemed to be terminated and withdrawn.
  - iv. If the Interconnection Customer fails to respond in full to the Transmission Provider's deficiency notice (including failing to provide all of the additional required information, evidence and/or make payments on any outstanding invoices required by the Transmission Provider's deficiency notice), the Transmission



Interconnection Request shall be deemed to be terminated and withdrawn.

3. Any Queue Position for which an Interconnection Customer has not cleared the deficiencies before the close of the relevant New Services Queue shall be deemed to be terminated and withdrawn, even if the deficiency response period for such Queue Position does not expire until after the close of the relevant New Services Queue.
4. The Transmission Provider shall assign Queue Positions pursuant to Tariff, Part VI, Preamble, section 201 on the date and time of receipt of all the required information set forth in this section 36.1.03 above.
5. Deficiencies shall be considered cleared as of the date and time the Transmission Provider receives from the Interconnection Customer the last piece of required information deemed acceptable by the Transmission Provider to clear such deficiency notice.
6. **Adjacent Control Area Stipulation.** If applicable, within 30 calendar days of submitting its Transmission Interconnection Request, the Interconnection Customer shall provide evidence acceptable to the Transmission Provider that Interconnection Customer has submitted a valid interconnection request with the adjacent Control Area(s) in which it is interconnecting. Transmission Interconnection Customer shall maintain its queue position(s) with such adjacent Control Area(s) throughout the entire PJM Transmission Interconnection Request process for the relevant PJM Transmission Interconnection Request. If Interconnection Customer fails to maintain its queue position(s) with such adjacent Control Area(s) throughout the entire PJM Transmission Interconnection Request process for the relevant PJM Transmission Interconnection Request, the relevant PJM Transmission Interconnection Request shall be deemed to be terminated and withdrawn.
7. **Transmission Provider Website Postings.**
  - a. The Transmission Provider shall maintain on the Transmission Provider's website a list of all Transmission Interconnection Requests that identifies:
    - i. in megawatts the potential nominal capability or increase in capability;
    - ii. the location of the Merchant Transmission Facilities by county and state;
    - iii. the station or transmission line or lines where the interconnection will be made;
    - iv. the facility's projected date of Initial Operation;

- v. the status of the Transmission Interconnection Request, including its Queue Position;
  - vi. the availability of any studies related to the Interconnection Request;
  - vii. the date of the Transmission Interconnection Request;
  - viii. the type of Merchant Transmission Facilities to be constructed; and
  - ix. for each Transmission Interconnection Request that has not resulted in a completed interconnection, an explanation of why it was not completed.
- b. This list will not disclose the identity of the Transmission Interconnection Customer, except as otherwise provided in Tariff, Part IV or Tariff, Part VI. The list and the priority of Transmission Interconnection Requests shall be included on the Transmission Provider's website as a part of the New Services Queue.

### **36.1.03A Transmission Interconnection Customers Requesting Merchant Network Upgrades**

Notwithstanding section 36.1.03 above, an Interconnection Customer that proposes Merchant Network Upgrades (including advancing pursuant to Tariff, Part VI, Subpart B, section 220 or accelerating 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 Operating Agreement, Schedule 6) shall submit an Upgrade Request, with the required information and the required deposit for a System Impact Study, as set forth in Tariff, Attachment EE.

#### **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 Tariff, Part III. Capacity Resources also may participate in Reliability Pricing Model Auctions and in Ancillary Services markets pursuant to the 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 Operating Agreement, Schedule 1, section 1.7.4(i), 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.

### **36.1.1A Service Below Generating Capability**

The Transmission Provider shall consider requests for Interconnection Service below the full electrical generating capability of the Generating Facility. These requests for Interconnection Service shall be studied at the level of Interconnection Service requested for purposes of determining Interconnection Facilities, Network Upgrades, and associated costs, but may be subject to other studies at the full electrical generating capability of the Generating Facility to ensure the safety and reliability of the system, with the study costs borne by the Interconnection Customer. If after additional studies are complete, Transmission Provider determines that additional Network Upgrades are necessary, then Transmission Provider must: (i) specify which additional Network Upgrade costs are based on which studies; and (ii) provide a detailed explanation of why the additional Network Upgrades are necessary. Any Interconnection Facility and/or Network Upgrades costs required for safety and reliability also will be borne by the Interconnection Customer. Interconnection Customers may be subject to additional control technologies as well as testing and validation of these technologies as set forth in the Interconnection Service Agreement. The necessary control technologies and protection systems shall be established in Tariff, Attachment O, Schedule K (Requirements for Interconnection Service Below Full Electrical Generating Capability) of the executed, or requested to be filed unexecuted Interconnection Service Agreement.

### **36.1.1B Surplus Interconnection Service Request**

Requests for Surplus Interconnection Service may be made by the existing Interconnection Customer whose Generating Facility is already interconnected, or one of its affiliates, or by an unaffiliated Interconnection Customer. The existing Interconnection Customer or one of its affiliates has priority to use this service; however, if they do not exercise this priority, Surplus Interconnection ~~Service~~ Requests also may be made available to an unaffiliated Surplus Interconnection Customer. Surplus Interconnection Service is limited to utilizing or transferring an existing Generating Facility's Surplus Interconnection Service at the pre-existing Point of Interconnection of the existing Generating Facility and cannot exceed the existing Generating Facility's total amount of Interconnection Service, i.e., the total amount of Interconnection Service used by the Generating Facility requesting Surplus Interconnection Service and the existing Generating Facility shall not exceed the lesser of the Maximum Facility Output stated in the existing Generating Facility's Interconnection Service Agreement or the total "as-built capability" of the existing Generating Facility. If the Generating Facility requests Surplus Interconnection Service associated with an existing Generating Facility that is an Energy Resource, the Generating Facility requesting the Surplus Interconnection Service shall be an Energy Resource; and if the existing Generating Facility is a Capacity Resource, the Generating Facility requesting Surplus Interconnection Service associated with the Generating Facility may be an Energy Resource or a Capacity Resource (but only up to the amount of Capacity

Interconnection Rights granted the existing Generating Facility). Surplus Interconnection Service cannot be granted if doing so would require new Network Upgrades or would have additional impacts affecting the determination of what Network Upgrades would be necessary to New Service Customers already in the ~~interconnection queue~~ New Services Queue or that have a material impact on short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability and response.

1. Surplus Interconnection Request Requirements. A Surplus Interconnection Customer seeking Surplus Interconnection Service must submit a complete and fully executed Surplus Interconnection Study Agreement, which form is located at Tariff, Attachment RR. To be considered complete at the time of submission, the Surplus Interconnection Customer's Surplus Interconnection Study Agreement must include, at a minimum, each of the following:
  - a. Specification of the location of the proposed surplus generating unit site or existing surplus generating unit (include both a written description (e.g., street address, global positioning coordinates) and attach a map in PDF format depicting the property boundaries and the location of the generating unit site); and
  - b. Evidence of an ownership interest in, or right to acquire or control the surplus generating unit site for a minimum of three years, such as a deed, option agreement, lease or other similar document acceptable to the Transmission Provider; and
  - c. The MW size of the proposed surplus generating unit or the amount of increase in MW capability of an existing surplus generating unit; and Identification of the fuel type of the proposed surplus generating unit or upgrade thereto; and
  - d. Identification of the fuel type of the proposed surplus generating unit or upgrade thereto; and
  - e. A description of the equipment configuration, and a set of preliminary electrical design specifications, and, if the surplus generating unit is wind generation facility, then the set of preliminary electrical design specifications must depict the wind plant as a single equivalent generator; and
  - f. The planned date the proposed surplus generating unit or increase in MW capability of an existing surplus generating unit will be in service; and
  - g. Any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; and

- h. A description of the circumstances under which Surplus Interconnection Service will be available at the existing Generating Facility's Point of Interconnection; and
- i. A deposit in the amount of \$10,000 plus \$100 for each MW requested provided that the maximum total deposit amount for a Surplus Interconnection Request shall not exceed \$110,000; and
- j. Identification of the specific, existing Generating Facility already interconnected to the PJM Transmission System providing Surplus Interconnection Service, including whether the Surplus Interconnection Customer requesting Surplus Interconnection Service is the owner or affiliate of the existing Generating Facility; and
- k. If the Surplus Interconnection Customer is an unaffiliated third party, the Surplus Interconnection Customer must submit with its Surplus Interconnection Study Agreement the following information and documentation acceptable to the Transmission Provider:

  - i. Written evidence from the owner of the existing Generating Facility granting Surplus Interconnection Customer permission to utilize the existing Generating Facility's unused portion of Interconnection Service established in the existing Generating Facility's Interconnection Service Agreement; and
  - ii. Written documentation stating that the owner of the surplus generating unit and the owner of the existing Generating Facility will have entered into, prior to the owner of the existing Generating Facility executing a revised Interconnection Service Agreement, a shared facilities agreement between the owner of the existing Generating Facility and the owner of the surplus generating unit detailing their respective roles and responsibilities relative to the Surplus Interconnection Service.
- l. If an Energy Storage Resource, Surplus Interconnection Customer must submit primary frequency response operating range for the surplus generating unit.
- 2. Deficiency Review. Following the receipt of the Surplus Interconnection Study Agreement and requisite information and/or monies listed in section 36.1.1B.1.a – k above, Transmission Provider shall determine whether the listed requirements were submitted as valid or deficient. If deemed deficient by Transmission Provider, Surplus Interconnection Customer must submit the requisite information and/or monies acceptable to the Transmission Provider within ten Business Days of receipt of the Transmission Provider's notice of deficiency. Failure of the

Interconnection Customer to timely provide information and/or monies identified in the deficiency notice shall result in the Surplus Interconnection Request being terminated and withdrawn. The Surplus Interconnection Service Request shall be considered valid as of the date and time the Transmission Provider receives from the Interconnection Customer the last piece of required information and/or monies deemed acceptable by the Transmission Provider to clear such deficiency notice.

### **36.1.2 No Applicability to Transmission Service:**

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

### **36.1.3 [Reserved]**

### **36.1.4 [Reserved]**

### **36.1.5 Scoping Meeting:**

After a valid Interconnection Request has been established, the 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 establishing a valid Interconnection Request, Transmission Provider shall offer to arrange, within seven Business Days of establishing such valid Interconnection Request, 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 establishment of a valid Interconnection Request if the valid Interconnection Request is established in the first four calendar months of the current New Services Queue; or within 30 days if the valid Interconnection Request is established within the fifth calendar month of the current New Services Queue; or in 20 days if the valid Interconnection Request is established 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 Tariff, Part VI, Subpart A, section 202.

### **36.1.7 Base Case Data:**

Transmission Provider shall maintain base case power flow, short circuit and stability databases, including all underlying assumptions, and contingency list on a password-protected website, subject to the confidentiality provisions of Tariff, Part VI, Subpart B, section 223. In addition, Transmission Provider shall maintain base case power flows and underlying assumptions on a password-protected website. Such base case power flows and underlying assumptions should reasonably represent those used during the most recent interconnection study. Transmission Provider may require Interconnection Customers and password-protected website users to sign any required confidentiality agreement(s) 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 (i) generation projects and (ii) transmission projects, including merchant transmission projects, that are included in the then-current, approved Regional Transmission Expansion Plan.

## 36.2 Interconnection Feasibility Study:

After receiving an Interconnection Request, ~~except for a request for Surplus Interconnection Service,~~ a signed Generation Interconnection Feasibility Study Agreement or Transmission Interconnection Feasibility Study Agreement, as applicable, and the applicable deposit contained in Tariff, Part IV, Subpart A, section 36.1.01, Tariff, Part IV, Subpart A, section 36.1.03, Tariff, Part IV, Subpart G, section 110.1, Tariff, Part IV, Subpart G, section 111.1, and Tariff, Part IV, Subpart G, section 112.1 from the Interconnection Customer, and, if applicable, subject to the terms of Tariff, Part IV, Subpart A, section 36.1A.5, the Transmission Provider shall conduct an Interconnection Feasibility Study to make a preliminary determination of the type and scope of Attachment Facilities, Local Upgrades, and Network Upgrades that will be necessary to accommodate the Interconnection Request and to provide the Interconnection Customer a preliminary estimate of the time that will be required to construct any necessary facilities and upgrades and the Interconnection Customer's cost responsibility, estimated consistent with Tariff, Part VI, Subpart B, section 217. The Interconnection Feasibility Study assesses the practicality and cost of accommodating interconnection of the generating unit or increased generating capacity with the Transmission System. The analysis is limited to load-flow analysis of probable contingencies and, for Generation Interconnection Requests, short-circuit studies. This study also focuses on determining preliminary estimates of the type, scope, cost and lead time for construction of facilities required to interconnect the project. For a Generation Interconnection Customer, the Interconnection Feasibility Study may provide separate estimates of necessary facilities and upgrades and associated cost responsibility reflecting the Generating Facility being designated as either a Capacity Resource or an Energy Resource. Transmission Provider shall study the Interconnection Request at the level of service requested by the Interconnection Customer, unless otherwise required to study the full electrical generating capability of the Generating Facility due to safety or reliability concerns. For purposes of determining necessary interconnection facilities and network upgrades, the Feasibility Study shall consider the level of Interconnection Service requested by the Interconnection Customer, unless otherwise required to study the full electrical generating capability of the Generating Facility due to safety or reliability concerns. ~~The Feasibility Study will also identify all control equipment identified as necessary for requests for Interconnection Service that are lower than the full electrical generating capability of the Generating Facility.~~—The study for the primary Point of Interconnection will be conducted as a cluster, within the project's New Services Queue. The study for the secondary Point of Interconnection will be conducted as a sensitivity analysis. The Transmission Provider shall provide a copy of the Interconnection Feasibility Study and, to the extent consistent with the Office of the Interconnection's confidentiality obligations in Operating Agreement, section 18.17, related work papers to the Interconnection Customer and the affected Transmission Owner(s). Upon completion, the Transmission Provider shall list the study and the date of the Interconnection Request to which it pertains on the Transmission Provider's website. To the extent required by Commission regulations, the Transmission Provider shall make the completed Interconnection Feasibility Study publicly available upon request, except that the identity of the Interconnection Customer shall remain confidential. The Transmission Provider shall conduct Interconnection Feasibility Studies two times each year.

The following applies to Interconnection Requests received on or before October 31, 2016:



For Interconnection Requests received during the six-month period ending October 31, the Transmission Provider shall use due diligence to complete Interconnection Feasibility Studies by the last day of February. For Interconnection Requests received during the six-month period ending April 30 the Transmission Provider shall use due diligence to complete Interconnection Feasibility Studies by August 31. Following the closure of an interconnection queue on October 31 and April 30, the Transmission Provider will utilize the following one month period to conduct any remaining scoping meetings and assemble the necessary analysis models so as to initiate the performance of the Interconnection Feasibility Studies on December 1 and June 1, respectively. In the event that the Transmission Provider is unable to complete an Interconnection Feasibility Study within such time period, it shall so notify the affected Interconnection Customer and the affected Transmission Owner(s) and provide an estimated completion date along with an explanation of the reasons why additional time is needed to complete the study.

The following applies to Interconnection Requests received between November 1, 2016 and March 31, 2017:

For Interconnection Requests received during the five-month period ending March 31, the Transmission Provider shall use due diligence to complete Interconnection Feasibility Studies by July 31. Following the closure of the relevant New Services Queue on March 31, the Transmission Provider will utilize the following one month period to conduct any remaining scoping meetings and assemble the necessary analysis models so as to initiate the performance of the Interconnection Feasibility Studies on May 1. In the event that the Transmission Provider is unable to complete an Interconnection Feasibility Study within such time period, it shall so notify the affected Interconnection Customer and the affected Transmission Owner(s) and provide an estimated completion date along with an explanation of the reasons why additional time is needed to complete the study.

The following applies to Interconnection Requests received on or after April 1, 2017:

For Interconnection Requests received during the six-month period ending September 30, the Transmission Provider shall use due diligence to complete Interconnection Feasibility Studies by January 31. For Interconnection Requests received during the six-month period ending March 31, the Transmission Provider shall use due diligence to complete Interconnection Feasibility Studies by July 31. Following the closure of the relevant New Services Queues on September 30 and March 31, respectively, the Transmission Provider will utilize the following months of October and April, respectively, to conduct any remaining scoping meetings and assemble the necessary analysis models so as to initiate the performance of the Interconnection Feasibility Studies on November 1 and May 1, respectively. In the event that the Transmission Provider is unable to complete an Interconnection Feasibility Study within such time period, it shall so notify the affected Interconnection Customer and the affected Transmission Owner(s) and provide an estimated completion date along with an explanation of the reasons why additional time is needed to complete the study.

### **36.2.1 Substitute Point:**

If the Interconnection Feasibility Study reveals any result(s) not reasonably expected at the time of the Scoping Meeting, a substitute Point of Interconnection identified by the Interconnection Customer, Transmission Provider, or the Interconnected Transmission Owner, and acceptable to the others, but which would not be a Material Modification, will be substituted for the Point of Interconnection identified in the Interconnection Feasibility Study Agreement. The substitute Point of Interconnection will be effected without loss of Queue Position and will be utilized in the ensuing System Impact Study.

### **36.2.2 Meeting with Transmission Provider:**

At the Interconnection Customer's request, Transmission Provider, the Interconnection Customer and the Interconnected Transmission Owner shall meet at a mutually agreeable time to discuss the results of the Interconnection Feasibility Study. Such meeting may occur in person or by telephone or video conference.

### **36.2.3 ~~[Reserved] Surplus Interconnection Services Requests:~~**

~~a. — Feasibility Study. Feasibility Study analyses can generally be expedited by examining a limited contingency set that focuses on the impact of the Interconnection Customer's Surplus Interconnection Service Request for Surplus Interconnection Service on contingency limits in the vicinity of the combined generation resources. Studies for Surplus Interconnection Service shall consist of reactive power, short circuit/fault duty, stability analyses and any other appropriate studies. Steady state (thermal/voltage) analyses may be performed as necessary to ensure that all required reliability conditions are studied under off-peak conditions. Off-peak steady state analyses shall be performed to the required level necessary to demonstrate reliable operation of the Surplus Interconnection Service.~~

~~b. — Once the Feasibility Study is completed and no Network Upgrades are required and there are no impacts affecting the determination of what upgrades are necessary for Interconnection Customers in the interconnection queue, a Feasibility Study report will be prepared and issued to the Interconnection Customer along with an executable Interconnection Service Agreement. Interconnection Customer requesting Interconnection Surplus Service shall execute the Interconnection Service Agreement, request dispute resolution, or request that the Interconnection Service Agreement be filed unexecuted in accordance with Tariff, Part VI, Subpart A, section 212.4.~~

~~c. — If the Transmission Provider does not or cannot determine from the Feasibility Study whether Network Upgrades will be required or whether there are impacts affecting the determination of what upgrades are necessary for Interconnection Customers in the interconnection queue a Feasibility Study report will be prepared and issued to the Interconnection Customer along with an executable System Impact Study Agreement consistent with Tariff, Part VI, Subpart A, section 204.3~~

~~d. — Deactivation of Existing Generating Facility~~

~~(a) — Surplus Interconnection Service cannot be offered if the existing Generating Facility from which Surplus Interconnection Service is provided is deactivated or has submitted a Notice~~

~~to Deactivate to Transmission Provider consistent with Tariff, Part V before the Generating Facility requesting Surplus Interconnection Service has commenced commercial operation.~~

~~(b) — Limited Operation. A Generating Facility receiving Surplus Interconnection Service may continue to receive Surplus Interconnection Service for a period not to exceed one year after the existing Generating Facility’s Deactivation Date under the following conditions:~~

~~i. — The Generating Facility receiving Surplus Interconnection Service must have been studied by Transmission Provider for the sole operation at the Point of Interconnection; and~~

~~ii. — Existing Interconnection Customer must agree in writing that the Interconnection Customer receiving Surplus Interconnection Service may continue to operate at either its limited share of the existing Generating Facility’s capability under its Interconnection Service Agreement or at any level below such capability upon the Deactivation of the existing Generating Facility~~

~~(c) — If the Interconnection Customer receiving Surplus Interconnection Service cannot satisfy the conditions of section 36.2.3.d(b) above, its Interconnection Service Agreement shall terminate simultaneously with the termination of the Interconnection Service Agreement of the existing Generating Facility from which Surplus Interconnection Service was provided.~~

### **36.2A Modification of Interconnection Request:**

The Interconnection Customer shall submit to the Transmission Provider, in writing, any modification to its project that causes the project's capacity, location, configuration or technology to differ from any corresponding information provided in the Interconnection Request. The Interconnection Customer shall retain its Queue Position if the modification is in accordance with sections 36.2A.1, 36.2A.~~32~~ or 36.2A.~~65~~, or, if not in accordance with one of those sections, is determined not to be a Material Modification pursuant to section 36.2A.~~43~~ below. Notwithstanding the above, during the course of the Interconnection Studies, the Interconnection Customer, the Interconnected Transmission Owner, or Transmission Provider may identify changes to the planned interconnection that may improve the costs and benefits (including reliability) of the interconnection, and the ability of the proposed change to accommodate the Interconnection Request. To the extent the identified changes are acceptable to the Transmission Provider and Interconnection Customer, such acceptance not to be unreasonably withheld, Transmission Provider shall modify the project's Point of Interconnection, capacity, and/or configuration in accordance with such changes and shall proceed with any re-studies that Transmission Provider finds necessary in accordance with Tariff, Part VI, Subpart A, section 205.5 and/or Tariff, Part VI, Subpart A, section 207.2, as applicable, provided, however, that a change to the Point of Interconnection shall be permitted without loss of Queue Position only if it would not be a Material Modification.

The following language for 36.2A.1 and 36.2A.~~23~~ apply to Interconnection Requests which have entered the New Services Queue prior to May 1, 2012:

36.2A.1 Prior to return of the executed System Impact Study Agreement to the Transmission Provider, an Interconnection Customer may modify its project to reduce by up to 60 percent the electrical output (MW) (in the case of a Generation Interconnection Request) or by up to 60 percent of the transmission capability (in the case of a Transmission Interconnection Request) of the proposed project. For increases in generating capacity or transmission capability, the Interconnection Customer must submit a new Interconnection Request for the additional capability and shall be assigned a new Queue Position for the additional capability.

36.2A.2 After the System Impact Study Agreement is executed and prior to execution of the Interconnection Service Agreement, an Interconnection Customer may modify its project to reduce the electrical output (MW) (in the case of a Generation Interconnection Request) or the transmission capability (in the case of a Transmission Interconnection Request) of the proposed project by up to the larger of 20 percent of the capability considered in the System Impact Study or 50 MW.

The following language for 36.2A.1 and 36.2A.~~23~~ apply to Interconnection Requests which have entered the New Services Queue on or after May 1, 2012:

#### **36.2A.1 Modifications Prior to Executing A System Impact Study Agreement**

36.2A.1.1 Prior to the commencement of the Feasibility Study, an Interconnection Customer may request to reduce by up to 60 percent of the electrical generating facility capability or Maximum Facility Output (MW) (in the case of a Generation Interconnection Request), through either (1) decrease in plant size or (2) a decrease in interconnection service level (consistent with the process described in Tariff, Part IV, Subpart A, section 36.1.1A or the capability (in the case of a Transmission Interconnection Request) without losing its current Queue Position. For Interconnection Requests received in months one through five of the New Services Queue the Interconnection Customer must identify this change prior to the close of business on the last day of the sixth month of the New Services Queue. For Interconnection Requests received during the sixth month of the New Services Queue the Interconnection Customer must identify this change no later than close of business on the day following the completion of the scoping meeting.

36.2A.1.2 After the start of the Feasibility Study, but prior to the return of the executed System Impact Study Agreement to the Transmission Provider, an Interconnection Customer may modify its project to reduce the size of the project as provided in this section 36.2A.1.2, subject to the limitation described in section 36.2A.76 below. The Interconnection Customer may reduce its project by up to 15 percent of the electrical generating facility capability or Maximum Facility Output (MW) (in the case of a Generation Interconnection Request), through either (1) a decrease in plant size or (2) a decrease in interconnection service level (consistent with the process described in Tariff, Part IV, Subpart A, section 36.1.1A or capability (in the case of a Transmission Interconnection Request) of the proposed project. For a request to reduce by more than 15 percent, an Interconnection Customer must request the Transmission Provider to evaluate if such a change would be a Material Modification and the Transmission Provider will allow the Interconnection Customer to reduce the size of its project: (i) to any size if the Transmission Provider determines the change is not a Material Modification; or (ii) by up to 60 percent of the electrical generating facility capability or Maximum Facility Output (MW) (in the case of a Generation Interconnection Request), through either (1) a decrease in plant size or (2) a decrease in interconnection service level (consistent with the process described in Tariff, Part IV, Subpart A, section 36.1.1A) or capability (in the case of a Transmission Interconnection Request) if the Transmission Provider determines the change is a Material Modification, however, such a project that falls within this subsection (ii) would be removed from its current Queue Position and will be assigned a new Queue Position at the beginning of the subsequent queue and a new Interconnection Feasibility Study will be performed consistent with the timing of studies for projects submitted in the subsequent queue. All projects assigned such new Queue Positions will retain their priority with respect to each other in their newly assigned queue and with respect to all later queue projects in subsequent queues, but will lose their priority with respect to other projects in the queue to which they were previously assigned. For increases in generating capacity or transmission capability, the Interconnection Customer must submit a new Interconnection Request for the additional capability and shall be assigned a new Queue Position for the additional capability.

### **36.2A.1.32 Modification of an Interconnection Request for Technological Changes**

36.2A.2.1 For a request to modify a project to include a technological advancement, no later than the return of the executed ~~System Impact~~Facilities Study Agreement (or, if a Facilities Study is not required, prior the return of an executed Interconnection Service Agreement) to the Transmission Provider, an Interconnection Customer may request to modify its ~~project submitted in its~~ Interconnection Request to include a Permissible Technological Advancement without losing its current Queue Position provided Interconnection Customer submits technological advancement by including the new machine modeling data associated with ~~advancements to turbines, inverters, plant supervisory controls or other similar advancements to the existing technology~~such Permissible Technological Advancements no later than the return of ~~the~~ at the same time the Interconnection Customer submits its executed System Impact Facilities Study Agreement (or, if a Facilities Study is not required, prior to return of an executed Interconnection Service Agreement). The machine modeling data as specified in the PJM Manuals System Impact Study data associated with the requested technological change must be submitted via the PJM website ~~as specified in the PJM Manuals~~.

36.2A.2.2 For a request to modify an Interconnection Request to include a technological advancement that does not qualify as a Permissible Technological Advancement, prior to returning an executed Facilities Study Agreement (or, if a Facilities Study is not required, prior to returning an executed Interconnection Service Agreement) to the Transmission Provider, an Interconnection Customer may request in writing to modify its Interconnection Request to add a technological advancement. Such requests must also include machine modeling data as specified in the PJM Manuals and submitted via the PJM website. If PJM determines the data submitted with such request is incomplete or incorrect, PJM will reject such technological change request and the Interconnection Customer may resubmit its technological change request with the complete and/or accurate data. All technological advancement requests not qualifying as a Permissible Technological Advancement will require a study and be evaluated by the Transmission Provider to determine whether such change would constitute a Material Modification. Such evaluation will include an analysis of the short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability and response on subsequent-queued Interconnection Requests. If the Transmission Provider determines that the technological advancement is not a Material Modification, the Interconnection Customer may modify its Interconnection Request to include such technological advancement. If the Transmission Provider determines the change is a Material Modification, the Interconnection Customer must withdraw its technological advancement change request to retain its Queue Position or proceed with a new Interconnection Request with such technological change. PJM shall determine whether a technological advancement is a Material Modification within thirty (30) calendar days of receipt of the technological advancement request.

### **36.2A.32 Modifications After the System Impact Study Agreement but Prior to Executing an Interconnection Service Agreement**

After the System Impact Study Agreement is executed and prior to execution of the Interconnection Service Agreement, an Interconnection Customer may modify its project to reduce the size of the project as provided in this section 36.2A.32, subject to the limitation

described in section 36.2A.76 below. The Interconnection Customer may reduce its project by the greater of 10 MW or 5 percent of the electrical generating facility capability or Maximum Facility Output (MW) (in the case of a Generation Interconnection Request), through either (1) a decrease in plant size or (2) a decrease in interconnection service level (consistent with the process described in Tariff, Part IV, Subpart A, section 36.1.1A) or capability (in the case of a Transmission Interconnection Request) of the proposed project. For a request to reduce by more than the greater of 10 MW or 5 percent, an Interconnection Customer must request the Transmission Provider to evaluate if such a change would be a Material Modification and the Transmission Provider will allow the Interconnection Customer to reduce the size of its project: (i) to any size if the Transmission Provider determines the change is not a Material Modification; or (ii) by up to the greater of 50 MW or 20 percent of the electrical generating facility capability or Maximum Facility Output (MW) (in the case of a Generation Interconnection Request), through either (1) a decrease in plant size or (2) a decrease in interconnection service level (consistent with the process described in Tariff, Part IV, Subpart A, section 36.1.1A) or capability (in the case of a Transmission Interconnection Request) if the Transmission Provider determines the change is a Material Modification, however, such a project that falls within this subsection (ii) would be removed from its current Queue Position and will be assigned a new Queue Position at the beginning of the subsequent queue and a new System Impact Study will be performed consistent with the timing of studies for projects submitted in the subsequent queue. All projects assigned such new Queue Positions will retain their priority with respect to each other in their newly assigned queue and with respect to all later queue projects in subsequent queues, but will lose their priority with respect to other projects in the queue to which they were previously assigned.

### **36.2A.43**

Prior to making any modifications other than those specifically permitted by sections 36.2A.1, 36.2A.32 and 36.2A.65, the Interconnection Customer may first request that the Transmission Provider evaluate whether such modification is a Material Modification. In response to the Interconnection Customer's request, the Transmission Provider shall evaluate the proposed modifications prior to making them and shall inform the Interconnection Customer in writing of whether the modification(s) would constitute a Material Modification. For purposes of this section 36.2A.43, any change to the Point of Interconnection (other than a change deemed acceptable under sections 36.1.5, 36.2.1, or 36.2A.1) or increase in generating capacity shall constitute a Material Modification. The Interconnection Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.

### **36.2A.54**

Upon receipt of the Interconnection Customer's request for modification under section 36.2A.43, the Transmission Provider shall commence and perform any necessary additional studies as soon as practicable, but, except as otherwise provided in this Subpart A, the Transmission Provider shall commence such studies no later than thirty (30) calendar days after receiving notice of the Interconnection Customer's request. Any additional studies resulting from such modification shall be done at the Interconnection Customer's expense. Transmission Provider may require the Interconnection Customer to pay the estimated cost of such studies in advance.

**36.2A.65**

Extensions of less than three (3) cumulative years in the projected date of Initial Operation of the Customer Facility are not material and shall be handled through construction sequencing.

The proposed Commencement Date can be extended (i) after the scoping meeting, once study timing is fully understood, not to exceed seven (7) years; (ii) due to study delays; or (iii) due to associated Network Upgrade construction timing.

The following language applies to Interconnection Requests which have entered the New Services Queue on or after May 1, 2012:

**36.2A.76**

An Interconnection Customer may be assigned a new queue position as provided for in sections 36.2A.1.2 or 36.2A.~~2~~3 a total of two times for any single Interconnection Request. In the event that Interconnection Customer seeks to reduce the size of its project such that Transmission Provider determines the change is a material modification, and such change would result in the third assignment of a new queue position under sections 36.2A.1 .2 or 36.2A.~~3~~2, then the Interconnection Request shall be terminated and withdrawn if the Interconnection Customer proceeds with such change.



### **36.4 Surplus Interconnection Study**

After receiving a valid Surplus Interconnection Study Agreement seeking Surplus Interconnection Service and the requisite deposit set forth in Tariff, Part IV, Subpart A, section 36.1.1B.1.i from the Surplus Interconnection Customer, the Transmission Provider shall conduct a Surplus Interconnection Study.

- (1) Scope of Surplus Interconnection Study. A Surplus Interconnection Study shall consist of reactive power, short circuit/fault duty, stability analysis and any other appropriate analyses. Steady-state (thermal/voltage) analyses may be performed as necessary to ensure that all required reliability conditions are studied under off-peak conditions. Off-peak steady state analyses shall be performed to the required level necessary to demonstrate reliable operation of the Surplus Interconnection Service. The Transmission Provider shall use Reasonable Efforts to complete the Surplus Interconnection Study within one hundred eighty (180) days of determination of a valid Surplus Interconnection Service Request pursuant to Tariff, Part IV, Subpart A, section 36.1.1B. If the Transmission Provider is unable to complete the Surplus Interconnection Study within such time period, Transmission Provider shall notify the Surplus Interconnection Customer and provide an estimated completion date and an explanation of the reasons why the additional time is required.
- (2) Once the Surplus Interconnection Study is completed and Transmission Provider confirms that (i) no new Network Upgrades are required, (ii) there are no impacts affecting the determination of what upgrades are necessary for New Service Customers in the New Services Queue, and (iii) there are no material impacts on short circuit capability limits, steady-state thermal and voltage limits or dynamic system stability and response, the Transmission Provider shall issue the Surplus Interconnection Study to the Surplus Interconnection Customer. If the Surplus Interconnection Customer is an unaffiliated third party, PJM shall issue a Surplus Interconnection Study to the owner of the existing Generating Facility. A revised Interconnection Service Agreement will be prepared and issued to the owner of the existing Generating Facility within sixty (60) days of issuance of the Surplus Interconnection Study including the terms and conditions for Surplus Interconnection Service. Within sixty (60) days of receipt by the owner of the existing Generating Facility of the revised Interconnection Service Agreement, the owner of the existing Generating Facility will execute the revised Interconnection Service Agreement, request dispute resolution or request that the Interconnection Service Agreement be filed unexecuted in accordance with Tariff, Part VI, Subpart A, section 212.4.
- (3) If the Transmission Provider determines from the Surplus Interconnection Study that Network Upgrades may be required or there may be impacts affecting the determination of what upgrades are necessary for New Service Customers in the New Services Queue, or there may be material impacts on short circuit capability limits, steady-state thermal and voltage limits or dynamic system stability and

response, the Surplus Interconnection Request will be terminated and withdrawn upon issuance of the Surplus Interconnection Study.

(4) Deactivation of Existing Generating Facility

- a. Surplus Interconnection Service cannot be offered if the existing Generating Facility from which Surplus Interconnection is provided is deactivated or has submitted a Notice to Deactivate to Transmission Provider consistent with Tariff, Part V, before the surplus generating unit has commenced commercial operation.
- b. Limited Operation. A Generating Facility receiving Surplus Interconnection Service may continue to receive Surplus Interconnection Service for a period not to exceed one (1) year after the existing Generating Facility's Deactivation Date under the following conditions:
  - i. The surplus generating unit must have been studied by the Transmission Provider for the sole operation at the Point of Interconnection; and
  - ii. The owner of the existing Generating Facility must agree in writing that the Surplus Interconnection Customer may continue to operate at either its limited share of the existing Generating Facility's capability under its Interconnection Service Agreement or any level below such capability upon the deactivation of the existing Generating Facility.
- c. If the Surplus Interconnection Customer cannot satisfy the conditions of section 36.4.4(b) above, the revised Interconnection Service Agreement for the existing Generating Facility shall terminate consistent with the Interconnection Service Agreement terms of termination for a deactivated Generating Facility.

## 205.2 Scope of Studies:

The System Impact Study is a comprehensive regional analysis of the effect of adding to the Transmission System the new facilities and services contemporaneously proposed by New Service Customers and an evaluation of their impact on deliverability to the aggregate of PJM Network Load. The System Impact Study identifies the system constraints, identified with specificity by transmission element or flowgate, relating to each proposed new project and service included therein and the Attachment Facilities, Merchant Network Upgrades, Direct Assignment Facilities, Local Upgrades, Network Upgrades, and/or Contingent Facilities required to accommodate such projects. The System Impact Study provides refined and comprehensive estimates of cost responsibility and construction lead times for new facilities and system upgrades. The Transmission Provider, in its sole discretion, may determine to evaluate in the same System Impact Study two or more New Service Requests relating to interconnections, Upgrade Requests, or proposed new transmission services where the associated increases in service or capability are in electrical proximity to each other. The scope of the System Impact Study may include (a) an assessment of sub-area import deliverability, (b) an assessment of sub-area export deliverability, (c) an assessment of project related short circuit duty issues, (d) a contingency analysis consistent with NERC's and each Applicable Regional Entity's reliability criteria, (e) an assessment of regional transmission upgrades that most effectively meet identified needs, and (f) an analysis to determine cost allocation responsibility for required facilities and upgrades. In addition, ~~E~~each System Impact Study shall identify the system constraints, identified with specificity by transmission element or flowgate in accordance with the distribution factor effect, megawatt contribution or fault duty contribution, relating to the New Service Requests being evaluated in the study and, as applicable to each included request, the redispatch options, additional Direct Assignment Facilities, necessary Merchant Network Upgrades, Attachment Facilities, Local Upgrades, Network Upgrades and/or Contingent Facilities necessary to accommodate such request. For purposes of determining necessary Interconnection Facilities and Network Upgrades, the System Impact Study shall consider the level of Interconnection Service requested by the Interconnection Customer unless otherwise required to study the full electrical generating capability of the Generating Facility due to safety or reliability concerns. The System Impact Study report shall include the list and facility loading of all newly-identified reliability criteria violations or contributions to a previously-identified reliability criteria violation specific to the New Service Request. The System Impact Study shall refine and more comprehensively estimate each New Service Customer's cost responsibility (determined in accordance with Tariff, Part VI, Subpart B, section 217) for necessary facilities and upgrades than the estimates provided in the Interconnection Feasibility Study or the Firm Transmission Feasibility Study, if applicable. In the event that more than one New Service Request is evaluated in a study, the Transmission Provider may provide a series of estimates to each participating New Service Customer to reflect the customer's estimated cost responsibility based on varying assumptions regarding the number of New Service Customers that decide to continue their New Service Requests after completion of the System Impact Study. A description of the Transmission Provider's methodology for completing a System Impact Study for Completed Applications is provided in Tariff, Attachment D. If applicable, the System Impact Study for a Transmission Interconnection Customer shall also include a preliminary estimate of the Incremental Deliverability Rights associated with the customer's proposed Merchant Transmission Facilities.

## 205.2.1 Contingent Facilities

Transmission Provider shall identify the Contingent Facilities to be provided to Interconnection Customer in the System Impact Study by reviewing unbuilt Interconnection Facilities and/or Network Upgrades (including those still subject to cost allocation in accordance with the PJM Manuals) associated with another Interconnection Customer with a higher queue priority upon which the Interconnection Customer's cost, timing and study findings are dependent and, if delayed or not built, could cause a need for interconnection restudies of the Interconnection Request or reassessment of the unbuilt Interconnection Facilities and/or Network Upgrades. The method for identifying Contingent Facilities shall be sufficiently transparent to determine why a specific Contingent Facility was identified and how it relates to the Interconnection Request. Transmission Provider shall include the list of the Contingent Facilities in the System Impact Study, Facilities Study, if applicable, and Interconnection Service Agreement, including why a specific Contingent Facility was identified and how it relates to the Interconnection Request. Transmission Provider shall also provide, upon request of the Interconnection Customer, the estimated Interconnection Facility and/or Network Upgrade costs and estimated in-service completion time of each identified Contingent Facility when this information is readily available and non-commercially sensitive.

## 207 Facilities Study Procedures:

The Transmission Provider will conduct Facilities Studies relating to the New Service Requests that were evaluated in the corresponding System Impact Studies, to the extent such New Service Requests have not been terminated and withdrawn. The Transmission Provider shall use Reasonable Efforts to complete the Facilities Study and issue it to a New Service Customer within 180 days after receipt of an executed Facilities Study Agreement. If Transmission Provider determines that it will not meet the 180 day time frame for completing the Facilities Study, Transmission Provider shall notify New Service Customer as to the scheduled status of the Facilities Study. If Transmission Provider is unable to complete the Facilities Study and issue a Facilities Study within 180 days, it shall notify New Service Customer and provide an estimated completion date and an explanation of the reasons why additional time is required. When completed, the Facilities Studies will include, commensurate with the degree of engineering specificity on which the New Service Customer and Transmission Provider mutually agree as provided in the Facilities Study Agreement, good faith estimates of the cost, determined in accordance with Tariff, Part VI, Subpart B, section 217, (a) to be charged to each affected New Service Customer for the (i) Attachment Facilities, Merchant Network Upgrades or Direct Assignment Facilities, and (ii) the Local Upgrades and/or Network Upgrades that are necessary to accommodate each New Service Request evaluated in the study; (b) the time required to complete detailed design and construction of the facilities and upgrades; ~~and~~ (c) a description of any site-specific environmental issues or requirements that could reasonably be anticipated to affect the cost or time required to complete construction of such facilities and upgrades; and (d) an assessment of project related system stability issues, if necessary. The Facilities Study will document the engineering design work necessary to begin construction of any required transmission facilities, including estimating the costs of the equipment, engineering, procurement and construction work needed to implement the conclusions of the System Impact Study in accordance with Good Utility Practice and, when applicable, identifying the electrical switching configuration of the connection equipment, including without limitation: the transformer, switchgear, meters, and other station equipment; and the nature and estimated costs of Attachment Facilities, Merchant Network Upgrades, Direct Assignment Facilities, Local Upgrades and/or Network Upgrades necessary to accommodate the New Service Request. For purposes of determining necessary Interconnection Facilities and Network Upgrades, the Facilities Study shall consider the level of Interconnection Service requested by the Interconnection Customer unless otherwise required to study the full electrical power generating capability of the Generating Facility due to safety or reliability concerns. ~~The System Impact Study will also identify all control equipment necessary to accommodate such requests for Interconnection Service that are lower than the full electrical power generating capability of the Generating Facility and cost estimates associated with such equipment.~~ The Facilities Study will also identify any potential control equipment for requests for Interconnection Service that are lower than the full electrical generating capability of the Generating Facility.

**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 Firm Transmission Feasibility 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, 204.1, 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 of \$ \_\_\_\_\_ 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 203 or 204 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.

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

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

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**{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:

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- 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.

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

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**{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.

## 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 Interconnection Feasibility Study, Upgrade Feasibility Study or Firm Transmission Feasibility 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,~~ ~~(cd)~~ an assessment of project related short circuit duty issues, ~~(de)~~ a contingency analysis consistent with NERC's and each Applicable Regional Entity's reliability criteria, ~~(ef)~~ an assessment of regional transmission upgrades that most effectively meet identified needs, and ~~(fg)~~ 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 website (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, 112.2, or 203 of the PJM Tariff. The refundable portion of the deposit described in Section 3 of this Agreement, paid by the New Service Customer pursuant to Sections 110.2, 111.2, 112.2, or 204.3A of the PJM Tariff, shall be applied toward the New Service Customer's System Impact Study cost responsibility. Pursuant to Section 204.3 of the PJM Tariff, during the acceptance review of this Agreement, in the event that the Transmission Provider anticipates that the New Service Customer's study cost responsibility will substantially exceed the refundable portion of the deposit, the Transmission Provider shall provide the New Service Customer with an estimate of the additional study costs and the New Service Customer's cost responsibility. The estimated additional study costs are non-binding, and additional actual study costs may exceed the estimated additional study cost increases provided by the Transmission Provider. Regardless of whether the Transmission Provider provides the New Service Customer with notification of estimated additional study costs, the New Service Customer is responsible for and must pay all actual study costs. If the Transmission Provider provides the New Service Customer with notification of estimated additional study costs, the New Service Customer must pay such estimated additional study costs within ten business days of Transmission Provider sending the New Service Customer notification of such estimated additional study costs. If the New Service Customer fails to pay such estimated additional study costs within ten business days of Transmission Provider sending the New Service Customer notification of such estimated additional study costs, then the New Service Request shall be deemed to be withdrawn and terminated.

#### **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.  
2750 Monroe Blvd.  
Audubon, PA 19403

**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 become effective on the date it is executed by all parties 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

**ATTACHMENT N-2  
FORM OF  
FACILITIES STUDY AGREEMENT**

(PJM Queue Position #\_\_\_\_)

**RECITALS**

1. This Facilities Study Agreement ("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. Pursuant to Section 36.2 or Section 205 of the PJM Tariff, Transmission Provider has completed a Generation or Transmission Interconnection Feasibility Study or an Initial Study (as applicable) and a System Impact Study and has provided the results of those studies to New Service Customer.
3. Transmission Provider has informed New Service Customer that the estimated date for completion of a Facilities Study pursuant to Section 206 of the PJM Tariff is {date} and that New Service Customer's estimated cost responsibility for such Facilities Study, subject to revision as provided in this Agreement, is \$ \_\_\_\_\_.
4. New Service Customer desires that Transmission Provider commence a Facilities Study for the New Service Request with Queue Position {queue position}.

**PREVIOUS SUBMISSIONS**

**{For Interconnection Customers, use the following paragraph 5}**

5. 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 Feasibility Study Agreement, dated \_\_\_\_\_, by and between New Service Customer and Transmission Provider, and to the extent supplemented as set forth in section 4 of the System Impact Study Agreement, dated \_\_\_\_\_, by and between New Service Customer and Transmission Provider, is accurate and complete as of the date of execution of this Facilities Study Agreement.

**{For New Service Customers other than Interconnection Customers use the following paragraph 5}**

5. Except as otherwise specifically set forth in an attachment to this Agreement, New Service Customer represents and warrants that the information provided in section 4 of the System Impact Study Agreement, dated \_\_\_\_\_, by and between New Service Customer and Transmission Provider, is accurate and complete as of the date of execution of this Facilities Study Agreement.

## **MILESTONES**

6. Pursuant to Section 206.1 of the PJM Tariff, the parties agree that New Service Customer must meet the following milestone dates relating to the development of its generation or merchant transmission project(s) or New Service Request, as applicable, in order to retain the assigned Queue Position of its New Service Request(s) (as established pursuant to Section 201 of the PJM Tariff) while Transmission Provider is completing the Facilities Study:

### **[Specify Project Specific Milestones]**

**[As appropriate include the following standard Milestones, with any revisions necessary for the project at hand]**

- 6.1 Unless New Service Customer previously specified, in its initial drawing submitted to Transmission Provider, the location of the high-side of the generator step-up transformer, then on or before \_\_\_\_\_, New Service Customer must provide evidence of an ownership interest in, or right to acquire or control the location which shall be on the high voltage side of the Customer Facility generator step-up transformer(s), or in the case of a Customer Facility with a single step-up transformer for multiple generators, the high voltage side of the facility step-up transformer. The evidence of site control shall be a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider.
- 6.2 To the extent New Service Customer intends to elect the Option to Build as provided in Appendix 2 to Attachment P of the Tariff, and to the extent any new or additional property is required to accommodate required Attachment Facilities and/or network substation, on or before \_\_\_\_\_, New Service Customer must provide evidence of an ownership interest in, or right to acquire or control the location which shall be the location of the network substation which shall be built and subsequently transferred to the Interconnected Transmission Owner. The evidence of site control shall be a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider.

### **[Add Additional Project Specific Milestones as appropriate]**

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Should New Service Customer fail to achieve any of the foregoing milestones, its New Service Request(s) shall be deemed to be withdrawn and terminated and it will have to resubmit its New Service Request(s) for reassignment of a Queue Position and re-initiation of the New Service Request study process.

## PURPOSE AND SCOPE OF THE FACILITIES STUDY

7. Transmission Provider, in consultation with the affected Transmission Owner(s), shall commence a Facilities Study pursuant to Section 206 of the PJM Tariff to evaluate the Attachment Facilities, Local Upgrades and/or Network Upgrades necessary to accommodate New Service Customer's New Service Request assigned Queue Position **{insert queue position}**. **{Add corresponding info on customer's other projects if necessary.}**
  - A. **Scope of Facilities Study:** The purpose of the Facilities Study is to provide, commensurate with any mutually agreed parameters regarding the scope and degree of specificity described in Schedule A attached to this agreement, an assessment of project related system stability issues and conceptual engineering and, as appropriate, detailed design, plus cost estimates and project schedules, to implement the conclusions of the System Impact Study regarding the Attachment Facilities, Local Upgrades and Network Upgrades necessary to accommodate the New Service Customer's New Service Request(s). Cost estimates shall be determined in a manner consistent with Section 217 of the PJM Tariff. The nature and scope of the materials that Transmission Provider shall deliver to the New Service Customer upon completion of the Facilities Study shall be described in the PJM Manuals.
  - B. **Facilities Study Cost and Time Estimate:** Transmission Provider's estimates of the date for completion of the Facilities Study and of New Service Customer's cost responsibility for the Facilities Study are stated in section 3 of this Agreement. In the event that Transmission Provider determines that it will be unable to complete the Facilities Study by the estimated completion date stated in section 3 of this Agreement, it shall notify New Service Customer and will explain the reasons for the delay. New Service Customer agrees that its estimated cost responsibility stated in section 3 is subject to revision as provided in sections 14, 15 and 16 of this Agreement.
8. The Facilities Study necessarily will employ various assumptions regarding New Service Customer's New Service Request(s), other pending New Service Requests, and PJM's Regional Transmission Expansion Plan at the time of the study. **IN NO EVENT SHALL THIS AGREEMENT OR THE FACILITIES STUDY IN ANY WAY BE DEEMED TO OBLIGATE TRANSMISSION PROVIDER OR THE TRANSMISSION OWNERS TO CONSTRUCT ANY FACILITIES OR UPGRADES OR TO PROVIDE ANY TRANSMISSION OR INTERCONNECTION SERVICE TO OR ON BEHALF OF NEW SERVICE CUSTOMER EITHER AT THIS POINT IN TIME OR IN THE FUTURE.**

## CONFIDENTIALITY

9. New Service Customer agrees to provide all information requested by Transmission Provider necessary to complete the Facilities Study. Subject to section 10 of this



Agreement and to the extent required by Section 222 of the PJM Tariff, information provided pursuant to this section 9 shall be and remain confidential.

10. Until completion of the Facilities Study, Transmission Provider shall keep confidential all information provided to it by the New Service Customer. Upon completion of the Facilities Study, Transmission Provider shall provide a copy of the study to New Service Customer, and to all other New Service Customers whose New Service Requests were evaluated in the Facilities Study, along with (to the extent consistent with Transmission Provider's confidentiality obligations in Section 18.17 of the Operating Agreement) all related work papers. Transmission Provider also shall post on its website the existence of the Facilities Study. New Service Customer acknowledges and consents to such other, additional disclosures of information as may be required under the PJM Tariff or the FERC's rules and regulations.
11. New Service Customer acknowledges that, consistent with Part VI of the PJM Tariff, the affected Transmission Owner(s) will participate in the Facilities Study process and that Transmission Provider may disseminate information to the affected Transmission Owner(s) and may consult with them regarding part or all of the Facilities Study.

#### **COST RESPONSIBILITY**

12.
  - A. New Service Customer shall reimburse Transmission Provider for all, or for an allocated portion of, the actual cost of the Facilities Study in accordance with its cost responsibility as determined under Section 206 of the PJM Tariff.
  - B. Prior to initiating the Facilities Study, Transmission Provider shall bill New Service Customer for New Service Customer's share of the cost of work on the study that is scheduled to be completed during the first three months after work commences. Thereafter, on or before the 5th business day of every third month, Transmission Provider shall bill New Service Customer for New Service Customer's share of the cost of work expected to be completed on the Facilities Study during the ensuing three months. New Service Customer shall pay each bill within twenty (20) days after receipt thereof. In the event New Service Customer fails, other than as provided below regarding billing disputes, to make timely payment of any invoice for work on the Facilities Study, its New Service Request shall be deemed to be terminated and withdrawn as of the date when payment was due. Notwithstanding the foregoing, in the event that the total estimated cost of the Facilities Study does not exceed the amount of the deposit required under Section 206 of the PJM Tariff, Transmission Provider shall apply the deposit in payment of the invoices for the cost of the Facilities Study. Upon written request by the New Service Customer pursuant to Section 206.4.1.1 of the PJM Tariff, Transmission Provider may provide a quarterly cost reconciliation. Subject to the following sentence regarding the final cost reconciliation upon completion of the Facility Study, such a quarterly cost reconciliation will have a one-quarter lag, e.g., reconciliation of costs for the first calendar quarter of work will be provided at the start of the third calendar quarter of work. Within 120 days after Transmission Provider completes the Facilities Study, Transmission Provider shall provide a final invoice presenting an accounting of, and the

appropriate party shall make any payment to the other that is necessary to resolve, any difference between (a) New Service Customer's cost responsibility under this Agreement and the PJM Tariff for the actual cost of the Facilities Study and (b) New Service Customer's aggregate payments hereunder, including its deposits.

C. In the event of a billing dispute, Transmission Provider shall continue to perform its obligations under this Agreement so long as (1) New Service Customer continues to make all payments not in dispute, and (2) New Service Customer's aggregate deposits held by Transmission Provider under this Agreement while the dispute is pending exceeds the amount in dispute, or (3) New Service Customer pays to Transmission Provider or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If New Service Customer fails to meet any of these requirements, then its New Service Request shall be deemed to be terminated and withdrawn as of the date when payment was due.

13. Concurrent with execution of this Agreement, New Service Customer will pay Transmission Provider a cash deposit, as provided by Section 206 of the PJM Tariff, equal to the greater of \$100,000 or New Service Customer's estimated cost responsibility for the first three months of work on the Facilities Study. Notwithstanding the foregoing, an Interconnection Customer with a proposed Customer Facility that is: (a) equal to or less than 20 MW but greater than 2 MW shall pay a refundable deposit in the amount of \$50,000; or (b) equal to or less than 2 MW shall pay a refundable deposit in the amount of \$15,000. New Service Customer's quarterly estimated cost responsibility shall equal its estimated cost responsibility for the work on the Facilities Study that is scheduled to be completed during each three-month period after such work commences. If New Service Customer fails timely to provide the deposit required by this section, its New Service Request shall be deemed terminated and withdrawn and this Agreement shall be null and void. New Service Customer acknowledges that it may become obligated to pay one or more additional deposits pursuant to sections 14 and 15 below. Except as otherwise provided in section 12.B above, Transmission Provider shall continue to hold the amounts on deposit under this agreement until settlement of the final invoice.
14. If the Facilities Study, as described in section 7.A of this Agreement, is to include evaluation of more than one New Service Request and one or more of those requests is terminated and withdrawn, subject to the terms of section 15 of this Agreement, Transmission Provider will redetermine and reallocate the costs of the Facilities Study among the remaining participating New Service Customers in accord with Section 206 of the PJM Tariff. In that event, and subject to the terms of section 15, within 30 days after the date for execution and return of Facilities Study Agreements as determined under Section 206 of the PJM Tariff, Transmission Provider will provide the New Service Customer with a written statement of the New Service Customer's revised responsibility for the estimated cost of the Facilities Study, determined in accordance with Section 206 of the PJM Tariff. In the event that New Service Customer's revised cost responsibility exceeds the sum of its previous deposits for the Facilities Study, it shall deliver to Transmission Provider, within 10 days after New Service Customer's receipt of its revised cost responsibility, an additional cash deposit equal to the amount of the excess.

If New Service Customer fails timely to provide an additional deposit that is required under this section, its New Service Request shall be deemed terminated and withdrawn as of the date by which its additional deposit was due. In the event that New Service Customer's revised cost responsibility under the notice described in this section is less than the sum of its previous deposits for the Facilities Study, Transmission Provider shall return to New Service Customer, with its notice of the revised cost responsibility, the amount of the difference.

15. A. This section shall apply prior to commencement of the Facilities Study (1) if the Facilities Study is to include multiple New Service Requests; and (2) if, in Transmission Provider's reasonable judgment, the termination and withdrawal of one or more of those New Service Requests significantly changes the group of New Service Requests to be included in the Facilities Study from the group that was included in the System Impact Study. For the purposes of this section, a change to the group of New Service Requests to be included in the Facilities Study shall be significant if, in Transmission Provider's reasonable engineering judgment, the change is likely to cause the system constraints relating to, and/or the facilities and upgrades necessary to accommodate, the group of New Service Requests remaining to be included in the Facilities Study to differ materially from the system constraints relating to, and/or from the facilities and upgrades necessary to accommodate, the group of New Service Requests that the System Impact Study evaluated.

B. In the event of a significant change to the group of New Service Requests that the System Impact Study evaluated, within 15 days after the date for execution and return of Facilities Study Agreements as determined under Section 206 of the PJM Tariff, Transmission Provider shall provide New Service Customer with an explanation of the nature and extent of the change in the affected group of New Service Requests and of the extent to which Transmission Provider has determined that it must re-assess the results of the System Impact Study. Within 30 days after it provides the explanation described in the preceding sentence, Transmission Provider shall provide New Service Customer with a revised estimate of the time needed, and of the likely cost, to complete the Facilities Study, and, if the study continues to include evaluation of more than one New Service Customer's New Service Request(s), New Service Customer's allocated share of the estimated cost of the revised Facilities Study, determined in accord with Section 206 of the PJM Tariff.

C. In the event that New Service Customer's revised cost responsibility exceeds the sum of its previous deposits for the Facilities Study, it shall deliver to Transmission Provider, within 10 days after New Service Customer's receipt of its revised cost responsibility, an additional cash deposit equal to the amount of the excess. If New Service Customer fails timely to provide an additional deposit that is required under this section, its New Service Request shall be deemed terminated and withdrawn as of the date by which its additional deposit was due. In the event that New Service Customer's revised cost responsibility under the notice described in this section is less than the sum of its previous deposits for the Facilities Study, Transmission Provider shall return to

New Service Customer, with its notice of the revised cost responsibility, the amount of the difference.

16. A. If the Facilities Study includes New Service Customer's New Service Request(s) only, New Service Customer may terminate its participation in the study at any time by providing written notice of termination to Transmission Provider. New Service Customer's notice of termination (1) shall be effective as of the end of the business day following the day that Transmission Provider receives such notice and (2) concurrently shall have the effect of terminating and withdrawing New Service Customer's New Service Request(s). New Service Customer will be responsible for all costs of the Facilities Study that Transmission Provider incurred prior to the effective date of the notice of termination. Within thirty (30) days after the effective date of New Service Customer's notice of termination, Transmission Provider will deliver to New Service Customer a statement of New Service Customer's responsibility for the costs of the Facilities Study incurred up to the date of termination. In the event that New Service Customer's cost responsibility as of the date of termination exceeds the sum of its deposits then held by Transmission Provider for the Facilities Study, Transmission Provider's statement will include an invoice in the amount of such excess. New Service Customer will pay that invoice within ten (10) days after it receives it. In the event that New Service Customer does not pay the invoice within ten (10) days after receipt, New Service Customer shall owe the invoice amount plus interest at the applicable rate prescribed in 18 C.F.R. § 35.19a (a)(2)(iii), accrued from the day after the date payment was due until the date of payment. In the event that New Service Customer's cost responsibility as of the date of termination was less than the sum of its deposits for the Facilities Study, Transmission Provider's statement will include a payment to New Service Customer in the amount of the difference.
- B. If the Facilities Study includes any New Service Request(s) other than that (those) of New Service Customer, termination and withdrawal of New Service Customer's New Service Request(s) at any time after Transmission Provider has commenced the Facilities Study will not alter New Service Customer's responsibility for the costs of the Facilities Study under this Agreement and the PJM Tariff.

#### **DISCLAIMER OF WARRANTY, LIMITATION OF LIABILITY**

17. In analyzing and preparing the Facilities Study, Transmission Provider, the Transmission Owners, and any other subcontractors employed by Transmission Provider shall have to rely on information provided by 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 OWNERS, NOR ANY OTHER SUBCONTRACTORS EMPLOYED BY 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 FACILITIES STUDY. 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.

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

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

**MISCELLANEOUS**

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

**Transmission Provider**

PJM Interconnection, L.L.C.  
2750 Monroe Blvd.  
Audubon, PA 19403

**New Service Customer**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

20. No waiver by either party of one or more defaults by the other in performance of any of the provisions of this Agreement shall operate or be construed as a waiver of any other or further default or defaults, whether of a like or different character.
21. This Agreement or any part thereof, may not be amended, modified, assigned or waived other than by a writing signed by all parties hereto.
22. This Agreement shall be binding upon the parties hereto, their heirs, executors, administrators, successors, and assigns.

23. Neither this Agreement nor the Facilities Study performed hereunder shall be construed as an application for service under Part II or Part III of the PJM Tariff.
24. The provisions of Part VI of the PJM Tariff are incorporated herein and made a part hereof.
25. Capitalized terms used but not otherwise defined herein shall have the meaning ascribed to them in the PJM Tariff.
26. This Facilities Study Agreement shall become effective on the date it is executed by all parties and shall remain in effect until the earlier of (a) the date on which the Transmission Provider tenders the completed Facilities Study and, as applicable, a proposed Interconnection Service Agreement or Upgrade Construction Service Agreement to New Service Customer pursuant to Section 212 or Section 213, respectively, of the PJM Tariff, or (b) termination and withdrawal of the New Service Request(s) to which the Facilities Study hereunder relates.
27. **No Third-Party Beneficiaries**  
This 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.
28. **Multiple Counterparts**  
This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.
29. **No Partnership**  
This 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.
30. **Severability**  
If any provision or portion of this 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 Agreement shall remain in full force and effect.
31. **Governing Law, Regulatory Authority, and Rules**  
For Interconnection Requests, the validity, interpretation and enforcement of this 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 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.

32. **Reservation of Rights**

The Transmission Provider shall have the right to make a unilateral filing with FERC to modify this 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 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 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, Transmission Provider and the New Service Customer have caused this Facilities 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

**Schedule A**  
**Details of Design and Cost Estimates/Quality**  
**For the Facilities Study**

[insert details regarding degree of accuracy of cost estimates and associated scope of design as mutually agreed by Transmission Provider and New Service Customer]



## 1.4A Other Interconnection Options

### 1.4A.1 Limited Operation:

If any of the Transmission Owner Interconnection Facilities are not reasonably expected to be completed prior to the Interconnection Customer's planned date of Initial Operation, and provided that the Interconnected Transmission Owner has accepted the Customer Interconnection Facilities pursuant to the Interconnection Construction Service Agreement, Transmission Provider shall, upon the request and at the expense of Interconnection Customer, perform appropriate power flow or other operating studies on a timely basis to determine the extent to which the Customer Facility and the Customer Interconnection Facilities may operate prior to the completion of the Transmission Owner Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and the Interconnection Service Agreement. In accordance with the results of such studies and subject to such conditions as Transmission Provider determines to be reasonable and appropriate, Transmission Provider shall (a) permit Interconnection Customer to operate the Customer Facility and the Customer Interconnection Facilities, and (b) grant Interconnection Customer limited, interim Interconnection Rights commensurate with the extent to which operation of the Customer Facility is permitted.

### 1.4A.2 Provisional Interconnection Service:

Upon the request of Interconnection Customer, and prior to completion of requisite Interconnection Facilities, Network Upgrades, Local Upgrades, or system protection facilities Interconnection Customer may request limited Interconnection Service at the discretion of Transmission Provider based upon an evaluation that will consider the results of available studies, which terms shall be memorialized in the Interconnection Service Agreement. Consistent with Tariff, Part VI, Subpart B, section 212.4, Interconnection Customer may execute the Interconnection Service Agreement, request dispute resolution or request that the Interconnection Service Agreement be filed unexecuted with the Commission. Transmission Provider shall determine, through available studies or additional studies as necessary, whether stability, short circuit, thermal, and/or voltage issues would arise if Interconnection Customer interconnects without modifications to the Generating Facility or the Transmission System. Transmission Provider shall determine whether any Interconnection Facilities, Network Upgrades, Local Upgrades, or system protection facilities that are necessary to meet the requirements of NERC, or any applicable Regional Entity for the interconnection of a new, modified and/or expanded Generating Facility are in place prior to the commencement of Interconnection Service from the Generating Facility. Where available studies indicate that such Interconnection Facilities, Network Upgrades, Local Upgrades, and/or system protection facilities that are required for the interconnection of a new, modified and/or expanded Generating Facility are not currently in place, Transmission Provider will perform a study, at the Interconnection Customer's expense, to confirm the facilities that are required for Provisional Interconnection Service. The maximum permissible output of the Generating Facility shall be studied and updated ~~on a frequency determined by Transmission Provider annually~~ and at the Interconnection Customer's expense. The results will be communicated to the Interconnection Customer in writing upon completion of the study. Interconnection Customer assumes all risk

and liabilities with respect to the Provisional Interconnection Service, including changes in output limits and Interconnection Facilities, Network Upgrades, Local Upgrades, and/or system protection facilities cost responsibilities.

**ATTACHMENT RR**  
**Form of**  
**Surplus Interconnection Study Agreement**

**RECITALS**

1. This Surplus Interconnection Study Agreement (the “Agreement”), dated as of \_\_\_\_\_, is entered into, by and between \_\_\_\_\_ (“Surplus Interconnection Customer”) and PJM Interconnection, L.L.C. (“Transmission Provider”) (individually referred to as a “Party,” or collectively referred to as the “Parties”) pursuant to the PJM Interconnection, L.L.C. Open Access Transmission Tariff (“Tariff”), Tariff, Part IV and Tariff, Part VI. Capitalized terms used in this agreement, unless otherwise indicated, shall have the meanings ascribed to them in the Tariff.
  
2. By submitting this Agreement and complying with Tariff, Part IV, Subpart A, section 36.4 and Tariff, Part IV, Subpart A, section 36.1.1B, the Surplus Interconnection Customer has submitted a Surplus Interconnection Request. In accordance with Tariff, Part IV, Subpart A, section 36.1.1B.1.i, the Surplus Interconnection Customer has also submitted with this Agreement the applicable required deposit to the Transmission Provider.
  
3. By submitting this Agreement to the Transmission Provider, the Surplus Interconnection Customer requests to utilize Surplus Interconnection Service on the Transmission System of an existing Generating Facility with the following specifications:
  - a. Identification of the specific, existing Generating Facility already interconnected to the PJM Transmission System providing Surplus Interconnection Service, including whether the Surplus Interconnection Customer requesting Surplus Interconnection Service is the owner or affiliate of the existing Generating Facility, and details regarding the existing Generating Facility’s current Interconnection Service Agreement.

\_\_\_\_\_  
\_\_\_\_\_  
If the Surplus Interconnection Customer is an unaffiliated third party, the Surplus Interconnection Customer must submit with this Agreement the following information and documentation acceptable to the Transmission Provider:

- i. Name and address of the current owner of the existing Generating Facility, including details specific to the existing Generating Facility’s most current Interconnection Service Agreement, including the Service Agreement Number:
- \_\_\_\_\_

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ii. Written evidence from the owner of the existing Generating Facility granting Surplus Interconnection Customer permission to utilize the existing Generating Facility's unused portion of Interconnection Service established in the existing Generating Facility's Interconnection Service Agreement; and

iii. Written documentation stating that the owner of the surplus generating unit and the owner of the existing Generating Facility will have entered into, prior to the owner of the existing Generating Facility executing a revised Interconnection Service Agreement, a shared facilities agreement between the owner of the existing Generating Facility and the owner of the surplus generating unit detailing their respective roles and responsibilities relative to the Surplus Interconnection Service.

b. Evidence of ownership interest in, or right to acquire or control, the surplus generating unit site for a minimum of three years, such as a deed, option agreement, lease or other similar document acceptable to the Transmission Provider. Include both a written description of the evidence to be relied upon and attach a Word or PDF version copy thereof.

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c. Location of proposed surplus generating unit site or existing surplus generating unit (include both a written description (e.g., street address, global positioning coordinates) and attach a map in PDF format depicting the property boundaries and the location of the surplus generating unit site):

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d. The megawatt size of the proposed surplus generating unit or the amount of increase in megawatt capability of an existing surplus generating unit.

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e. Identify the fuel type of the surplus generating unit or upgrade thereto:

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f. A PDF format attachment of the site plan/single line diagram together with a description of the equipment configuration, including a set of preliminary electrical design specifications, and if the surplus generating unit is a wind generation facility, then also submit a set of preliminary electrical design specifications depicting the wind generation facility as a single equivalent generator:

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g. Planned date the new surplus generating unit (or increase in megawatt capability of an existing surplus generating unit) will be in service:

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h. Other related information, including for example, but not limited to, identifying: all of Surplus Interconnection Customer's prior Interconnection Requests or Surplus Interconnection Requests; and stating whether the Surplus Interconnection Customer has submitted a previous Surplus Interconnection Request for this particular project:

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i. Describe the circumstances under which Surplus Interconnection Service will be available at the existing Point of Interconnection:

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j. If any Energy Storage Resource, the primary frequency response operating range for a surplus generating unit:

Minimum State of Charge: \_\_\_\_\_ ; and

Maximum State of Charge: \_\_\_\_\_ .

**PURPOSE OF THE SURPLUS INTERCONNECTION STUDY**

4. Consistent with Tariff, Part IV, Subpart A, section 36.4, the Transmission Provider shall conduct a Surplus Interconnection Study to provide the Surplus Interconnection Customer with a determination of whether the surplus generating unit is eligible for

Surplus Interconnection Service. In the event that the Transmission Provider is unable to complete the Surplus Interconnection Study within the timeframe prescribed in Tariff, Part IV, Subpart A, section 36.4.1, the Transmission Provider shall notify the Surplus Interconnection Customer and explain the reasons for the delay.

5. The Surplus Interconnection Study conducted hereunder will provide only a sensitivity analysis based on the data specified by the Surplus Interconnection Customer in its Surplus Interconnection Request. The Surplus Interconnection Study necessarily will employ various assumptions regarding the Surplus Interconnection Request, other pending New Service Requests and PJM's Regional Transmission Expansion Plan at the time of the study. The Surplus Interconnection Study will not obligate the Transmission Provider or the Transmission Owner(s) to interconnect with the Surplus Interconnection Customer or construct any facilities or upgrades.

### **CONFIDENTIALITY**

6. The Interconnection Customer agrees to provide all information requested by the Transmission Provider necessary to complete the Surplus Interconnection Study. Subject to Paragraph 7 of this Agreement and to the extent required by Tariff, Part VI, Subpart B, section 222, information provided pursuant to this Paragraph 6 shall be and remain confidential.
7. Until completion of the Surplus Interconnection Study, the Transmission Provider shall keep confidential all information provided to it by the Surplus Interconnection Customer. Upon completion of the Surplus Interconnection Study and, to the extent required by Commission regulations, will be made publicly available upon request, except that the identity of the Surplus Interconnection Customer shall remain confidential.
8. Surplus Interconnection Customer acknowledges that, consistent with the Tariff, the Transmission Provider may contract with consultants, including the Transmission Owners, to provide services or expertise in the Surplus Interconnection Study process and that the Transmission Provider may disseminate information to the Transmission Owners.

### **COST RESPONSIBILITY**

9. The Surplus Interconnection Customer shall reimburse the Transmission Provider for the actual cost of the Surplus Interconnection Study. The deposit paid by the Surplus Interconnection Customer described in Paragraph 2 of this Agreement shall be applied toward the Surplus Interconnection Customer's Surplus Interconnection Study cost responsibility. The Surplus Interconnection Customer shall be responsible for and must pay all actual study costs. If at any time the Transmission Provider notifies the Surplus Interconnection Customer of estimated additional study costs, the Surplus Interconnection Customer must pay such estimated additional study costs within ten (10) Business Days of Transmission Provider sending the Surplus Interconnection Customer notification of such estimated additional study costs. If the Surplus Interconnection Customer fails to pay such estimated additional study costs within ten (10) Business Days

of Transmission Provider sending the Surplus Interconnection Customer notification of such estimated additional study costs, then the Surplus Interconnection Request shall be deemed to be terminated and withdrawn.

### **DISCLAIMER OF WARRANTY, LIMITATION OF LIABILITY**

10. In analyzing and preparing the Surplus Interconnection 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 Surplus Interconnection Customer and possibly by third parties, including the owner of the existing Generating Facility, 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 SURPLUS INTERCONNECTION STUDY. The Surplus Interconnection 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 Agreement nor the Surplus Interconnection 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 Surplus Interconnection Customer either at this point in time or in the future.

11. 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 under this 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 Surplus Interconnection Study Agreement.

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

**MISCELLANEOUS**

12. Any notice or request made to or by any Party regarding this Agreement shall be made to the representative of the other Party as indicated below.

**Transmission Provider**

PJM Interconnection, L.L.C.

2750 Monroe Blvd.

Audubon, PA 19403

**Surplus Interconnection Customer**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

13. No waiver by either Party of one or more defaults by the other in performance of any of the provisions of this Agreement shall operate or be construed as a waiver of any other or further default or defaults, whether of a like or different character.

14. This Agreement or any part thereof, may not be amended, modified, or waived other than by a writing signed by all Parties hereto.

15. This Agreement shall be binding upon the Parties hereto, their heirs, executors, administrators, successors, and assigns.

16. Neither this Agreement nor the Surplus Interconnection Study performed hereunder shall be construed as an application for service under Tariff, Part II or Tariff, Part III.

17. The provisions of Tariff, Part IV that relate to Surplus Interconnection Service are incorporated herein and made a part hereof.

**18. Governing Law, Regulatory Authority, and Rules**

The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the state of \_\_\_\_\_ (the state where the Point of Interconnection is located), without regard to its conflicts of law principles. This 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.

**19. No Third-Party Beneficiaries**

Except as stated in Paragraph 11 of this Agreement, this 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.

**20. Multiple Counterparts**

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all of which constitute one and the same instrument.

**21. No Partnership**

This 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.

**22. Severability**

If any provision or portion of this 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 Agreement shall remain in full force and effect.

**23. Reservation of Rights**

The Transmission Provider shall have the right to make a unilateral filing with the Federal Energy Regulatory Commission ("FERC") to modify this 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 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 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.

**CERTIFICATION**

**By initialing the line next to each of the following required elements, Surplus Interconnection Customer hereby certifies that it has submitted with this executed Agreement each of the required elements (if this Surplus Interconnection Request is being**

**submitted electronically, each of the required elements must be submitted electronically as individual PDF files, together with an electronic PDF copy of this signed Agreement):**

**Specification of the location of the proposed surplus generating unit site or existing surplus generating unit (including both a written description (e.g., street address, global positioning coordinates) and attach a map in PDF format depicting the property boundaries and the location of the surplus generating unit site)**

**If the Surplus Interconnection Customer is an unaffiliated third party, the information and evidence set forth in Paragraph 3(a)(i) – (iii) of this Agreement**

**Evidence of an ownership interest in, or right to acquire or control the surplus generating unit site**

**The megawatt size of the proposed surplus generating unit or the amount of increase in megawatt capability of an existing surplus generating unit**

**Identification of the fuel type of the proposed surplus generating unit**

**Description of the equipment configuration and a set of preliminary electrical design specifications, and, if the surplus generating unit is a wind generation facility, then the set of preliminary electrical design specifications must depict the wind plant as a single equivalent generator**

**The planned date that the proposed surplus generating unit (or increase in megawatt capability of an existing surplus generating unit) will be in service**

**All additional information prescribed by the Transmission Provider in the PJM Manuals**

**The full amount of the required deposit**

IN WITNESS WHEREOF, the Transmission Provider and the Surplus Interconnection Customer have caused this Agreement to be executed by their respective authorized officials.

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

By: \_\_\_\_\_  
\_\_\_\_\_ Name \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_  
Printed Name

**Surplus Interconnection Customer: [Name of Party]**

By: \_\_\_\_\_  
\_\_\_\_\_ Name \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_  
Printed Name

# Attachment B

PJM Open Access Transmission Tariff  
(Clean Format)

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  - 13.1A Required Coverages for Generation Resources Of 20 Megawatts Or Less
  - 13.2 Additional Insureds
  - 13.3 Other Required Terms
  - 13.3A No Limitation of Liability
  - 13.4 Self-Insurance
  - 13.5 Notices; Certificates of Insurance
  - 13.6 Subcontractor Insurance

- 13.7 Reporting Incidents
- 14 Indemnity**
  - 14.1 Indemnity
  - 14.2 Indemnity Procedures
  - 14.3 Indemnified Person
  - 14.4 Amount Owing
  - 14.5 Limitation on Damages
  - 14.6 Limitation of Liability in Event of Breach
  - 14.7 Limited Liability in Emergency Conditions
- 15 Breach, Cure And Default**
  - 15.1 Breach
  - 15.2 Continued Operation
  - 15.3 Notice of Breach
  - 15.4 Cure and Default
  - 15.5 Right to Compel Performance
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- 16 Termination**
  - 16.1 Termination
  - 16.2 Disposition of Facilities Upon Termination
  - 16.3 FERC Approval
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- 17 Confidentiality**
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  - 17.3 Release of Confidential Information
  - 17.4 Rights
  - 17.5 No Warranties
  - 17.6 Standard of Care
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  - 17.8 Termination of Interconnection Service Agreement
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  - 17.10 Disclosure to FERC or its Staff
  - 17.11 No Interconnection Party Shall Disclose Confidential Information
  - 17.12 Information that is Public Domain
  - 17.13 Return or Destruction of Confidential Information
- 18 Subcontractors**
  - 18.1 Use of Subcontractors
  - 18.2 Responsibility of Principal
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  - 18.4 Subcontractors Not Beneficiaries
- 19 Information Access And Audit Rights**
  - 19.1 Information Access
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  - 19.3 Audit Rights
- 20 Disputes**
  - 20.1 Submission

- 20.2 Rights Under The Federal Power Act
- 20.3 Equitable Remedies
- 21 Notices**
  - 21.1 General
  - 21.2 Emergency Notices
  - 21.3 Operational Contacts
- 22 Miscellaneous**
  - 22.1 Regulatory Filing
  - 22.2 Waiver
  - 22.3 Amendments and Rights Under the Federal Power Act
  - 22.4 Binding Effect
  - 22.5 Regulatory Requirements
- 23 Representations And Warranties**
  - 23.1 General
- 24 Tax Liability**
  - 24.1 Safe Harbor Provisions
  - 24.2 Tax Indemnity
  - 24.3 Taxes Other Than Income Taxes
  - 24.4 Income Tax Gross-Up
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**ATTACHMENT O - SCHEDULE A**

**Customer Facility Location/Site Plan**

**ATTACHMENT O - SCHEDULE B**

**Single-Line Diagram**

**ATTACHMENT O - SCHEDULE C**

**List of Metering Equipment**

**ATTACHMENT O - SCHEDULE D**

**Applicable Technical Requirements and Standards**

**ATTACHMENT O - SCHEDULE E**

**Schedule of Charges**

**ATTACHMENT O - SCHEDULE F**

**Schedule of Non-Standard Terms & Conditions**

**ATTACHMENT O - SCHEDULE G**

**Interconnection Customer's Agreement to Conform with IRS Safe Harbor Provisions for Non-Taxable Status**

**ATTACHMENT O - SCHEDULE H**

**Interconnection Requirements for a Wind Generation Facility**

**ATTACHMENT O – SCHEDULE I**

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**Schedule of Terms and Conditions for Surplus Interconnection Service**

**ATTACHMENT O – SCHEDULE K**

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**ATTACHMENT O-1**

**Form of Interim Interconnection Service Agreement**

## **ATTACHMENT P**

### **Form of Interconnection Construction Service Agreement**

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- 2.0 Authority
- 3.0 Customer Facility
- 4.0 Effective Date and Term
  - 4.1 Effective Date
  - 4.2 Term
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- 5.0 Construction Responsibility
- 6.0 [Reserved.]
- 7.0 Scope of Work
- 8.0 Schedule of Work
- 9.0 [Reserved.]
- 10.0 Notices
- 11.0 Waiver
- 12.0 Amendment
- 13.0 Incorporation Of Other Documents
- 14.0 Addendum of Interconnection Customer's Agreement to Conform with IRS Safe Harbor Provisions for Non-Taxable Status
- 15.0 Addendum of Non-Standard Terms and Conditions for Interconnection Service
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- 17.0 Infrastructure Security of Electric System Equipment and Operations and Control Hardware and Software is Essential to Ensure Day-to-Day Reliability and Operational Security

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#### **2 Construction Obligations**

- 2.1 Interconnection Customer Obligations
- 2.2 Transmission Owner Interconnection Facilities and Merchant Network Upgrades
  - 2.2A Scope of Applicable Technical Requirements and Standards
- 2.3 Construction By Interconnection Customer
- 2.4 Tax Liability
- 2.5 Safety
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- 2.7 Coordination Among Constructing Parties

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  - 3.2.1 Standard Option
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- 3.3 Revisions to Schedule of Work
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- 3.10 Interconnected Transmission Owner's Acceptance of Facilities Constructed by Interconnection Customer
- 4 Transmission Outages**
  - 4.1 Outages; Coordination
- 5 Land Rights; Transfer of Title**
  - 5.1 Grant of Easements and Other Land Rights
  - 5.2 Construction of Facilities on Interconnection Customer Property
  - 5.3 Third Parties
  - 5.4 Documentation
  - 5.5 Transfer of Title to Certain Facilities Constructed By Interconnection Customer
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- 6 Warranties**
  - 6.1 Interconnection Customer Warranty
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- 7 [Reserved.]**
- 8 [Reserved.]**
- 9 Security, Billing And Payments**
  - 9.1 Adjustments to Security
  - 9.2 Invoice
  - 9.3 Final Invoice
  - 9.4 Disputes
  - 9.5 Interest
  - 9.6 No Waiver
- 10 Assignment**
  - 10.1 Assignment with Prior Consent
  - 10.2 Assignment Without Prior Consent
  - 10.3 Successors and Assigns
- 11 Insurance**
  - 11.1 Required Coverages For Generation Resources Of More Than 20 Megawatts and Merchant Transmission Facilities
  - 11.1A Required Coverages For Generation Resources of 20 Megawatts Or Less
  - 11.2 Additional Insureds
  - 11.3 Other Required Terms
  - 11.3A No Limitation of Liability

- 11.4 Self-Insurance
- 11.5 Notices; Certificates of Insurance
- 11.6 Subcontractor Insurance
- 11.7 Reporting Incidents
- 12 Indemnity**
  - 12.1 Indemnity
  - 12.2 Indemnity Procedures
  - 12.3 Indemnified Person
  - 12.4 Amount Owing
  - 12.5 Limitation on Damages
  - 12.6 Limitation of Liability in Event of Breach
  - 12.7 Limited Liability in Emergency Conditions
- 13 Breach, Cure And Default**
  - 13.1 Breach
  - 13.2 Notice of Breach
  - 13.3 Cure and Default
    - 13.3.1 Cure of Breach
  - 13.4 Right to Compel Performance
  - 13.5 Remedies Cumulative
- 14 Termination**
  - 14.1 Termination
  - 14.2 [Reserved.]
  - 14.3 Cancellation By Interconnection Customer
  - 14.4 Survival of Rights
- 15 Force Majeure**
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  - 15.4 Definition of Force Majeure
- 16 Subcontractors**
  - 16.1 Use of Subcontractors
  - 16.2 Responsibility of Principal
  - 16.3 Indemnification by Subcontractors
  - 16.4 Subcontractors Not Beneficiaries
- 17 Confidentiality**
  - 17.1 Term
  - 17.2 Scope
  - 17.3 Release of Confidential Information
  - 17.4 Rights
  - 17.5 No Warranties
  - 17.6 Standard of Care
  - 17.7 Order of Disclosure
  - 17.8 Termination of Construction Service Agreement
  - 17.9 Remedies
  - 17.10 Disclosure to FERC or its Staff

- 17.11 No Construction Party Shall Disclose Confidential Information of Another Construction Party
- 17.12 Information that is Public Domain
- 17.13 Return or Destruction of Confidential Information
- 18 Information Access And Audit Rights**
  - 18.1 Information Access
  - 18.2 Reporting of Non-Force Majeure Events
  - 18.3 Audit Rights
- 19 Disputes**
  - 19.1 Submission
  - 19.2 Rights Under The Federal Power Act
  - 19.3 Equitable Remedies
- 20 Notices**
  - 20.1 General
  - 20.2 Operational Contacts
- 21 Miscellaneous**
  - 21.1 Regulatory Filing
  - 21.2 Waiver
  - 21.3 Amendments and Rights under the Federal Power Act
  - 21.4 Binding Effect
  - 21.5 Regulatory Requirements
- 22 Representations and Warranties**
  - 22.1 General

**ATTACHMENT P - SCHEDULE A**

**Site Plan**

**ATTACHMENT P - SCHEDULE B**

**Single-Line Diagram of Interconnection Facilities**

**ATTACHMENT P - SCHEDULE C**

**Transmission Owner Interconnection Facilities to be Built by Interconnected Transmission Owner**

**ATTACHMENT P - SCHEDULE D**

**Transmission Owner Interconnection Facilities to be Built by Interconnection Customer Pursuant to Option to Build**

**ATTACHMENT P - SCHEDULE E**

**Merchant Network Upgrades to be Built by Interconnected Transmission Owner**

**ATTACHMENT P - SCHEDULE F**

**Merchant Network Upgrades to be Built by Interconnection Customer Pursuant to Option to Build**

**ATTACHMENT P - SCHEDULE G**

**Customer Interconnection Facilities**

**ATTACHMENT P - SCHEDULE H**

**Negotiated Contract Option Terms**

**ATTACHMENT P - SCHEDULE I**

**Scope of Work**

**ATTACHMENT P - SCHEDULE J**

**Schedule of Work**

**ATTACHMENT P - SCHEDULE K**

**Applicable Technical Requirements and Standards**  
**ATTACHMENT P - SCHEDULE L**  
**Interconnection Customer's Agreement to Confirm with IRS Safe Harbor Provisions For Non-Taxable Status**  
**ATTACHMENT P - SCHEDULE M**  
**Schedule of Non-Standard Terms and Conditions**  
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**Interconnection Requirements for a Wind Generation Facility**  
**ATTACHMENT Q**  
**PJM Credit Policy**  
**ATTACHMENT R**  
**Lost Revenues Of PJM Transmission Owners And Distribution of Revenues Remitted By MISO, SECA Rates to Collect PJM Transmission Owner Lost Revenues Under Attachment X, And Revenues From PJM Existing Transactions**  
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**Form of Transmission Interconnection Feasibility Study Agreement**  
**ATTACHMENT T**  
**Identification of Merchant Transmission Facilities**  
**ATTACHMENT U**  
**Independent Transmission Companies**  
**ATTACHMENT V**  
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**ATTACHMENT W**  
**COMMONWEALTH EDISON COMPANY**  
**ATTACHMENT X**  
**Seams Elimination Cost Assignment Charges**  
**NOTICE OF ADOPTION OF NERC TRANSMISSION LOADING RELIEF PROCEDURES**  
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**Certification Codes and Standards**  
**ATTACHMENT AA**  
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**Form of Certificate of Completion (Small Generating Inverter Facility No Larger Than 10 kW)**  
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**Reliability Pricing Model**  
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**Form of Upgrade Request**

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**ATTACHMENT GG**

**Form of Upgrade Construction Service Agreement**

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Article 4 – Early Termination

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Article 5 – Rights

5.0 Rights

5.1 Amount of Rights Granted

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5.3 Credits

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6.0 Notices

6.1 Waiver

6.2 Amendment

6.3 No Partnership

6.4 Counterparts

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**SCOPE AND SCHEDULE OF WORK FOR DIRECT ASSIGNMENT  
FACILITIES OR CUSTOMER-FUNDED UPGRADES TO BE BUILT BY  
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1.3 Applicable Regional Reliability Council

1.4 Applicable Standards

1.5 Breach

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1.8 Commission

- 1.9 Confidential Information
- 1.10 Constructing Entity
- 1.11 Control Area
- 1.12 Costs
- 1.13 Default
- 1.14 Delivering Party
- 1.15 Emergency Condition
- 1.16 Environmental Laws
- 1.17 Facilities Study
- 1.18 Federal Power Act
- 1.19 FERC
- 1.20 Firm Point-To-Point
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- 1.22 Good Utility Practice
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- 1.24 Hazardous Substances
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- 1.28 MAAC
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- 1.32 Office of the Interconnection
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- 1.34 Part I
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- 1.39 PJM Interchange Energy Market
- 1.40 PJM Manuals
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1.55 VACAR

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- 1.0 Effective Date and Term
  - 1.1 Effective Date
  - 1.2 Term
  - 1.3 Survival
- 2.0 Facilitation by Transmission Provider
- 3.0 Construction Obligations
  - 3.1 Direct Assignment Facilities or Customer-Funded Upgrades
  - 3.2 Scope of Applicable Technical Requirements and Standards
- 4.0 Tax Liability
  - 4.1 New Service Customer Payments Taxable
  - 4.2 Income Tax Gross-Up
  - 4.3 Private Letter Ruling
  - 4.4 Refund
  - 4.5 Contests
  - 4.6 Taxes Other Than Income Taxes
  - 4.7 Tax Status
- 5.0 Safety
  - 5.1 General
  - 5.2 Environmental Releases
- 6.0 Schedule Of Work
  - 6.1 Standard Option
  - 6.2 Option to Build
  - 6.3 Revisions to Schedule and Scope of Work
  - 6.4 Suspension
- 7.0 Suspension of Work Upon Default
  - 7.1 Notification and Correction of Defects
- 8.0 Transmission Outages
  - 8.1 Outages; Coordination
- 9.0 Security, Billing and Payments
  - 9.1 Adjustments to Security
  - 9.2 Invoice
  - 9.3 Final Invoice
  - 9.4 Disputes
  - 9.5 Interest
  - 9.6 No Waiver
- 10.0 Assignment
  - 10.1 Assignment with Prior Consent
  - 10.2 Assignment Without Prior Consent
  - 10.3 Successors and Assigns
- 11.0 Insurance
  - 11.1 Required Coverages
  - 11.2 Additional Insureds
  - 11.3 Other Required Terms

- 11.4 No Limitation of Liability
- 11.5 Self-Insurance
- 11.6 Notices: Certificates of Insurance
- 11.7 Subcontractor Insurance
- 11.8 Reporting Incidents
- 12.0 Indemnity
  - 12.1 Indemnity
  - 12.2 Indemnity Procedures
  - 12.3 Indemnified Person
  - 12.4 Amount Owing
  - 12.5 Limitation on Damages
  - 12.6 Limitation of Liability in Event of Breach
  - 12.7 Limited Liability in Emergency Conditions
- 13.0 Breach, Cure And Default
  - 13.1 Breach
  - 13.2 Notice of Breach
  - 13.3 Cure and Default
  - 13.4 Right to Compel Performance
  - 13.5 Remedies Cumulative
- 14.0 Termination
  - 14.1 Termination
  - 14.2 Cancellation By New Service Customer
  - 14.3 Survival of Rights
  - 14.4 Filing at FERC
- 15.0 Force Majeure
  - 15.1 Notice
  - 15.2 Duration of Force Majeure
  - 15.3 Obligation to Make Payments
- 16.0 Confidentiality
  - 16.1 Term
  - 16.2 Scope
  - 16.3 Release of Confidential Information
  - 16.4 Rights
  - 16.5 No Warranties
  - 16.6 Standard of Care
  - 16.7 Order of Disclosure
  - 16.8 Termination of Upgrade Construction Service Agreement
  - 16.9 Remedies
  - 16.10 Disclosure to FERC or its Staff
  - 16.11 No Party Shall Disclose Confidential Information of Party 16.12 Information that is Public Domain
  - 16.13 Return or Destruction of Confidential Information
- 17.0 Information Access And Audit Rights
  - 17.1 Information Access
  - 17.2 Reporting of Non-Force Majeure Events
  - 17.3 Audit Rights



- 17.4 Waiver
- 17.5 Amendments and Rights under the Federal Power Act
- 17.6 Regulatory Requirements
- 18.0 Representation and Warranties
  - 18.1 General
- 19.0 Inspection and Testing of Completed Facilities
  - 19.1 Coordination
  - 19.2 Inspection and Testing
  - 19.3 Review of Inspection and Testing by Transmission Owner
  - 19.4 Notification and Correction of Defects
  - 19.5 Notification of Results
- 20.0 Energization of Completed Facilities
- 21.0 Transmission Owner's Acceptance of Facilities Constructed by New Service Customer
- 22.0 Transfer of Title to Certain Facilities Constructed By New Service Customer
- 23.0 Liens

**ATTACHMENT HH – RATES, TERMS, AND CONDITIONS OF SERVICE FOR PJMSETTLEMENT, INC.**

**ATTACHMENT II – MTEP PROJECT COST RECOVERY FOR ATSI ZONE**

**ATTACHMENT JJ – MTEP PROJECT COST RECOVERY FOR DEOK ZONE**

**ATTACHMENT KK - FORM OF DESIGNATED ENTITY AGREEMENT**

**ATTACHMENT LL - FORM OF INTERCONNECTION COORDINATION AGREEMENT**

**ATTACHMENT MM – FORM OF PSEUDO-TIE AGREEMENT – WITH NATIVE BA AS PARTY**

**ATTACHMENT MM-1 – FORM OF SYSTEM MODIFICATION COST REIMBURSEMENT AGREEMENT – PSEUDO-TIE INTO PJM**

**ATTACHMENT NN – FORM OF PSEUDO-TIE AGREEMENT WITHOUT NATIVE BA AS PARTY**

**ATTACHMENT OO – FORM OF DYNAMIC SCHEDULE AGREEMENT INTO THE PJM REGION**

**ATTACHMENT PP – FORM OF FIRM TRANSMISSION FEASIBILITY STUDY AGREEMENT**

**ATTACHMENT RR – FORM OF SURPLUS INTERCONNECTION STUDY AGREEMENT**

## **Definitions – O – P - Q**

### **Obligation:**

“Obligation” shall mean all amounts owed to PJM Settlement for purchases from the PJM Markets, Transmission Service, (under both Tariff, Part II and Part III), and other services or obligations pursuant to the Agreements. In addition, aggregate amounts that will be owed to PJM Settlement in the future for capacity purchases within the PJM capacity markets will be added to this figure. Should other markets be formed such that Participants may incur future Obligations in those markets, then the aggregate amount of those Obligations will also be added to the Net Obligation.

### **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.

### **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.

### **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.

### **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.

### **Open Access Same-Time Information System (OASIS) or PJM Open Access Same-Time Information System:**

“Open Access Same-Time Information System,” “PJM Open Access Same-Time Information System” or “OASIS” shall mean the electronic communication and 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 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.

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

“Operating Agreement of the PJM Interconnection, L.L.C.,” “Operating Agreement” or “PJM Operating Agreement” shall mean the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. dated as of April 1, 1997 and as amended and restated as of June 2, 1997, including all Schedules, Exhibits, Appendices, addenda or supplements hereto, as amended from time to time thereafter, among the Members of the PJM Interconnection, L.L.C., on file with the Commission.

**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.

**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.

**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.

**Operationally Deliverable:**

“Operationally Deliverable” shall mean, as determined by the Office of the Interconnection, that there are no operational conditions, arrangements or limitations experienced or required that threaten, impair or degrade effectuation or maintenance of deliverability of capacity or energy from the external Generation Capacity Resource to loads in the PJM Region in a manner comparable to the deliverability of capacity or energy to such loads from Generation Capacity Resources located inside the metered boundaries of the PJM Region, including, without limitation, an identified need by an external Balancing Authority Area for a remedial action scheme or manual generation trip protocol, transmission facility switching arrangements that would have the effect of radializing load, or excessive or unacceptable frequency of regional reliability limit violations or (outside an interregional agreed congestion management process) of

local reliability dispatch instructions and commitments.

**Opportunity Cost:**

“Opportunity Cost” shall mean a component of the Market Seller Offer Cap calculated in accordance with Tariff, Attachment DD, section 6.

**OPSI Advisory Committee:**

“OPSI Advisory Committee” shall mean the committee established under Tariff, Attachment M, section III.G.

**Option to Build:**

“Option to Build” shall mean 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.

**Optional Interconnection Study:**

“Optional Interconnection Study” shall mean a sensitivity analysis of an Interconnection Request based on assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement.

**Optional Interconnection Study Agreement:**

“Optional Interconnection Study Agreement” shall mean the form of agreement for preparation of an Optional Interconnection Study, as set forth in Tariff, Attachment N-3.

**Part I:**

“Part I” shall mean the Tariff Definitions and Common Service Provisions contained in Tariff, Part I, sections 1 through 12A.

**Part II:**

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

**Part III:**

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

**Part IV:**

“Part IV” shall mean Tariff, sections 36 through 112C pertaining to generation or merchant transmission interconnection to the Transmission System in conjunction with the applicable Common Service Provisions of Tariff, Part I and appropriate Schedules and Attachments.

**Part V:**

“Part V” shall mean Tariff, sections 113 through 122 pertaining to the deactivation of generating units in conjunction with the applicable Common Service Provisions of Tariff, Part I and appropriate Schedules and Attachments.

**Part VI:**

“Part VI” shall mean 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 Tariff, Part I and appropriate Schedules and Attachments.

**Participant:**

“Participant” shall mean a Market Participant and/or Transmission Customer and/or Applicant requesting to be an active Market Participant and/or Transmission Customer.

**Parties:**

“Parties” shall mean 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.

**Peak-Hour Dispatch:**

“Peak-Hour Dispatch” shall mean, for purposes of calculating the Energy and Ancillary Services Revenue Offset under Tariff, Attachment DD, section 5, an assumption, as more fully set forth in the PJM Manuals, that the Reference Resource is committed in the Day-Ahead Energy Market in four distinct blocks of four hours of continuous output for each block from the peak-hour period beginning with the hour ending 0800 EPT through to the hour ending 2300 EPT for any day when the average day-ahead LMP for the area for which the Net Cost of New Entry is being determined is greater than, or equal to, the cost to generate (including the cost for a complete start and shutdown cycle), *plus 10% of such costs*, for at least two hours during each four-hour block, where such blocks shall be assumed to be committed independently; provided that, if there are not at least two economic hours in any given four-hour block, then the Reference Resource shall be assumed not to be committed for such block; and to the extent not committed in any such block in the Day-Ahead Energy Market under the above conditions based on Day-Ahead LMPs, is dispatched in the Real-Time Energy Market for such block if the Real-Time LMP is greater than or equal to the cost to generate, *plus 10% of such costs*, under the same conditions as described above for the Day-Ahead Energy Market.

**Peak Market Activity:**

“Peak Market Activity” shall mean a measure of exposure for which credit is required, involving peak exposures in rolling three-week periods over a year timeframe, with two semi-annual reset points, pursuant to provisions of Tariff, Attachment Q, section V.A. Peak Market Activity shall exclude FTR Net Activity, Virtual Transactions Net Activity, and Export Transactions Net Activity.

**Peak Season:**

“Peak Season” shall mean the weeks containing the 24th through 36th Wednesdays of the calendar year. Each such week shall begin on a Monday and end on the following Sunday, except for the week containing the 36th Wednesday, which shall end on the following Friday.

**Percentage Internal Resources Required:**

“Percentage Internal Resources Required” shall have the meaning specified in the Reliability Assurance Agreement.

**Performance Assessment Interval:**

“Performance Assessment Interval” shall mean each Real-time Settlement Interval for which an Emergency Action has been declared by the Office of the Interconnection, provided, however, that Performance Assessment Intervals for a Base Capacity Resource shall not include any intervals outside the calendar months of June through September.

**Permissible Technological Advancement:**

“Permissible Technological Advancement” shall mean a proposed technological change such as an advancement to turbines, inverters, plant supervisory controls or other similar advancements to the technology proposed in the Interconnection Request that is submitted to the Transmission Provider no later than the return of an executed Facilities Study Agreement (or, if a Facilities Study is not required, prior to the return of an executed Interconnection Service Agreement). Provided such change may not: (i) increase the capability of the Generating Facility as specified in the original Interconnection Request; (ii) represent a different fuel type from the original Interconnection Request; or (iii) cause any material adverse impact(s) on the Transmission System with regard to short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability and response. If the proposed technological advancement is a Permissible Technological Advancement, no additional study will be necessary and the proposed technological advancement will not be considered a Material Modification.

**PJM:**

“PJM” shall mean PJM Interconnection, L.L.C., including the Office of the Interconnection as referenced in the PJM Operating Agreement. When such term is being used in the RAA it shall also include the PJM Board.

**PJM Administrative Service:**

“PJM Administrative Service” shall mean the services provided by PJM pursuant to Tariff, Schedule 9.

**PJM Board:**

“PJM Board” shall mean the Board of Managers of the LLC, acting pursuant to the Operating Agreement except when such term is being used in Tariff, Attachment M, in which case PJM Board shall mean the Board of Managers of PJM or its designated representative, exclusive of any members of PJM Management.

**PJM Control Area:**

“PJM Control Area” shall mean the Control Area recognized by NERC as the PJM Control Area.

**PJM Entities:**

“PJM Entities” shall mean PJM, including the Market Monitoring Unit, the PJM Board, and PJM’s officers, employees, representatives, advisors, contractors, and consultants.

**PJM Interchange:**

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

**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 Operating Agreement, Schedule 1, and the parallel provisions of Tariff, Attachment K – Appendix.

**PJM Interchange Export:**

“PJM Interchange Export” shall mean the following, as determined in accordance with the Operating Agreement and Tariff: (a) for a Market Participant that is a Network Service User, the amount by which its interval Equivalent Load is exceeded by the sum of the interval 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 interval scheduled deliveries of Spot Market Energy by a Market Seller from an External Resource; or (d) the interval net metered output of any other Market Seller.

**PJM Interchange Import:**

“PJM Interchange Import” shall mean the following, as determined in accordance with the Operating Agreement and Tariff: (a) for a Market Participant that is a Network Service User, the amount by which its interval Equivalent Load exceeds the sum of the interval 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 interval scheduled deliveries of Spot Market Energy to an External Market Buyer; or (d) the interval scheduled deliveries to an Internal Market Buyer that is not a Network Service User.

**PJM Liaison:**

“PJM Liaison” shall mean the liaison established under Tariff, Attachment M, section III.I.

**PJM Management:**

“PJM Management” shall mean the officers, executives, supervisors and employee managers of PJM.

**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.

**PJM Markets:**

“PJM Markets” shall mean the PJM Interchange Energy and capacity markets, including the RPM auctions, together with all bilateral or other wholesale electric power and energy transactions, capacity transactions, ancillary services transactions (including black start service), transmission transactions and any other market operated under the PJM Tariff or Operating Agreement within the PJM Region, wherein Market Participants may incur Obligations to PJM Settlement.

**PJM Market Rules:**

“PJM Market Rules” shall mean the rules, standards, procedures, and practices of the PJM Markets set forth in the PJM Tariff, the PJM Operating Agreement, the PJM Reliability Assurance Agreement, the PJM Consolidated Transmission Owners Agreement, the PJM Manuals, the PJM Regional Practices Document, the PJM-Midwest Independent Transmission System Operator Joint Operating Agreement or any other document setting forth market rules.



**PJM Net Assets:**

“PJM Net Assets” shall mean the total assets per PJM’s consolidated quarterly or year-end financial statements most recently issued as of the date of the receipt of written notice of a claim less amounts for which PJM is acting as a temporary custodian on behalf of its Members, transmission developers/Designated Entities, and generation developers, including, but not limited to, cash deposits related to credit requirement compliance, study and/or interconnection receivables, member prepayments, invoiced amounts collected from Net Buyers but have not yet been paid to Net Sellers, and excess congestion (as described in Operating Agreement, Schedule 1, section 5.2.6, and the parallel provisions of Tariff, Attachment K-Appendix, section 5.2.6).

**PJM Region:**

“PJM Region” shall have the meaning specified in the Operating Agreement.

**PJM Regional Practices Document:**

“PJM Regional Practices Document” shall mean the document of that title that compiles and describes the practices in the PJM Markets and that is made available in hard copy and on the Internet.

**PJM Region Installed Reserve Margin:**

“PJM Region Installed Reserve Margin” shall mean the percent installed reserve margin for the PJM Region required pursuant to RAA, Schedule 4.1, as approved by the PJM Board.

**PJM Region Peak Load Forecast:**

“PJM Region Peak Load Forecast” shall mean the peak load forecast used by the Office of the Interconnection in determining the PJM Region Reliability Requirement, and shall be determined on both a preliminary and final basis as set forth in Tariff, Attachment DD, section 5.

**PJM Region Reliability Requirement:**

“PJM Region Reliability Requirement” shall mean, for purposes of the Base Residual Auction, the Forecast Pool Requirement multiplied by the Preliminary PJM Region Peak Load Forecast, less the sum of all Preliminary Unforced Capacity Obligations of FRR Entities in the PJM Region; and, for purposes of the Incremental Auctions, the Forecast Pool Requirement multiplied by the updated PJM Region Peak Load Forecast, less the sum of all updated Unforced Capacity Obligations of FRR Entities in the PJM Region.

**PJM Settlement:**

“PJM Settlement” or “PJM Settlement, Inc.” shall mean PJM Settlement, Inc. (or its successor), established by PJM as set forth in Operating Agreement, section 3.3.

**PJM Tariff, Tariff, O.A.T.T., OATT or PJM Open Access Transmission Tariff:**

“PJM Tariff,” “Tariff,” “O.A.T.T.,” “OATT,” or “PJM Open Access Transmission Tariff” shall mean that certain PJM Open Access Transmission Tariff, including any schedules, appendices or exhibits attached thereto, on file with FERC and as amended from time to time thereafter.

**Plan:**

“Plan” shall mean the PJM market monitoring plan set forth in Tariff, Attachment M.

**Planned Demand Resource:**

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

**Planned External Financed Generation Capacity Resource:**

“Planned External Financed Generation Capacity Resource” shall mean a Planned External Generation Capacity Resource that, prior to August 7, 2015, has an effective agreement that is the equivalent of an Interconnection Service Agreement, has submitted to the Office of the Interconnection the appropriate certification attesting achievement of Financial Close, and has secured at least 50 percent of the MWs of firm transmission service required to qualify such resource under the deliverability requirements of the Reliability Assurance Agreement.

**Planned External Generation Capacity Resource:**

“Planned External Generation Capacity Resource” shall have the meaning specified in the Reliability Assurance Agreement.

**Planned Financed Generation Capacity Resource:**

“Planned Financed Generation Capacity Resource” shall mean a Planned Generation Capacity Resource that, prior to August 7, 2015, has an effective Interconnection Service Agreement and has submitted to the Office of the Interconnection the appropriate certification attesting achievement of Financial Close.

**Planned Generation Capacity Resource:**

“Planned Generation Capacity Resource” shall have the meaning specified in the Reliability Assurance Agreement.

**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.

**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.

**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.

**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 Tariff, Part II. The Point(s) of Delivery shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

**Point of Interconnection:**

“Point of Interconnection” shall mean the point or points where the Customer Interconnection Facilities interconnect with the Transmission Owner Interconnection Facilities or the Transmission System.

**Point(s) of Receipt:**

“Point(s) of Receipt” shall mean 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 Tariff, Part II. The Point(s) of Receipt shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

**Point-To-Point Transmission Service:**

“Point-To-Point Transmission Service shall mean 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 Tariff, Part II.

**Power Purchaser:**

“Power Purchaser” shall mean the entity that is purchasing the capacity and energy to be transmitted under the Tariff.

**PRD Curve:**

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

**PRD Provider:**

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

**PRD Reservation Price:**

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

**PRD Substation:**

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

**Pre-Confirmed Application:**

“Pre-Confirmed Application” shall be 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.

**Pre-Emergency Load Response Program:**

“Pre-Emergency Load Response Program” shall be the program by which Curtailment Service Providers may be compensated by PJM for Demand Resources that will reduce load when dispatched by PJM during pre-emergency conditions, and is described in Operating Agreement, Schedule 1, section 8 and the parallel provisions of Tariff, Attachment K-Appendix, section 8.

**Pre-Expansion PJM Zones:**

“Pre-Expansion PJM Zones” shall be zones included in the 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, Mid-Atlantic Interstate Transmission, LLC (“MAIT”) (MAIT owns and operates the transmission facilities in the Metropolitan Edison Company Zone and the Pennsylvania Electric Company Zone), PECO Energy Company, Pennsylvania Power & Light Group, Potomac Electric Power Company, Public Service Electric and Gas Company, Allegheny Power, and Rockland Electric Company.

**Price Responsive Demand:**

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

**Primary Reserve:**

“Primary Reserve” shall mean the total reserve capability of generation resources that can be converted fully into energy or Demand Resources whose demand can be reduced within ten

minutes of a request from the Office of the Interconnection dispatcher, and is comprised of both Synchronized Reserve and Non-Synchronized Reserve.

**Primary Reserve Alert**

“Primary Reserve Alert” shall mean a notification from PJM to alert Members of an anticipated shortage of Operating Reserve capacity for a future critical period.

**Primary Reserve Requirement:**

“Primary Reserve Requirement” shall mean the megawatts required to be maintained in a Reserve Zone or Reserve Sub-zone as Primary Reserve, absent any increase to account for additional reserves scheduled to address operational uncertainty. The Primary Reserve Requirement is calculated in accordance with the PJM Manuals.

**Prior CIL Exception External Resource:**

“Prior CIL Exception External Resource” shall mean an external Generation Capacity Resource for which (1) a Capacity Market Seller had, prior to May 9, 2017, cleared a Sell Offer in an RPM Auction under the exception provided to the definition of Capacity Import Limit as set forth in RAA, Article I or (2) an FRR Entity committed, prior to May 9, 2017, in an FRR Capacity Plan under the exception provided in the definition of Capacity Import Limit. In the event only a portion (in MW) of an external Generation Capacity Resource has a Pseudo-Tie into the PJM Region, that portion of the external Generation Capacity Resource, which can include up to the maximum megawatt amount cleared in any prior RPM auction or committed in an FRR Capacity Plan (and no other portion thereof) is eligible for treatment as a Prior CIL Exception External Resource if such portion satisfies the requirements of the first sentence of this definition.

**Project Financing:**

“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.

**Project Finance Entity:**

“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.

**Projected PJM Market Revenues:**

“Projected PJM Market Revenues” shall mean a component of the Market Seller Offer Cap calculated in accordance with Tariff, Attachment DD, section 6.

**Proportional Multi-Driver Project:**

“Proportional Multi-Driver Project” shall have the same meaning provided in the Operating Agreement.

**Provisional Interconnection Service:**

“Provisional Interconnection Service” shall mean interconnection service provided by Transmission Provider associated with interconnecting the Interconnection Customer’s Generating Facility to Transmission Provider’s Transmission System and enabling that Transmission System to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Interconnection Service Agreement and, if applicable, the Tariff.

**Pseudo-Tie:**

“Pseudo-Tie” shall have the same meaning provided in the Operating Agreement.

**Public Policy Objectives:**

“Public Policy Objectives” shall have the same meaning provided in the Operating Agreement.

**Public Policy Requirements:**

“Public Policy Requirements” shall have the same meaning provided in the Operating Agreement.

**Qualifying Transmission Upgrade:**

“Qualifying Transmission Upgrade” shall mean a proposed enhancement or addition to the Transmission System that: (a) will increase the Capacity Emergency Transfer Limit into an LDA by a megawatt quantity certified by the Office of the Interconnection; (b) the Office of the Interconnection has determined will be in service on or before the commencement of the first Delivery Year for which such upgrade is the subject of a Sell Offer in the Base Residual Auction; (c) is the subject of a Facilities Study Agreement executed before the conduct of the Base Residual Auction for such Delivery Year and (d) a New Service Customer is obligated to fund through a rate or charge specific to such facility or upgrade.

**Queue Position:**

“Queue Position” shall mean the priority assigned to an Interconnection Request, a Completed Application, or an Upgrade Request pursuant to applicable provisions of Tariff, Part VI.

## **Definitions – R - S**

### **Ramping Capability:**

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

### **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.

### **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.

### **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.

### **Real-time Offer:**

“Real-time Offer” shall mean a new offer or an update to a Market Seller’s existing cost-based or market-based offer for a clock hour, submitted for use after the close of the Day-ahead Energy Market.

### **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.

### **Real-time Settlement Interval:**

“Real-time Settlement Interval” shall mean the interval used by settlements, which shall be every five minutes.

### **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.

### **Reasonable Efforts:**



“Reasonable Efforts” shall mean, with respect to any action required to be made, attempted, or taken by an Interconnection Party or by a Construction Party under Tariff, Part IV or Part VI, 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.

**Receiving Party:**

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

**Referral:**

“Referral” shall mean a formal report of the Market Monitoring Unit to the Commission for investigation of behavior of a Market Participant, of behavior of PJM, or of a market design flaw, pursuant to Tariff, Attachment M, section IV.I.

**Reference Resource:**

“Reference Resource” shall mean a combustion turbine generating station, configured with a *single* General Electric Frame 7HA turbine with *evaporative cooling*, Selective Catalytic Reduction technology all CONE Areas, dual fuel capability, and a heat rate of 9.134 Mmbtu/MWh.

**Regional Entity:**

“Regional Entity” shall have the same meaning specified in the Operating Agreement.

**Regional Transmission Expansion Plan:**

“Regional Transmission Expansion Plan” shall mean the plan prepared by the Office of the Interconnection pursuant to Operating Agreement, Schedule 6 for the enhancement and expansion of the Transmission System in order to meet the demands for firm transmission service in the PJM Region.

**Regional Transmission Group (RTG):**

“Regional Transmission Group” or “RTG” shall mean 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.

**Regulation:**

“Regulation” shall mean the capability of a specific generation resource or Demand Resource with appropriate telecommunications, control and response capability to separately increase and

decrease its output or adjust load in response to a regulating control signal, in accordance with the specifications in the PJM Manuals.

**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.

**Relevant Electric Retail Regulatory Authority:**

“Relevant Electric Retail Regulatory Authority” shall mean 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.

**Reliability Assurance Agreement or PJM Reliability Assurance Agreement:**

“Reliability Assurance Agreement” or “PJM 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. 44, and as amended from time to time thereafter.

**Reliability Pricing Model Auction:**

“Reliability Pricing Model Auction” or “RPM Auction” shall mean the Base Residual Auction or any Incremental Auction, or, for the 2016/2017 and 2017/2018 Delivery Years, any Capacity Performance Transition Incremental Auction.

**Required Transmission Enhancements:**

“Regional Transmission Enhancements” shall mean enhancements and expansions of the Transmission System that (1) a Regional Transmission Expansion Plan developed pursuant to Operating Agreement, Schedule 6 or (2) any joint planning or coordination agreement between PJM and another region or transmission planning authority set forth in Tariff, Schedule 12-Appendix B (“Appendix B Agreement”) designates one or more of the Transmission Owner(s) to construct and own or finance. Required Transmission Enhancements shall also include enhancements and expansions of facilities in another region or planning authority that 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 constructed pursuant to an Appendix B Agreement cost responsibility for which has been assigned at least in part to PJM pursuant to such Appendix B Agreement.

**Reserved Capacity:**

“Reserved Capacity” shall mean 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 Tariff, Part II. Reserved Capacity shall be expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis.

**Reserve Penalty Factor:**

“Reserve Penalty Factor” shall mean the cost, in \$/MWh, associated with being unable to meet a specific reserve requirement in a Reserve Zone or Reserve Sub-zone. A Reserve Penalty Factor will be defined for each reserve requirement in a Reserve Zone or Reserve Sub-zone.

**Reserve Sub-zone:**

“Reserve Sub-zone” shall mean any of those geographic areas wholly contained within a Reserve Zone, consisting of a combination of a portion 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, reserve service.

**Reserve Zone:**

“Reserve Zone” shall mean any of those geographic areas 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, reserve service.

**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, including the return to service of existing transmission capability, that was not modeled pursuant to Operating Agreement, Schedule 1, section 7.5 and the parallel provisions of Tariff, Attachment K-Appendix, section 7.5 in compliance with Operating Agreement, Schedule 1, section 7.4.2 (h) and the parallel provisions of Tariff, Attachment K-Appendix, section 7.4.2(h), and, if modeled, would have increased the amount of stage 1 Auction Revenue Rights allocated pursuant to Operating Agreement, Schedule 1, section 7.4.2 and the parallel provisions of Tariff, Attachment K-Appendix, section 7.4.2; provided that, the foregoing notwithstanding, Residual Auction Revenue Rights shall exclude: 1) Incremental Auction Revenue Rights allocated pursuant to Tariff, Part VI; and 2) Auction Revenue Rights allocated to entities that are assigned cost responsibility pursuant to Operating Agreement, Schedule 6 for transmission upgrades that create such rights.

**Residual Metered Load:**

“Residual Metered Load” shall mean all load remaining in an electric distribution company’s fully metered franchise area(s) or service territory(ies) after all nodally priced load of entities serving load in such area(s) or territory(ies) has been carved out.

**Resource Substitution Charge:**

“Resource Substitution Charge” shall mean a charge assessed on Capacity Market Buyers in an Incremental Auction to recover the cost of replacement Capacity Resources.

**Revenue Data for Settlements:**

“Revenue Data for Settlements” shall mean energy quantities used in accounting and billing as determined pursuant to Tariff, Attachment K-Appendix and the corresponding provisions of Operating Agreement, Schedule 1.

**RPM Seller Credit:**

“RPM Seller Credit” shall mean an additional form of Unsecured Credit defined in Tariff, Attachment Q, section IV.

**Scheduled Incremental Auctions:**

“Scheduled Incremental Auctions” shall refer to the First, Second, or Third Incremental Auction.

**Schedule of Work:**

“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.

**Scope of Work:**

“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.

**Seasonal Capacity Performance Resource:**

“Seasonal Capacity Performance Resource” shall have the same meaning specified in Tariff, Attachment DD, section 5.5A.

**Secondary Systems:**

“Secondary Systems” shall mean 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.

**Second Incremental Auction:**

“Second Incremental Auction” shall mean an Incremental Auction conducted ten months before the Delivery Year to which it relates.

**Security:**

“Security” shall mean the security provided by the New Service Customer pursuant to Tariff, section 212.4 or Tariff, Part VI, section 213.4 to secure the New Service Customer’s responsibility for Costs under the Interconnection Service Agreement or Upgrade Construction Service Agreement and Tariff, Part VI, section 217.

**Segment:**

“Segment” shall have the same meaning as described in Operating Agreement, Schedule 1, section 3.2.3(e).

**Self-Supply:**

“Self-Supply” shall mean Capacity Resources secured by a Load-Serving Entity, by ownership or contract, outside a Reliability Pricing Model Auction, and used to meet obligations under this Attachment or the Reliability Assurance Agreement through submission in a Base Residual Auction or an Incremental Auction of a Sell Offer indicating such Market Seller’s intent that such Capacity Resource be Self-Supply. Self-Supply may be either committed regardless of clearing price or submitted as a Sell Offer with a price bid. A Load Serving Entity's Sell Offer with a price bid for an owned or contracted Capacity Resource shall not be deemed “Self-Supply,” unless it is designated as Self-Supply and used by the LSE to meet obligations under this Attachment or the Reliability Assurance Agreement.

**Sell Offer:**

“Sell Offer” shall mean an offer to sell Capacity Resources in a Base Residual Auction, Incremental Auction, or Reliability Backstop Auction.

**Service Agreement:**

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

**Service Commencement Date:**

“Service Commencement Date” shall mean 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 Tariff, Part II, section 15.3 or Tariff, Part III, section 29.1.

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

“Short-Term Firm Point-To-Point Transmission Service” shall mean Firm Point-To-Point Transmission Service under Tariff, Part II with a term of less than one year.

**Short-term Project:**

“Short-term Project” shall have the same meaning provided in the Operating Agreement.

**Short-Term Resource Procurement Target:**

“Short-Term Resource Procurement Target” shall mean, for Delivery Years through May 31, 2018, as to the PJM Region, for purposes of the Base Residual Auction, 2.5% of the PJM Region Reliability Requirement determined for such Base Residual Auction, for purposes of the First Incremental Auction, 2% of the of the PJM Region Reliability Requirement as calculated at the time of the Base Residual Auction; and, for purposes of the Second Incremental Auction, 1.5% of the of the PJM Region Reliability Requirement as calculated at the time of the Base Residual Auction; and, as to any Zone, an allocation of the PJM Region Short-Term Resource Procurement Target based on the Preliminary Zonal Forecast Peak Load, reduced by the amount of load served under the FRR Alternative. For any LDA, the LDA Short-Term Resource Procurement Target shall be the sum of the Short-Term Resource Procurement Targets of all Zones in the LDA.

**Short-Term Resource Procurement Target Applicable Share:**

“Short-Term Resource Procurement Target Applicable Share” shall mean, for Delivery Years through May 31, 2018: (i) for the PJM Region, as to the First and Second Incremental Auctions, 0.2 times the Short-Term Resource Procurement Target used in the Base Residual Auction and, as to the Third Incremental Auction for the PJM Region, 0.6 times such target; and (ii) for an LDA, as to the First and Second Incremental Auctions, 0.2 times the Short-Term Resource Procurement Target used in the Base Residual Auction for such LDA and, as to the Third Incremental Auction, 0.6 times such target.

**Site:**

“Site” shall mean 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.

**Small Commercial Customer:**

“Small Commercial Customer,” as used in RAA, Schedule 6 and Tariff, Attachment DD-1, shall mean a commercial retail electric end-use customer of an electric distribution company that

participates in a mass market demand response program under the jurisdiction of a RERRA and satisfies the definition of a “small commercial customer” under the terms of the applicable RERRA’s program, provided that the customer has an annual peak demand no greater than 100kW.

**Small Generation Resource:**

“Small Generation Resource” shall mean an Interconnection Customer’s device of 20 MW or less for the production and/or storage for later injection of electricity identified in an Interconnection Request, but shall not include the Interconnection Customer’s Interconnection Facilities. This term shall include Energy Storage Resources and/or other devices for storage for later injection of energy.

**Small Inverter Facility:**

“Small Inverter Facility” shall mean an Energy Resource that is a certified small inverter-based facility no larger than 10 kW.

**Small Inverter ISA:**

“Small Inverter ISA” shall mean an agreement among Transmission Provider, Interconnection Customer, and Interconnected Transmission Owner regarding interconnection of a Small Inverter Facility under Tariff, Part IV, section 112B.

**Special Member:**

“Special Member” shall mean an entity that satisfies the requirements of Operating Agreement, Schedule 1, section 1.5A.02, and the parallel provisions of Tariff, Attachment K-Appendix, section 1.5A.02, or the special membership provisions established under the Emergency Load Response and Pre-Emergency Load Response Programs.

**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.

**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 Operating Agreement, Schedule 1, section 2, and the parallel provisions of Tariff, Attachment K-Appendix, section 2.

**Start Additional Labor Costs:**

“Start Additional Labor Costs” shall mean additional labor costs for startup required above normal station manning levels.

**Start-Up Costs:**

“Start-Up Costs” shall mean the unit costs to bring the boiler, turbine and generator from shutdown conditions to the point after breaker closure which is typically indicated by telemetered or aggregated state estimator megawatts greater than zero and is determined based on the cost of start fuel, total fuel-related cost, performance factor, electrical costs (station service), start maintenance adder, and additional labor cost if required above normal station manning. Start-Up Costs can vary with the unit offline time being categorized in three unit temperature conditions: hot, intermediate and cold.

**State:**

“State” shall mean the District of Columbia and any State or Commonwealth of the United States.

**State Commission:**

“State Commission” shall mean any state regulatory agency having jurisdiction over retail electricity sales in any State in the PJM Region.

**State Estimator:**

“State Estimator” shall mean the computer model of power flows specified in Operating Agreement, Schedule 1, section 2.3 and the parallel provisions of Tariff, Attachment K-Appendix, section 2.3.

**State of Charge:**

“State of Charge” shall mean the quantity of physical energy stored in an Energy Storage Resource Model Participant in proportion to its maximum State of Charge capability. State of Charge is quantified as defined in the PJM Manuals.

**State of Charge Management:**

“State of Charge Management” shall mean the control of State of Charge of an Energy Storage Resource Market Participant using minimum and maximum charge and discharge limits, changes in operating mode, charging and discharging offer curves, and self-scheduling of non-dispatchable purchases and sales of energy in the PJM markets. State of Charge Management shall not interfere with an Energy Storage Resource Model Participant’s obligation to follow PJM dispatch, consistent with all other resources.

**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 in association with restoration or black start service; or (iv) that is Direct Charging Energy.

**Sub-Annual Resource Constraint:**

“Sub-Annual Resource Constraint” shall mean, for the 2017/2018 Delivery Year and for FRR Capacity Plans the 2017/2018 and 2018/2019 Delivery Years, for the PJM Region or for each LDA for which the Office of the Interconnection is required under Tariff, Attachment DD, section 5.10(a) to establish a separate VRR Curve for a Delivery Year, a limit on the total amount of Unforced Capacity that can be committed as Limited Demand Resources and Extended Summer Demand Resources for the 2017/2018 Delivery Year in the PJM Region or in such LDA, calculated as the Sub-Annual Resource Reliability Target for the PJM Region or for such LDA, respectively, minus the Short-Term Resource Procurement Target for the PJM Region or for such LDA, respectively.

**Sub-Annual Resource Price Decrement:**

“Sub-Annual Resource Price Decrement” shall mean, for the 2017/2018 Delivery Year, a difference between the clearing price for Extended Summer Demand Resources and the clearing price for Annual Resources, representing the cost to procure additional Annual Resources out of merit order when the Sub-Annual Resource Constraint is binding.

**Sub-Annual Resource Reliability Target:**

“Sub-Annual Reliability Target” for the PJM Region or an LDA, shall mean the maximum amount of the combination of Extended Summer Demand Resources and Limited Demand Resources in Unforced Capacity determined by PJM to be consistent with the maintenance of reliability, stated in Unforced Capacity, that shall be used to calculate the Minimum Annual Resource Requirement for Delivery Years through May 31, 2017 and the Sub-Annual Resource Constraint for the 2017/2018 and 2018/2019 Delivery Years. As more fully set forth in the PJM Manuals, PJM calculates the Sub-Annual Resource Reliability Target, by first determining a reference annual loss of load expectation (“LOLE”) assuming no Demand Resources. The calculation for the unconstrained portion of the PJM Region uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast and iteratively shifting the load distributions to result in the Installed Reserve Margin established for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Installed Reserve Margin study for the Delivery Year in question). The calculation for each relevant LDA uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Capacity Emergency Transfer Objective study for the Delivery

Year in question). For the relevant LDA calculation, the weekly capacity distributions are adjusted to reflect the Capacity Emergency Transfer Limit for the Delivery Year in question.

For both the PJM Region and LDA analyses, PJM then models the commitment of varying amounts of DR (displacing otherwise committed generation) as interruptible from May 1 through October 31 and unavailable from November 1 through April 30 and calculates the LOLE at each DR level. The Extended Summer DR Reliability Target is the DR amount, stated as a percentage of the unrestricted peak load, that produces no more than a ten percent increase in the LOLE, compared to the reference value. The Sub-Annual Resource Reliability Target shall be expressed as a percentage of the forecasted peak load of the PJM Region or such LDA and is converted to Unforced Capacity by multiplying [the reliability target percentage] times [the Forecast Pool Requirement] times [the DR Factor] times [the forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].

**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.

**Summer-Period Capacity Performance Resource:**

“Summer-Period Capacity Performance Resource” shall have the same meaning specified in Tariff, Attachment DD, section 5.5A.

**Surplus Interconnection Customer:**

“Surplus Interconnection Customer” shall mean either an Interconnection Customer whose Generating Facility is already interconnected to the PJM Transmission System or one of its affiliates, or an unaffiliated entity that submits a Surplus Interconnection Request to utilize Surplus Interconnection Service within the Transmission System in the PJM Region. A Surplus Interconnection Customer is not a New Service Customer.

**Surplus Interconnection Request:**

“Surplus Interconnection Request” shall mean a request submitted by a Surplus Interconnection Customer, pursuant to Tariff, Attachment RR, to utilize Surplus Interconnection Service within the Transmission System in the PJM Region. A Surplus Interconnection Request is not a New Service Request.

**Surplus Interconnection Service:**

“Surplus Interconnection Service” shall mean any unneeded portion of Interconnection Service established in an Interconnection Service Agreement, such that if Surplus Interconnection

Service is utilized, the total amount of Interconnection Service at the Point of Interconnection would remain the same.

**Switching and Tagging Rules:**

“Switching and Tagging Rules” shall mean the switching and tagging procedures of Interconnected Transmission Owners and Interconnection Customer as they may be amended from time to time.

**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.

**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 in one or more specified Reserve Zones or Reserve Sub-zones, within ten minutes, to increase the energy output or reduce load by the amount of assigned or self-scheduled Synchronized Reserve capability.

**Synchronized Reserve Requirement:**

“Synchronized Reserve Requirement” shall mean the megawatts required to be maintained in a Reserve Zone or Reserve Sub-zone as Synchronized Reserve, absent any increase to account for additional reserves scheduled to address operational uncertainty. The Synchronized Reserve Requirement is calculated in accordance with the PJM Manuals.

**System Condition:**

“System Condition” shall mean 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 Tariff, Part II, section 13.6. Such conditions must be identified in the Transmission Customer’s Service Agreement.

**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 Operating Agreement, Schedule 1, section 2 and the parallel provisions of Tariff, Attachment K-Appendix, section 2.

**System Impact Study:**

“System Impact Study” shall mean 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.

**System Protection Facilities:**

“System Protection Facilities” shall refer to 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.

### **36.1 General:**

Generation Interconnection Requests and Transmission Interconnection Requests shall be governed by Tariff, Part IV, Subpart A, 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, to increase the capacity of generation already interconnected in, the PJM Region shall submit to the Transmission Provider a Generation Interconnection Request. The Transmission Provider shall acknowledge receipt of the Generation Interconnection Request (electronically when available to all parties, otherwise written) within five Business Days after receipt of the request and shall attach a copy of the received Generation Interconnection Request to the Transmission Provider's acknowledgment.

1. Generation Interconnection Request Requirements. To be assigned a PJM Queue Position pursuant to Tariff, Part IV, Preamble, section 201, a Generation Interconnection Customer must submit a complete and fully executed Generation Interconnection Feasibility Study Agreement, a form of which is located in the Tariff, Attachment N. To be considered complete at the time of submission, the Interconnection Customer's Generation Interconnection Feasibility Study Agreement must include, at a minimum, each of the following:
  - a. specification of the location of the proposed Generating Facility site or existing Generating Facility (include both a written description (e.g., street address, global positioning coordinates) and attach a map in PDF format depicting the property boundaries and the location of the generating unit site); and
  - b. evidence of an ownership interest in, or right to acquire or control the Generating Facility site for a minimum of three years, such as a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider; and
  - c. the MW size of the proposed Generating Facility or the amount of increase in MW capability of an existing Generating Facility, and identification of any MW portion of the facility's capability that will be a Capacity Resource; and
  - d. identification of the fuel type of the proposed generating unit or upgrade thereto; and
  - e. a description of the equipment configuration, and a set of preliminary electrical design specifications, and, if the generating unit is a wind generation facility, then the set of preliminary electrical design

specifications must depict the wind plant as a single equivalent generator;  
and

- f. the planned date the proposed generating unit or increase in MW capability of an existing generating unit will be in service, where such date is to be no more than seven years from the date that a complete and fully executed Generation Interconnection Feasibility Study Agreement is received by the Transmission Provider unless the Interconnection Customer demonstrates that engineering, permitting, and construction of the generating unit or increase in capability will take more than seven years; and
- g. any additional information as may be prescribed by the Transmission Provider in the PJM Manuals, including a description of how the full electrical generating capability of the generating unit will be limited to the Maximum Facility Output requested if the Maximum Facility Output of the generating unit is less than the full electrical generating capability of the Generating Facility; and
- h. if Behind The Meter Generation is identified in the Generation Interconnection Feasibility Study Agreement, all of the requirements in Tariff, Part IV, Subpart A, section 36.1A must also be met; and
- i. Deposit.
  - i. A deposit shall be submitted to Transmission Provider, as follows:
    - (1) Provided that the maximum total deposit amount for a Generation Interconnection Request submitted in the first four calendar months of the current New Services Queue shall not exceed \$110,000, a deposit of \$10,000 plus \$100 for each MW requested if the Generation Interconnection Request is received in the first four calendar months of the current New Services Queue; or
    - (2) Provided that the maximum total deposit amount for a Generation Interconnection Request submitted in the fifth calendar month of the current New Services Queue shall not exceed \$120,000, a deposit of \$20,000 plus \$150 for each MW requested if the Generation Interconnection Request is received in the fifth calendar month of the current New Services Queue; or
    - (3) Provided that the maximum total deposit amount for a Generation Interconnection Request submitted in the sixth calendar month of the current New Services Queue shall not exceed \$130,000 a deposit of \$30,000 plus \$200 for each MW requested, if the Generation Interconnection

Request is received in the sixth calendar month of the current New Services Queue.

- ii. 10% of each total deposit amount is non-refundable. Any unused non-refundable deposit monies shall be returned to the Generation Interconnection Customer upon Initial Operation. However, if, before reaching Initial Operation, the Generation Interconnection Customer withdraws its Generation Interconnection Request, or the Generation Interconnection Request is otherwise deemed rejected or terminated and withdrawn, any unused portion of the non-refundable deposit monies shall be used to fund:
  - (1) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices due to Transmission Provider, Interconnected Transmission Owner(s) and/or third party contractors, as applicable, as a result of any failure of the Interconnection Customer to pay actual costs for the Generation Interconnection Request and/or associated Queue Position; and/or
  - (2) Any restudies required as a result of the rejection, termination and/or withdrawal of such Generation Interconnection Request; and/or
  - (3) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Generation Interconnection Requests by the Interconnection Customer.
- iii. 90% of each total deposit amount is refundable, and the Transmission Provider shall utilize, in no particular order, the refundable portion of each total deposit amount to cover the following:
  - (1) The cost of the Queue Position acceptance review; and
  - (2) The cost of the deficiency review of the Interconnection Customer's Generation Interconnection Request (to determine whether the Generation Interconnection Request is valid); and
  - (3) The dollar amount of the Interconnection Customer's cost responsibility for the Generation Interconnection Feasibility Study; and
  - (4) If the Generation Interconnection Request is deemed to be modified (pursuant to Tariff, Part IV, Subpart A, section 36.2A), rejected, terminated and/or withdrawn during the

deficiency review and/or deficiency response period (as described further below), or during the Feasibility Study period, the refundable deposit money shall be applied to cover all of the costs incurred by the Transmission Provider up to the point of such Generation Interconnection Request being modified, rejected, terminated and/or withdrawn, and any remaining refundable deposit monies shall be applied to cover:

- (a) The costs of any restudies required as a result of the modification (pursuant to Tariff, Part IV, Subpart A, section 36.2A), rejection, termination and/or withdrawal of such Generation Interconnection Request; and/or
  - (b) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices due to Transmission Provider, Interconnected Transmission Owner(s) and/or third party contractors, as applicable, as a result of any failure of the Interconnection Customer to pay actual costs for the Generation Interconnection Request and/or associated Queue Position; and/or
  - (c) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Generation Interconnection Requests by the Interconnection Customer.
  - (d) If any refundable deposit monies remain after all costs and outstanding monies owed, as described in this section, are covered, such remaining refundable deposit monies shall be returned to the Generation Interconnection Customer in accordance with the PJM Manuals.
- iv. Upon completion of the Feasibility Study, the Transmission Provider shall apply any remaining refundable deposit monies toward:
- (1) The Interconnection Customer's cost responsibility for any other studies conducted for the Generation Interconnection Request under Tariff, Part VI, which shall be applied prior to the deposit monies collected for such other studies; and/or



- (2) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior Generation Interconnection Requests by the Interconnection Customer.
  - v. If any refundable deposit monies remain after the Feasibility Study is complete and any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Generation Interconnection Requests by the Interconnection Customer have been paid, such remaining deposit monies shall be returned to the Generation Interconnection Customer.
  - vi. The Interconnection Customer must submit the total required deposit amount with the Generation Interconnection Request. If the Interconnection Customer fails to submit the total required deposit amount with the Generation Interconnection Request, the Generation Interconnection Request shall be deemed to be terminated and withdrawn (i.e., the Generation Interconnection Request shall be terminated prior to reaching the deficiency review stage).
  - vii. Deposit monies are non-transferrable. Under no circumstances may refundable or non-refundable deposit monies for a specific Interconnection Request or Queue Position be applied in whole or in part to a different New Service Request or Interconnection Request or Queue Position.
  - j. Primary frequency response operating range for Energy Storage Resources.
2. Deficiency Review. Within five Business Days of the Interconnection Customer submitting a Generation Interconnection Request, Transmission Provider shall provide a deficiency review of the Generation Interconnection Request to determine whether the Interconnection Customer submitted a valid Generation Interconnection Request.
- a. With the exception of evidence of an ownership interest in, or right to acquire or control the generating unit site for a minimum of three years, if a Generation Interconnection Request meets all requirements set forth above the Transmission Provider shall start the deficiency review. While deficiency reviews may commence for Generation Interconnection Requests that are submitted without site control evidence that is acceptable to the Transmission Provider, such Generation Interconnection Requests shall not be assigned a Queue Position until the Transmission Provider receives site control evidence that is acceptable to the Transmission Provider.

- b. Pursuant to Section 9, Cost Responsibility, of the Generation Interconnection Feasibility Study Agreement (Tariff, Attachment N), if the Transmission Provider anticipates that the actual study costs will exceed the refundable portion of the required deposit, the Transmission Provider shall provide the Interconnection Customer with an estimate of the additional study costs. The estimated additional study costs are non-binding, and additional actual study costs may exceed the estimated additional study cost increases provided by the Transmission Provider. Regardless of whether the Transmission Provider provides the Interconnection Customer with estimated additional study costs, the Interconnection Customer is responsible for and must pay all actual study costs.
  - i. If the Transmission Provider sends the Interconnection Customer notification of estimated additional study costs during the deficiency review period (as described below), then the Interconnection Customer must either:
    - (1) Withdraw the Generation Interconnection Request during the deficiency response period (as described below); or
    - (2) Pay all estimated additional study costs prior to the expiration of the deficiency response period (as described below).
    - (3) If the Interconnection Customer fails to complete either (1) or (2) above, the Generation Interconnection Request shall be deemed to be terminated and withdrawn.
  - ii. If at any time after the deficiency review period the Transmission Provider provides the Interconnection Customer with notification of estimated additional study costs, the Interconnection Customer must pay such estimated additional study costs within ten Business Days of Transmission Provider sending the Interconnection Customer notification of such estimated additional study costs. If the Interconnection Customer fails to pay such estimated additional study costs within ten Business Days of Transmission Provider sending the Interconnection Customer notification of such estimated additional study costs, then the Generation Interconnection Request shall be deemed to be terminated and withdrawn.
- c. If there are deficiencies in the Generation Interconnection Request for any of the requirements set forth above, the Transmission Provider shall notify the Interconnection Customer (electronically when available to all parties, otherwise written) within five Business Days of receipt of the Generation

Interconnection Request that such Generation Interconnection Request is deficient. This notification is referred to as a deficiency notice.

- i. The deficiency notice shall clearly set forth the basis upon which the deficiency determination was made.
  - ii. The Interconnection Customer shall be provided ten Business Days to respond to the deficiency notice. This ten Business Day period is referred to as the deficiency response period.
    - (1) Within the deficiency response period, the Interconnection Customer shall provide, in full, the additional information and/or evidence (such as generation site control) and/or monies that the Transmission Provider's deficiency notice identified as being required to constitute a valid Generation Interconnection Request.
    - (2) If the Interconnection Customer fails to clear within the deficiency response period all deficiencies identified by the Transmission Provider in the deficiency notice, the Generation Interconnection Request shall be deemed to be terminated and withdrawn.
  - iii. Without regard to the timing of the Interconnection Customer's deficiency response period, the Transmission Provider shall have an additional five Business Days to review each Interconnection Customer's response to the deficiency notice. If the Generation Interconnection Request is still deficient after the Transmission Provider's additional five Business Day review and the full ten Business Days of the Interconnection Customer's deficiency response period have expired, the Generation Interconnection Request shall be deemed to be terminated and withdrawn.
  - iv. If the Interconnection Customer fails to respond in full to the Transmission Provider's deficiency notice (including failing to provide all of the additional required information, evidence and/or make payments on any outstanding invoices required by the Transmission Provider's deficiency notice), the Generation Interconnection Request shall be deemed to be terminated and withdrawn.
3. Any Queue Position for which an Interconnection Customer has not cleared the deficiencies before the close of the relevant New Services Queue shall be deemed to be terminated and withdrawn, even if the deficiency response period for such Queue Position does not expire until after the close of the relevant New Services Queue.

4. In accordance with Tariff, Part VI, Preamble, section 201, the Transmission Provider shall assign Queue Positions as of the date and time of receipt of all information required pursuant to section 36.1.01 above. If the information required pursuant to section 36.1.01 above is provided to the Transmission Provider in separate submissions, the Queue Position shall be assigned based on the date and time of receipt of the last required piece of information.
5. Deficiency notices shall be considered cleared as of the date and time the Transmission Provider receives from the Interconnection Customer the last piece of required information deemed acceptable by the Transmission Provider to clear such deficiency notice.
6. Transmission Provider Website Postings.
  - a. The Transmission Provider shall maintain on the Transmission Provider's website a list of all Generation Interconnection Requests that identifies:
    - i. the proposed maximum summer and winter megawatt electrical output;
    - ii. the location of the generation by county and state;
    - iii. the station or transmission line or lines where the interconnection will be made;
    - iv. the facility's projected date of Initial Operation;
    - v. the status of the Generation Interconnection Request, including its Queue Position;
    - vi. the type of Generation Interconnection Service requested;
    - vii. the availability of any studies related to the Interconnection Request;
    - viii. the date of the Generation Interconnection Request;
    - ix. the type of Generating Facility to be constructed (combined cycle, base load or combustion turbine and fuel type); and
    - x. for each Generation Interconnection Request that has not resulted in a completed interconnection, an explanation of why it was not completed.
  - b. This list will not disclose the identity of the Generation Interconnection Customer, except as otherwise provided in Tariff, Part IV. The list and the priority of Generation Interconnection Requests shall be included on the Transmission Provider's 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 Tariff, Part IV, Subpart G 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 shall submit to the Transmission Provider a Transmission Interconnection Request. The Transmission Provider shall acknowledge receipt of the Transmission Interconnection Request (electronically when available to all parties, otherwise written) within five Business Days after receipt of the request and shall attach a copy of the received Transmission Interconnection Request to the Transmission Provider's acknowledgment.

1.      Transmission Interconnection Request Requirements. To be assigned a PJM Queue Position pursuant to Tariff, Part VI, Preamble, section 201, a Transmission Interconnection Customer must submit a complete and fully executed Transmission Interconnection Feasibility Study Agreement, a form of which is located in the Tariff, Attachment S. To be considered complete at the time of submission, the Interconnection Customer's Transmission Interconnection Feasibility Study Agreement must include, at a minimum, each of the following:
  - a.      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; and
  - b.      a description of the proposed Merchant Transmission Facilities; and
  - c.      the nominal capability or increase in capability (in megawatts) of the proposed Merchant Transmission Facilities; and
  - d.      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; and
  - e.      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; and

- i. Transmission Injection Rights and/or Transmission Withdrawal Rights, or
  - ii. 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;
- f. if the Transmission Interconnection Customer will be eligible to receive Incremental Deliverability Rights under Tariff, Part VI, Subpart C, section 235, 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; and
- g. any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; and
- h. Deposit.
- i. A deposit shall be submitted to the Transmission Provider as follows:
    - (1) Provided that the maximum total deposit amount for a Transmission Interconnection Request submitted in the first four calendar months of the current New Services Queue shall not exceed \$110,000, a deposit of \$10,000 plus \$100 for each MW requested if the Transmission Interconnection Request is received in the first four calendar months of the current New Services Queue; or
    - (2) Provided that the maximum total deposit amount for a Transmission Interconnection Request submitted in the fifth calendar month of the current New Services Queue shall not exceed \$120,000, a deposit of \$20,000 plus \$150 for each MW requested if the Transmission Interconnection Request is received within the fifth calendar month of the current New Services Queue; or
    - (3) Provided that the maximum total deposit amount for a Transmission Interconnection Request submitted in the sixth calendar month of the current New Services Queue shall not exceed \$130,000, a deposit of \$30,000 plus \$200 for each MW requested, if the Transmission

Interconnection Request is received within the sixth calendar month of the current New Services Queue.

- ii. 10% of each total deposit amount is non-refundable. Any unused non-refundable deposit monies shall be returned to the Transmission Interconnection Customer upon Initial Operation. However, if, before reaching Initial Operation, the Transmission Interconnection Customer withdraws its Transmission Interconnection Request, or the Transmission Interconnection Request is otherwise deemed rejected or terminated and withdrawn, any unused portion of the non-refundable deposit monies shall be used to fund:
  - (1) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices due to Transmission Provider, Interconnected Transmission Owner(s) and/or third party contractors, as applicable, as a result of any failure of the Interconnection Customer to pay actual costs for the Transmission Interconnection Request and/or associated Queue Position; and/or
  - (2) Any restudies required as a result of the rejection, termination and/or withdrawal of such Transmission Interconnection Request; and/or
  - (3) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Transmission and/or Generation Interconnection Requests by the Interconnection Customer.
  
- iii. 90% of each total deposit amount is refundable, and the Transmission Provider shall utilize, in no particular order, the refundable portion of each total deposit amount to cover the following:
  - (1) The cost of the Queue Position acceptance review; and
  - (2) The cost of the deficiency review of the Interconnection Customer's Transmission Interconnection Request (to determine whether the Transmission Interconnection Request is valid); and
  - (3) The dollar amount of the Interconnection Customer's cost responsibility for the Transmission Interconnection Feasibility Study; and

(4) If the Transmission Interconnection Request is deemed to be modified (pursuant to Tariff, Part IV, Subpart A, section 36.2A), rejected, terminated and/or withdrawn during the deficiency review and/or deficiency response period (as described further below), or during the Feasibility Study period, the refundable deposit money shall be applied to cover all of the costs incurred by the Transmission Provider up to the point of such Transmission Interconnection Request being modified, rejected, terminated and/or withdrawn, and any remaining refundable deposit monies shall be applied to cover:

(a) The costs of any restudies required as a result of the modification, rejection termination and/or withdrawal of such Transmission Interconnection Request; and/or

(b) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices due to Transmission Provider, Interconnected Transmission Owner(s) and/or third party contractors, as applicable, as a result of any failure of the Interconnection Customer to pay actual costs for the Transmission Interconnection Request and/or associated Queue Position; and/or

(c) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Transmission and/or Generation Interconnection Requests by the Interconnection Customer.

(d) If any refundable deposit monies remain after all costs and outstanding monies owed, as described in this section, are covered, such remaining refundable deposit monies shall be returned to the Interconnection Customer in accordance with the PJM Manuals.

iv. Upon completion of the Transmission Interconnection Feasibility Study, the Transmission Provider shall apply any remaining refundable deposit monies toward:

(1) The Interconnection Customer's cost responsibility for any other studies conducted for the Transmission Interconnection Request under Tariff, Part VI, which shall



be applied prior to the deposit monies collected for such other studies; and/or

- (2) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Transmission and/or Generation Interconnection Requests by the Interconnection Customer.
  - v. If any refundable deposit monies remain after the Feasibility Study is complete and any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Transmission and/or Generation Interconnection Requests by the Interconnection Customer have been paid, such remaining deposit monies shall be returned to the Interconnection Customer.
  - vi. The Interconnection Customer must submit the total required deposit amount with the Transmission Interconnection Request. If the Interconnection Customer fails to submit the total required deposit amount with the Transmission Interconnection Request, the Transmission Interconnection Request shall be deemed to be terminated and withdrawn (i.e., the Transmission Interconnection Request shall be terminated prior to reaching the deficiency review stage).
  - vii. Deposit monies are non-transferrable. Under no circumstances may refundable or non-refundable deposit monies for a specific Interconnection Request or Queue Position be applied in whole or in part to a different New Service Request or Interconnection Request or Queue Position.
2. Deficiency Review. Within five Business Days of the Interconnection Customer submitting a Transmission Interconnection Request, the Transmission Provider shall provide a deficiency review of the Transmission Interconnection Request to determine whether the Interconnection Customer submitted a valid Transmission Interconnection Request.
- a. If a Transmission Interconnection Request meets all requirements set forth above, the Transmission Provider shall start the deficiency review.
  - b. Pursuant to Section 9, Cost Responsibility, of the Transmission Interconnection Feasibility Study Agreement (Tariff, Attachment S), if the Transmission Provider anticipates that the actual study costs will exceed the refundable portion of the required deposit, the Transmission Provider shall provide the Interconnection Customer with an estimate of the additional study costs. The estimated additional study costs are non-

binding, and additional actual study costs may exceed the estimated additional study cost increases provided by the Transmission Provider. Regardless of whether the Transmission Provider provides the Interconnection Customer with estimated additional study costs, the Interconnection Customer is responsible for and must pay all actual study costs.

- i. If the Transmission Provider sends the Interconnection Customer notification of estimated additional study costs during the deficiency review period (as described below), then the Interconnection Customer must either:
  - (1) Withdraw the Interconnection Request during the deficiency response period (as described below); or
  - (2) Pay all estimated additional study costs prior to the expiration of the deficiency response period (as described below).
  - (3) If the Interconnection Customer fails to complete either (1) or (2) above, the Transmission Interconnection Request shall be deemed to be terminated and withdrawn.
- ii. If at any time after the deficiency review period the Transmission Provider provides the Interconnection Customer with notification of estimated additional study costs, the Interconnection Customer must pay such estimated additional study costs within ten Business Days of Transmission Provider sending the Interconnection Customer notification of such estimated additional study costs. If the Interconnection Customer fails to pay such estimated additional study costs within ten Business Days of Transmission Provider sending the Interconnection Customer notification of such estimated additional study costs, then the Transmission Interconnection Request shall be deemed to be terminated and withdrawn.
- c. If there are deficiencies in the Transmission Interconnection Request for any of the requirements set forth above, the Transmission Provider shall notify the Interconnection Customer (electronically when available to all parties, otherwise written) within five Business Days of receipt of the Transmission Interconnection Request that such Transmission Interconnection Request is deficient. This notification is referred to as a deficiency notice.
  - i. The deficiency notice shall clearly set forth the basis upon which the deficiency determination was made.

- ii. The Interconnection Customer shall be provided ten Business Days to respond to the deficiency notice. This ten Business Day period is referred to as the deficiency response period.
    - (1) Within the deficiency response period, the Interconnection Customer shall provide, in full, the additional information and/or monies that the Transmission Provider's deficiency notice identified as being required to constitute a valid Transmission Interconnection Request.
    - (2) If the Interconnection Customer fails to clear within the deficiency response period all deficiencies identified by the Transmission Provider in the deficiency notice, the Transmission Interconnection Request shall be deemed to be terminated and withdrawn.
  - iii. Without regard to the timing of the Interconnection Customer's deficiency response period, the Transmission Provider shall have an additional five Business Days to review the Interconnection Customer's response to the deficiency notice. If the Transmission Interconnection Request is still deficient after the Transmission Provider's additional five Business Day review and the full ten Business Days of the Interconnection Customer's deficiency response period have expired, the Transmission Interconnection Request shall be deemed to be terminated and withdrawn.
  - iv. If the Interconnection Customer fails to respond in full to the Transmission Provider's deficiency notice (including failing to provide all of the additional required information, evidence and/or make payments on any outstanding invoices required by the Transmission Provider's deficiency notice), the Transmission Interconnection Request shall be deemed to be terminated and withdrawn.
3. Any Queue Position for which an Interconnection Customer has not cleared the deficiencies before the close of the relevant New Services Queue shall be deemed to be terminated and withdrawn, even if the deficiency response period for such Queue Position does not expire until after the close of the relevant New Services Queue.
  4. The Transmission Provider shall assign Queue Positions pursuant to Tariff, Part VI, Preamble, section 201 on the date and time of receipt of all the required information set forth in this section 36.1.03 above.
  5. Deficiencies shall be considered cleared as of the date and time the Transmission Provider receives from the Interconnection Customer the last piece of required

information deemed acceptable by the Transmission Provider to clear such deficiency notice.

6. Adjacent Control Area Stipulation. If applicable, within 30 calendar days of submitting its Transmission Interconnection Request, the Interconnection Customer shall provide evidence acceptable to the Transmission Provider that Interconnection Customer has submitted a valid interconnection request with the adjacent Control Area(s) in which it is interconnecting. Transmission Interconnection Customer shall maintain its queue position(s) with such adjacent Control Area(s) throughout the entire PJM Transmission Interconnection Request process for the relevant PJM Transmission Interconnection Request. If Interconnection Customer fails to maintain its queue position(s) with such adjacent Control Area(s) throughout the entire PJM Transmission Interconnection Request process for the relevant PJM Transmission Interconnection Request, the relevant PJM Transmission Interconnection Request shall be deemed to be terminated and withdrawn.
7. Transmission Provider Website Postings.
  - a. The Transmission Provider shall maintain on the Transmission Provider's website a list of all Transmission Interconnection Requests that identifies:
    - i. in megawatts the potential nominal capability or increase in capability;
    - ii. the location of the Merchant Transmission Facilities by county and state;
    - iii. the station or transmission line or lines where the interconnection will be made;
    - iv. the facility's projected date of Initial Operation;
    - v. the status of the Transmission Interconnection Request, including its Queue Position;
    - vi. the availability of any studies related to the Interconnection Request;
    - vii. the date of the Transmission Interconnection Request;
    - viii. the type of Merchant Transmission Facilities to be constructed; and
    - ix. for each Transmission Interconnection Request that has not resulted in a completed interconnection, an explanation of why it was not completed.

- b. This list will not disclose the identity of the Transmission Interconnection Customer, except as otherwise provided in Tariff, Part IV or Tariff, Part VI. The list and the priority of Transmission Interconnection Requests shall be included on the Transmission Provider's website as a part of the New Services Queue.

### **36.1.03A Transmission Interconnection Customers Requesting Merchant Network Upgrades**

Notwithstanding section 36.1.03 above, an Interconnection Customer that proposes Merchant Network Upgrades (including advancing pursuant to Tariff, Part VI, Subpart B, section 220 or accelerating 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 Operating Agreement, Schedule 6) shall submit an Upgrade Request, with the required information and the required deposit for a System Impact Study, as set forth in Tariff, Attachment EE.

#### **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 Tariff, Part III. Capacity Resources also may participate in Reliability Pricing Model Auctions and in Ancillary Services markets pursuant to the 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 Operating Agreement, Schedule 1, section 1.7.4(i), 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.

#### **36.1.1A Service Below Generating Capability**

The Transmission Provider shall consider requests for Interconnection Service below the full electrical generating capability of the Generating Facility. These requests for Interconnection Service shall be studied at the level of Interconnection Service requested for purposes of determining Interconnection Facilities, Network Upgrades, and associated costs, but may be subject to other studies at the full electrical generating capability of the Generating Facility to ensure the safety and reliability of the system, with the study costs borne by the Interconnection

Customer. If after additional studies are complete, Transmission Provider determines that additional Network Upgrades are necessary, then Transmission Provider must: (i) specify which additional Network Upgrade costs are based on which studies; and (ii) provide a detailed explanation of why the additional Network Upgrades are necessary. Any Interconnection Facility and/or Network Upgrades costs required for safety and reliability also will be borne by the Interconnection Customer. Interconnection Customers may be subject to additional control technologies as well as testing and validation of these technologies as set forth in the Interconnection Service Agreement. The necessary control technologies and protection systems shall be established in Tariff, Attachment O, Schedule K (Requirements for Interconnection Service Below Full Electrical Generating Capability) of the executed, or requested to be filed unexecuted Interconnection Service Agreement.

### **36.1.1B Surplus Interconnection Service Request**

Requests for Surplus Interconnection Service may be made by the existing Interconnection Customer whose Generating Facility is already interconnected, or one of its affiliates, or by an unaffiliated Interconnection Customer. The existing Interconnection Customer or one of its affiliates has priority to use this service; however, if they do not exercise this priority, Surplus Interconnection Requests also may be made available to an unaffiliated Surplus Interconnection Customer. Surplus Interconnection Service is limited to utilizing or transferring an existing Generating Facility's Surplus Interconnection Service at the pre-existing Point of Interconnection of the existing Generating Facility and cannot exceed the existing Generating Facility's total amount of Interconnection Service, i.e., the total amount of Interconnection Service used by the Generating Facility requesting Surplus Interconnection Service and the existing Generating Facility shall not exceed the lesser of the Maximum Facility Output stated in the existing Generating Facility's Interconnection Service Agreement or the total "as-built capability" of the existing Generating Facility. If the Generating Facility requests Surplus Interconnection Service associated with an existing Generating Facility that is an Energy Resource, the Generating Facility requesting the Surplus Interconnection Service shall be an Energy Resource; and if the existing Generating Facility is a Capacity Resource, the Generating Facility requesting Surplus Interconnection Service associated with the Generating Facility may be an Energy Resource or a Capacity Resource (but only up to the amount of Capacity Interconnection Rights granted the existing Generating Facility). Surplus Interconnection Service cannot be granted if doing so would require new Network Upgrades or would have additional impacts affecting the determination of what Network Upgrades would be necessary to New Service Customers already in the New Services Queue or that have a material impact on short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability and response.

1. **Surplus Interconnection Request Requirements.** A Surplus Interconnection Customer seeking Surplus Interconnection Service must submit a complete and fully executed Surplus Interconnection Study Agreement, which form is located at Tariff, Attachment RR. To be considered complete at the time of submission, the Surplus Interconnection Customer's Surplus Interconnection Study Agreement must include, at a minimum, each of the following:

- a. Specification of the location of the proposed surplus generating unit site or existing surplus generating unit (include both a written description (e.g., street address, global positioning coordinates) and attach a map in PDF format depicting the property boundaries and the location of the generating unit site); and
- b. Evidence of an ownership interest in, or right to acquire or control the surplus generating unit site for a minimum of three years, such as a deed, option agreement, lease or other similar document acceptable to the Transmission Provider; and
- c. The MW size of the proposed surplus generating unit or the amount of increase in MW capability of an existing surplus generating unit; and Identification of the fuel type of the proposed surplus generating unit or upgrade thereto; and
- d. Identification of the fuel type of the proposed surplus generating unit or upgrade thereto; and
- e. A description of the equipment configuration, and a set of preliminary electrical design specifications, and, if the surplus generating unit is wind generation facility, then the set of preliminary electrical design specifications must depict the wind plant as a single equivalent generator; and
- f. The planned date the proposed surplus generating unit or increase in MW capability of an existing surplus generating unit will be in service; and
- g. Any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; and
- h. A description of the circumstances under which Surplus Interconnection Service will be available at the existing Generating Facility's Point of Interconnection; and
- i. A deposit in the amount of \$10,000 plus \$100 for each MW requested provided that the maximum total deposit amount for a Surplus Interconnection Request shall not exceed \$110,000; and
- j. Identification of the specific, existing Generating Facility already interconnected to the PJM Transmission System providing Surplus Interconnection Service, including whether the Surplus Interconnection Customer requesting Surplus Interconnection Service is the owner or affiliate of the existing Generating Facility; and

- k. If the Surplus Interconnection Customer is an unaffiliated third party, the Surplus Interconnection Customer must submit with its Surplus Interconnection Study Agreement the following information and documentation acceptable to the Transmission Provider:
  - i. Written evidence from the owner of the existing Generating Facility granting Surplus Interconnection Customer permission to utilize the existing Generating Facility's unused portion of Interconnection Service established in the existing Generating Facility's Interconnection Service Agreement; and
  - ii. Written documentation stating that the owner of the surplus generating unit and the owner of the existing Generating Facility will have entered into, prior to the owner of the existing Generating Facility executing a revised Interconnection Service Agreement, a shared facilities agreement between the owner of the existing Generating Facility and the owner of the surplus generating unit detailing their respective roles and responsibilities relative to the Surplus Interconnection Service.
- l. If an Energy Storage Resource, Surplus Interconnection Customer must submit primary frequency response operating range for the surplus generating unit.
- 2. Deficiency Review. Following the receipt of the Surplus Interconnection Study Agreement and requisite information and/or monies listed in section 36.1.1B.1.a – k above, Transmission Provider shall determine whether the listed requirements were submitted as valid or deficient. If deemed deficient by Transmission Provider, Surplus Interconnection Customer must submit the requisite information and/or monies acceptable to the Transmission Provider within ten Business Days of receipt of the Transmission Provider's notice of deficiency. Failure of the Interconnection Customer to timely provide information and/or monies identified in the deficiency notice shall result in the Surplus Interconnection Request being terminated and withdrawn. The Surplus Interconnection Service Request shall be considered valid as of the date and time the Transmission Provider receives from the Interconnection Customer the last piece of required information and/or monies deemed acceptable by the Transmission Provider to clear such deficiency notice.

**36.1.2 No Applicability to Transmission Service:**

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

**36.1.3 [Reserved]**



#### **36.1.4 [Reserved]**

#### **36.1.5 Scoping Meeting:**

After a valid Interconnection Request has been established, the 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 establishing a valid Interconnection Request, Transmission Provider shall offer to arrange, within seven Business Days of establishing such valid Interconnection Request, 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 establishment of a valid Interconnection Request if the valid Interconnection Request is established in the first four calendar months of the current New Services Queue; or within 30 days if the valid Interconnection Request is established within the fifth calendar month of the current New Services Queue; or in 20 days if the valid Interconnection Request is established 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 Tariff, Part VI, Subpart A, section 202.

#### **36.1.7 Base Case Data:**

Transmission Provider shall maintain base case power flow, short circuit and stability databases, including all underlying assumptions, and contingency list on a password-protected website, subject to the confidentiality provisions of Tariff, Part VI, Subpart B, section 223. In addition, Transmission Provider shall maintain base case power flows and underlying assumptions on a password-protected website. Such base case power flows and underlying assumptions should reasonably represent those used during the most recent interconnection study. Transmission Provider may require Interconnection Customers and password-protected website users to sign any required confidentiality agreement(s) 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 (i) generation projects and (ii) transmission projects, including merchant transmission projects, that are included in the then-current, approved Regional Transmission Expansion Plan.

## **36.2 Interconnection Feasibility Study:**

After receiving an Interconnection Request, a signed Generation Interconnection Feasibility Study Agreement or Transmission Interconnection Feasibility Study Agreement, as applicable, and the applicable deposit contained in Tariff, Part IV, Subpart A, section 36.1.01, Tariff, Part IV, Subpart A, section 36.1.03, Tariff, Part IV, Subpart G, section 110.1, Tariff, Part IV, Subpart G, section 111.1, and Tariff, Part IV, Subpart G, section 112.1 from the Interconnection Customer, and, if applicable, subject to the terms of Tariff, Part IV, Subpart A, section 36.1A.5, the Transmission Provider shall conduct an Interconnection Feasibility Study to make a preliminary determination of the type and scope of Attachment Facilities, Local Upgrades, and Network Upgrades that will be necessary to accommodate the Interconnection Request and to provide the Interconnection Customer a preliminary estimate of the time that will be required to construct any necessary facilities and upgrades and the Interconnection Customer's cost responsibility, estimated consistent with Tariff, Part VI, Subpart B, section 217. The Interconnection Feasibility Study assesses the practicality and cost of accommodating interconnection of the generating unit or increased generating capacity with the Transmission System. The analysis is limited to load-flow analysis of probable contingencies and, for Generation Interconnection Requests, short-circuit studies. This study also focuses on determining preliminary estimates of the type, scope, cost and lead time for construction of facilities required to interconnect the project. For a Generation Interconnection Customer, the Interconnection Feasibility Study may provide separate estimates of necessary facilities and upgrades and associated cost responsibility reflecting the Generating Facility being designated as either a Capacity Resource or an Energy Resource. Transmission Provider shall study the Interconnection Request at the level of service requested by the Interconnection Customer, unless otherwise required to study the full electrical generating capability of the Generating Facility due to safety or reliability concerns. For purposes of determining necessary interconnection facilities and network upgrades, the Feasibility Study shall consider the level of Interconnection Service requested by the Interconnection Customer, unless otherwise required to study the full electrical generating capability of the Generating Facility due to safety or reliability concerns. The study for the primary Point of Interconnection will be conducted as a cluster, within the project's New Services Queue. The study for the secondary Point of Interconnection will be conducted as a sensitivity analysis. The Transmission Provider shall provide a copy of the Interconnection Feasibility Study and, to the extent consistent with the Office of the Interconnection's confidentiality obligations in Operating Agreement, section 18.17, related work papers to the Interconnection Customer and the affected Transmission Owner(s). Upon completion, the Transmission Provider shall list the study and the date of the Interconnection Request to which it pertains on the Transmission Provider's website. To the extent required by Commission regulations, the Transmission Provider shall make the completed Interconnection Feasibility Study publicly available upon request, except that the identity of the Interconnection Customer shall remain confidential. The Transmission Provider shall conduct Interconnection Feasibility Studies two times each year.

The following applies to Interconnection Requests received on or before October 31, 2016:

For Interconnection Requests received during the six-month period ending October 31, the Transmission Provider shall use due diligence to complete Interconnection Feasibility Studies by

the last day of February. For Interconnection Requests received during the six-month period ending April 30 the Transmission Provider shall use due diligence to complete Interconnection Feasibility Studies by August 31. Following the closure of an interconnection queue on October 31 and April 30, the Transmission Provider will utilize the following one month period to conduct any remaining scoping meetings and assemble the necessary analysis models so as to initiate the performance of the Interconnection Feasibility Studies on December 1 and June 1, respectively. In the event that the Transmission Provider is unable to complete an Interconnection Feasibility Study within such time period, it shall so notify the affected Interconnection Customer and the affected Transmission Owner(s) and provide an estimated completion date along with an explanation of the reasons why additional time is needed to complete the study.

The following applies to Interconnection Requests received between November 1, 2016 and March 31, 2017:

For Interconnection Requests received during the five-month period ending March 31, the Transmission Provider shall use due diligence to complete Interconnection Feasibility Studies by July 31. Following the closure of the relevant New Services Queue on March 31, the Transmission Provider will utilize the following one month period to conduct any remaining scoping meetings and assemble the necessary analysis models so as to initiate the performance of the Interconnection Feasibility Studies on May 1. In the event that the Transmission Provider is unable to complete an Interconnection Feasibility Study within such time period, it shall so notify the affected Interconnection Customer and the affected Transmission Owner(s) and provide an estimated completion date along with an explanation of the reasons why additional time is needed to complete the study.

The following applies to Interconnection Requests received on or after April 1, 2017:

For Interconnection Requests received during the six-month period ending September 30, the Transmission Provider shall use due diligence to complete Interconnection Feasibility Studies by January 31. For Interconnection Requests received during the six-month period ending March 31, the Transmission Provider shall use due diligence to complete Interconnection Feasibility Studies by July 31. Following the closure of the relevant New Services Queues on September 30 and March 31, respectively, the Transmission Provider will utilize the following months of October and April, respectively, to conduct any remaining scoping meetings and assemble the necessary analysis models so as to initiate the performance of the Interconnection Feasibility Studies on November 1 and May 1, respectively. In the event that the Transmission Provider is unable to complete an Interconnection Feasibility Study within such time period, it shall so notify the affected Interconnection Customer and the affected Transmission Owner(s) and provide an estimated completion date along with an explanation of the reasons why additional time is needed to complete the study.

### **36.2.1 Substitute Point:**

If the Interconnection Feasibility Study reveals any result(s) not reasonably expected at the time of the Scoping Meeting, a substitute Point of Interconnection identified by the Interconnection

Customer, Transmission Provider, or the Interconnected Transmission Owner, and acceptable to the others, but which would not be a Material Modification, will be substituted for the Point of Interconnection identified in the Interconnection Feasibility Study Agreement. The substitute Point of Interconnection will be effected without loss of Queue Position and will be utilized in the ensuing System Impact Study.

### **36.2.2 Meeting with Transmission Provider:**

At the Interconnection Customer's request, Transmission Provider, the Interconnection Customer and the Interconnected Transmission Owner shall meet at a mutually agreeable time to discuss the results of the Interconnection Feasibility Study. Such meeting may occur in person or by telephone or video conference.

### **36.2.3 [Reserved]**

### **36.2A Modification of Interconnection Request:**

The Interconnection Customer shall submit to the Transmission Provider, in writing, any modification to its project that causes the project's capacity, location, configuration or technology to differ from any corresponding information provided in the Interconnection Request. The Interconnection Customer shall retain its Queue Position if the modification is in accordance with sections 36.2A.1, 36.2A.3 or 36.2A.6, or, if not in accordance with one of those sections, is determined not to be a Material Modification pursuant to section 36.2A.4 below. Notwithstanding the above, during the course of the Interconnection Studies, the Interconnection Customer, the Interconnected Transmission Owner, or Transmission Provider may identify changes to the planned interconnection that may improve the costs and benefits (including reliability) of the interconnection, and the ability of the proposed change to accommodate the Interconnection Request. To the extent the identified changes are acceptable to the Transmission Provider and Interconnection Customer, such acceptance not to be unreasonably withheld, Transmission Provider shall modify the project's Point of Interconnection, capacity, and/or configuration in accordance with such changes and shall proceed with any re-studies that Transmission Provider finds necessary in accordance with Tariff, Part VI, Subpart A, section 205.5 and/or Tariff, Part VI, Subpart A, section 207.2, as applicable, provided, however, that a change to the Point of Interconnection shall be permitted without loss of Queue Position only if it would not be a Material Modification.

The following language for 36.2A.1 and 36.2A.3 apply to Interconnection Requests which have entered the New Services Queue prior to May 1, 2012:

36.2A.1 Prior to return of the executed System Impact Study Agreement to the Transmission Provider, an Interconnection Customer may modify its project to reduce by up to 60 percent the electrical output (MW) (in the case of a Generation Interconnection Request) or by up to 60 percent of the transmission capability (in the case of a Transmission Interconnection Request) of the proposed project. For increases in generating capacity or transmission capability, the Interconnection Customer must submit a new Interconnection Request for the additional capability and shall be assigned a new Queue Position for the additional capability.

36.2A.2 After the System Impact Study Agreement is executed and prior to execution of the Interconnection Service Agreement, an Interconnection Customer may modify its project to reduce the electrical output (MW) (in the case of a Generation Interconnection Request) or the transmission capability (in the case of a Transmission Interconnection Request) of the proposed project by up to the larger of 20 percent of the capability considered in the System Impact Study or 50 MW.

The following language for 36.2A.1 and 36.2A.3 apply to Interconnection Requests which have entered the New Services Queue on or after May 1, 2012:

#### **36.2A.1 Modifications Prior to Executing A System Impact Study Agreement**

36.2A.1.1 Prior to the commencement of the Feasibility Study, an Interconnection Customer may request to reduce by up to 60 percent of the electrical generating facility capability or Maximum Facility Output (MW) (in the case of a Generation Interconnection Request), through either (1) decrease in plant size or (2) a decrease in interconnection service level (consistent with the process described in Tariff, Part IV, Subpart A, section 36.1.1A or the capability (in the case of a Transmission Interconnection Request) without losing its current Queue Position. For Interconnection Requests received in months one through five of the New Services Queue the Interconnection Customer must identify this change prior to the close of business on the last day of the sixth month of the New Services Queue. For Interconnection Requests received during the sixth month of the New Services Queue the Interconnection Customer must identify this change no later than close of business on the day following the completion of the scoping meeting.

36.2A.1.2 After the start of the Feasibility Study, but prior to the return of the executed System Impact Study Agreement to the Transmission Provider, an Interconnection Customer may modify its project to reduce the size of the project as provided in this section 36.2A.1.2, subject to the limitation described in section 36.2A.7 below. The Interconnection Customer may reduce its project by up to 15 percent of the electrical generating facility capability or Maximum Facility Output (MW) (in the case of a Generation Interconnection Request), through either (1) a decrease in plant size or (2) a decrease in interconnection service level (consistent with the process described in Tariff, Part IV, Subpart A, section 36.1.1A or capability (in the case of a Transmission Interconnection Request) of the proposed project. For a request to reduce by more than 15 percent, an Interconnection Customer must request the Transmission Provider to evaluate if such a change would be a Material Modification and the Transmission Provider will allow the Interconnection Customer to reduce the size of its project: (i) to any size if the Transmission Provider determines the change is not a Material Modification; or (ii) by up to 60 percent of the electrical generating facility capability or Maximum Facility Output (MW) (in the case of a Generation Interconnection Request), through either (1) a decrease in plant size or (2) a decrease in interconnection service level (consistent with the process described in Tariff, Part IV, Subpart A, section 36.1.1A) or capability (in the case of a Transmission Interconnection Request) if the Transmission Provider determines the change is a Material Modification, however, such a project that falls within this subsection (ii) would be removed from its current Queue Position and will be assigned a new Queue Position at the beginning of the subsequent queue and a new Interconnection Feasibility Study will be performed consistent with the timing of studies for projects submitted in the subsequent queue. All projects assigned such new Queue Positions will retain their priority with respect to each other in their newly assigned queue and with respect to all later queue projects in subsequent queues, but will lose their priority with respect to other projects in the queue to which they were previously assigned. For increases in generating capacity or transmission capability, the Interconnection Customer must submit a new Interconnection Request for the additional capability and shall be assigned a new Queue Position for the additional capability.

### **36.2A.2 Modification of an Interconnection Request for Technological Changes**

36.2A.2.1 For a request to modify a project to include a technological advancement, no later than the return of the executed Facilities Study Agreement (or, if a Facilities Study is not required, prior the return of an executed Interconnection Service Agreement) to the Transmission Provider, an Interconnection Customer may request to modify its Interconnection Request to include a Permissible Technological Advancement without losing its current Queue Position provided Interconnection Customer submits the new machine modeling data associated with such Permissible Technological Advancements no later than the return of the executed Facilities Study Agreement (or, if a Facilities Study is not required, prior to return of an executed Interconnection Service Agreement). The machine modeling data as specified in the PJM Manuals associated with the requested technological change must be submitted via the PJM website.

36.2A.2.2 For a request to modify an Interconnection Request to include a technological advancement that does not qualify as a Permissible Technological Advancement, prior to returning an executed Facilities Study Agreement (or, if a Facilities Study is not required, prior to returning an executed Interconnection Service Agreement) to the Transmission Provider, an Interconnection Customer may request in writing to modify its Interconnection Request to add a technological advancement. Such requests must also include machine modeling data as specified in the PJM Manuals and submitted via the PJM website. If PJM determines the data submitted with such request is incomplete or incorrect, PJM will reject such technological change request and the Interconnection Customer may resubmit its technological change request with the complete and/or accurate data. All technological advancement requests not qualifying as a Permissible Technological Advancement will require a study and be evaluated by the Transmission Provider to determine whether such change would constitute a Material Modification. Such evaluation will include an analysis of the short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability and response on subsequent-queued Interconnection Requests. If the Transmission Provider determines that the technological advancement is not a Material Modification, the Interconnection Customer may modify its Interconnection Request to include such technological advancement. If the Transmission Provider determines the change is a Material Modification, the Interconnection Customer must withdraw its technological advancement change request to retain its Queue Position or proceed with a new Interconnection Request with such technological change. PJM shall determine whether a technological advancement is a Material Modification within thirty (30) calendar days of receipt of the technological advancement request.

### **36.2A.3 Modifications After the System Impact Study Agreement but Prior to Executing an Interconnection Service Agreement**

After the System Impact Study Agreement is executed and prior to execution of the Interconnection Service Agreement, an Interconnection Customer may modify its project to reduce the size of the project as provided in this section 36.2A.3, subject to the limitation described in section 36.2A.7 below. The Interconnection Customer may reduce its project by the greater of 10 MW or 5 percent of the electrical generating facility capability or Maximum Facility Output (MW) (in the case of a Generation Interconnection Request), through either (1) a



decrease in plant size or (2) a decrease in interconnection service level (consistent with the process described in Tariff, Part IV, Subpart A, section 36.1.1A) or capability (in the case of a Transmission Interconnection Request) of the proposed project. For a request to reduce by more than the greater of 10 MW or 5 percent, an Interconnection Customer must request the Transmission Provider to evaluate if such a change would be a Material Modification and the Transmission Provider will allow the Interconnection Customer to reduce the size of its project: (i) to any size if the Transmission Provider determines the change is not a Material Modification; or (ii) by up to the greater of 50 MW or 20 percent of the electrical generating facility capability or Maximum Facility Output (MW) (in the case of a Generation Interconnection Request), through either (1) a decrease in plant size or (2) a decrease in interconnection service level (consistent with the process described in Tariff, Part IV, Subpart A, section 36.1.1A) or capability (in the case of a Transmission Interconnection Request) if the Transmission Provider determines the change is a Material Modification, however, such a project that falls within this subsection (ii) would be removed from its current Queue Position and will be assigned a new Queue Position at the beginning of the subsequent queue and a new System Impact Study will be performed consistent with the timing of studies for projects submitted in the subsequent queue. All projects assigned such new Queue Positions will retain their priority with respect to each other in their newly assigned queue and with respect to all later queue projects in subsequent queues, but will lose their priority with respect to other projects in the queue to which they were previously assigned.

#### **36.2A.4**

Prior to making any modifications other than those specifically permitted by sections 36.2A.1, 36.2A.3 and 36.2A.6, the Interconnection Customer may first request that the Transmission Provider evaluate whether such modification is a Material Modification. In response to the Interconnection Customer's request, the Transmission Provider shall evaluate the proposed modifications prior to making them and shall inform the Interconnection Customer in writing of whether the modification(s) would constitute a Material Modification. For purposes of this section 36.2A.4, any change to the Point of Interconnection (other than a change deemed acceptable under sections 36.1.5, 36.2.1, or 36.2A.1) or increase in generating capacity shall constitute a Material Modification. The Interconnection Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.

#### **36.2A.5**

Upon receipt of the Interconnection Customer's request for modification under section 36.2A.4, the Transmission Provider shall commence and perform any necessary additional studies as soon as practicable, but, except as otherwise provided in this Subpart A, the Transmission Provider shall commence such studies no later than thirty (30) calendar days after receiving notice of the Interconnection Customer's request. Any additional studies resulting from such modification shall be done at the Interconnection Customer's expense. Transmission Provider may require the Interconnection Customer to pay the estimated cost of such studies in advance.

#### **36.2A.6**

Extensions of less than three (3) cumulative years in the projected date of Initial Operation of the Customer Facility are not material and shall be handled through construction sequencing.

The proposed Commencement Date can be extended (i) after the scoping meeting, once study timing is fully understood, not to exceed seven (7) years; (ii) due to study delays; or (iii) due to associated Network Upgrade construction timing.

The following language applies to Interconnection Requests which have entered the New Services Queue on or after May 1, 2012.

### **36.2A.7**

An Interconnection Customer may be assigned a new queue position as provided for in sections 36.2A.1.2 or 36.2A.3 a total of two times for any single Interconnection Request. In the event that Interconnection Customer seeks to reduce the size of its project such that Transmission Provider determines the change is a material modification, and such change would result in the third assignment of a new queue position under sections 36.2A.1 .2 or 36.2A.3, then the Interconnection Request shall be terminated and withdrawn if the Interconnection Customer proceeds with such change.

### 36.4 Surplus Interconnection Study

After receiving a valid Surplus Interconnection Study Agreement seeking Surplus Interconnection Service and the requisite deposit set forth in Tariff, Part IV, Subpart A, section 36.1.1B.1.i from the Surplus Interconnection Customer, the Transmission Provider shall conduct a Surplus Interconnection Study.

- (1) Scope of Surplus Interconnection Study. A Surplus Interconnection Study shall consist of reactive power, short circuit/fault duty, stability analysis and any other appropriate analyses. Steady-state (thermal/voltage) analyses may be performed as necessary to ensure that all required reliability conditions are studied under off-peak conditions. Off-peak steady state analyses shall be performed to the required level necessary to demonstrate reliable operation of the Surplus Interconnection Service. The Transmission Provider shall use Reasonable Efforts to complete the Surplus Interconnection Study within one hundred eighty (180) days of determination of a valid Surplus Interconnection Service Request pursuant to Tariff, Part IV, Subpart A, section 36.1.1B. If the Transmission Provider is unable to complete the Surplus Interconnection Study within such time period, Transmission Provider shall notify the Surplus Interconnection Customer and provide an estimated completion date and an explanation of the reasons why the additional time is required.
- (2) Once the Surplus Interconnection Study is completed and Transmission Provider confirms that (i) no new Network Upgrades are required, (ii) there are no impacts affecting the determination of what upgrades are necessary for New Service Customers in the New Services Queue, and (iii) there are no material impacts on short circuit capability limits, steady-state thermal and voltage limits or dynamic system stability and response, the Transmission Provider shall issue the Surplus Interconnection Study to the Surplus Interconnection Customer. If the Surplus Interconnection Customer is an unaffiliated third party, PJM shall issue a Surplus Interconnection Study to the owner of the existing Generating Facility. A revised Interconnection Service Agreement will be prepared and issued to the owner of the existing Generating Facility within sixty (60) days of issuance of the Surplus Interconnection Study including the terms and conditions for Surplus Interconnection Service. Within sixty (60) days of receipt by the owner of the existing Generating Facility of the revised Interconnection Service Agreement, the owner of the existing Generating Facility will execute the revised Interconnection Service Agreement, request dispute resolution or request that the Interconnection Service Agreement be filed unexecuted in accordance with Tariff, Part VI, Subpart A, section 212.4.
- (3) If the Transmission Provider determines from the Surplus Interconnection Study that Network Upgrades may be required or there may be impacts affecting the determination of what upgrades are necessary for New Service Customers in the New Services Queue, or there may be material impacts on short circuit capability limits, steady-state thermal and voltage limits or dynamic system stability and

response, the Surplus Interconnection Request will be terminated and withdrawn upon issuance of the Surplus Interconnection Study.

(4) Deactivation of Existing Generating Facility

- a. Surplus Interconnection Service cannot be offered if the existing Generating Facility from which Surplus Interconnection is provided is deactivated or has submitted a Notice to Deactivate to Transmission Provider consistent with Tariff, Part V, before the surplus generating unit has commenced commercial operation.
- b. Limited Operation. A Generating Facility receiving Surplus Interconnection Service may continue to receive Surplus Interconnection Service for a period not to exceed one (1) year after the existing Generating Facility's Deactivation Date under the following conditions:
  - i. The surplus generating unit must have been studied by the Transmission Provider for the sole operation at the Point of Interconnection; and
  - ii. The owner of the existing Generating Facility must agree in writing that the Surplus Interconnection Customer may continue to operate at either its limited share of the existing Generating Facility's capability under its Interconnection Service Agreement or any level below such capability upon the deactivation of the existing Generating Facility.
- c. If the Surplus Interconnection Customer cannot satisfy the conditions of section 36.4.4(b) above, the revised Interconnection Service Agreement for the existing Generating Facility shall terminate consistent with the Interconnection Service Agreement terms of termination for a deactivated Generating Facility.

## 205.2 Scope of Studies:

The System Impact Study is a comprehensive regional analysis of the effect of adding to the Transmission System the new facilities and services contemporaneously proposed by New Service Customers and an evaluation of their impact on deliverability to the aggregate of PJM Network Load. The System Impact Study identifies the system constraints, identified with specificity by transmission element or flowgate, relating to each proposed new project and service included therein and the Attachment Facilities, Merchant Network Upgrades, Direct Assignment Facilities, Local Upgrades, Network Upgrades, and/or Contingent Facilities required to accommodate such projects. The System Impact Study provides refined and comprehensive estimates of cost responsibility and construction lead times for new facilities and system upgrades. The Transmission Provider, in its sole discretion, may determine to evaluate in the same System Impact Study two or more New Service Requests relating to interconnections, Upgrade Requests, or proposed new transmission services where the associated increases in service or capability are in electrical proximity to each other. The scope of the System Impact Study may include (a) an assessment of sub-area import deliverability, (b) an assessment of sub-area export deliverability, (c) an assessment of project related short circuit duty issues, (d) a contingency analysis consistent with NERC's and each Applicable Regional Entity's reliability criteria, (e) an assessment of regional transmission upgrades that most effectively meet identified needs, and (f) an analysis to determine cost allocation responsibility for required facilities and upgrades. In addition, each System Impact Study shall identify the system constraints, identified with specificity by transmission element or flowgate in accordance with the distribution factor effect, megawatt contribution or fault duty contribution, relating to the New Service Requests being evaluated in the study and, as applicable to each included request, the redispatch options, additional Direct Assignment Facilities, necessary Merchant Network Upgrades, Attachment Facilities, Local Upgrades, Network Upgrades and/or Contingent Facilities necessary to accommodate such request. For purposes of determining necessary Interconnection Facilities and Network Upgrades, the System Impact Study shall consider the level of Interconnection Service requested by the Interconnection Customer unless otherwise required to study the full electrical generating capability of the Generating Facility due to safety or reliability concerns. The System Impact Study report shall include the list and facility loading of all newly-identified reliability criteria violations or contributions to a previously-identified reliability criteria violation specific to the New Service Request. The System Impact Study shall refine and more comprehensively estimate each New Service Customer's cost responsibility (determined in accordance with Tariff, Part VI, Subpart B, section 217) for necessary facilities and upgrades than the estimates provided in the Interconnection Feasibility Study or the Firm Transmission Feasibility Study, if applicable. In the event that more than one New Service Request is evaluated in a study, the Transmission Provider may provide a series of estimates to each participating New Service Customer to reflect the customer's estimated cost responsibility based on varying assumptions regarding the number of New Service Customers that decide to continue their New Service Requests after completion of the System Impact Study. A description of the Transmission Provider's methodology for completing a System Impact Study for Completed Applications is provided in Tariff, Attachment D. If applicable, the System Impact Study for a Transmission Interconnection Customer shall also include a preliminary estimate of the Incremental Deliverability Rights associated with the customer's proposed Merchant Transmission Facilities.

## **205.2.1 Contingent Facilities**

Transmission Provider shall identify the Contingent Facilities to be provided to Interconnection Customer in the System Impact Study by reviewing unbuilt Interconnection Facilities and/or Network Upgrades (including those still subject to cost allocation in accordance with the PJM Manuals) associated with another Interconnection Customer with a higher queue priority upon which the Interconnection Customer's cost, timing and study findings are dependent and, if delayed or not built, could cause a need for interconnection restudies of the Interconnection Request or reassessment of the unbuilt Interconnection Facilities and/or Network Upgrades. The method for identifying Contingent Facilities shall be sufficiently transparent to determine why a specific Contingent Facility was identified and how it relates to the Interconnection Request. Transmission Provider shall include the list of the Contingent Facilities in the System Impact Study, Facilities Study, if applicable, and Interconnection Service Agreement, including why a specific Contingent Facility was identified and how it relates to the Interconnection Request. Transmission Provider shall also provide, upon request of the Interconnection Customer, the estimated Interconnection Facility and/or Network Upgrade costs and estimated in-service completion time of each identified Contingent Facility when this information is readily available and non-commercially sensitive.

## **207 Facilities Study Procedures:**

The Transmission Provider will conduct Facilities Studies relating to the New Service Requests that were evaluated in the corresponding System Impact Studies, to the extent such New Service Requests have not been terminated and withdrawn. The Transmission Provider shall use Reasonable Efforts to complete the Facilities Study and issue it to a New Service Customer within 180 days after receipt of an executed Facilities Study Agreement. If Transmission Provider determines that it will not meet the 180 day time frame for completing the Facilities Study, Transmission Provider shall notify New Service Customer as to the scheduled status of the Facilities Study. If Transmission Provider is unable to complete the Facilities Study and issue a Facilities Study within 180 days, it shall notify New Service Customer and provide an estimated completion date and an explanation of the reasons why additional time is required. When completed, the Facilities Studies will include, commensurate with the degree of engineering specificity on which the New Service Customer and Transmission Provider mutually agree as provided in the Facilities Study Agreement, good faith estimates of the cost, determined in accordance with Tariff, Part VI, Subpart B, section 217, (a) to be charged to each affected New Service Customer for the (i) Attachment Facilities, Merchant Network Upgrades or Direct Assignment Facilities, and (ii) the Local Upgrades and/or Network Upgrades that are necessary to accommodate each New Service Request evaluated in the study; (b) the time required to complete detailed design and construction of the facilities and upgrades; (c) a description of any site-specific environmental issues or requirements that could reasonably be anticipated to affect the cost or time required to complete construction of such facilities and upgrades; and (d) an assessment of project related system stability issues, if necessary. The Facilities Study will document the engineering design work necessary to begin construction of any required transmission facilities, including estimating the costs of the equipment, engineering, procurement and construction work needed to implement the conclusions of the System Impact Study in accordance with Good Utility Practice and, when applicable, identifying the electrical switching configuration of the connection equipment, including without limitation: the transformer, switchgear, meters, and other station equipment; and the nature and estimated costs of Attachment Facilities, Merchant Network Upgrades, Direct Assignment Facilities, Local Upgrades and/or Network Upgrades necessary to accommodate the New Service Request. For purposes of determining necessary Interconnection Facilities and Network Upgrades, the Facilities Study shall consider the level of Interconnection Service requested by the Interconnection Customer unless otherwise required to study the full electrical power generating capability of the Generating Facility due to safety or reliability concerns. The Facilities Study will also identify any potential control equipment for requests for Interconnection Service that are lower than the full electrical generating capability of the Generating Facility.

**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 Firm Transmission Feasibility 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, 204.1, 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 of \$ \_\_\_\_\_ 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 203 or 204 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.

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

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

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**{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:

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- 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.

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

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**{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.

## **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 Interconnection Feasibility Study, Upgrade Feasibility Study or Firm Transmission Feasibility 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 short circuit duty issues, (d) a contingency analysis consistent with NERC's and each Applicable Regional Entity's reliability criteria, (e) an assessment of regional transmission upgrades that most effectively meet identified needs, and (f) 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 website (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, 112.2, or 203 of the PJM Tariff. The refundable portion of the deposit described in Section 3 of this Agreement, paid by the New Service Customer pursuant to Sections 110.2, 111.2, 112.2, or 204.3A of the PJM Tariff, shall be applied toward the New Service Customer's System Impact Study cost responsibility. Pursuant to Section 204.3 of the PJM Tariff, during the acceptance review of this Agreement, in the event that the Transmission Provider anticipates that the New Service Customer's study cost responsibility will substantially exceed the refundable portion of the deposit, the Transmission Provider shall provide the New Service Customer with an estimate of the additional study costs and the New Service Customer's cost responsibility. The estimated additional study costs are non-binding, and additional actual study costs may exceed the estimated additional study cost increases provided by the Transmission Provider. Regardless of whether the Transmission Provider provides the New Service Customer with notification of estimated additional study costs, the New Service Customer is responsible for and must pay all actual study costs. If the Transmission Provider provides the New Service Customer with notification of estimated additional study costs, the New Service Customer must pay such estimated additional study costs within ten business days of Transmission Provider sending the New Service Customer notification of such estimated additional study costs. If the New Service Customer fails to pay such estimated additional study costs within ten business days of Transmission Provider sending the New Service Customer notification of such estimated additional study costs, then the New Service Request shall be deemed to be withdrawn and terminated.

### **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.  
2750 Monroe Blvd.  
Audubon, PA 19403

**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 become effective on the date it is executed by all parties 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

**ATTACHMENT N-2  
FORM OF  
FACILITIES STUDY AGREEMENT**

(PJM Queue Position #\_\_\_\_)

**RECITALS**

1. This Facilities Study Agreement ("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. Pursuant to Section 36.2 or Section 205 of the PJM Tariff, Transmission Provider has completed a Generation or Transmission Interconnection Feasibility Study or an Initial Study (as applicable) and a System Impact Study and has provided the results of those studies to New Service Customer.
3. Transmission Provider has informed New Service Customer that the estimated date for completion of a Facilities Study pursuant to Section 206 of the PJM Tariff is {date} and that New Service Customer's estimated cost responsibility for such Facilities Study, subject to revision as provided in this Agreement, is \$ \_\_\_\_\_.
4. New Service Customer desires that Transmission Provider commence a Facilities Study for the New Service Request with Queue Position {queue position}.

**PREVIOUS SUBMISSIONS**

**{For Interconnection Customers, use the following paragraph 5}**

5. 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 Feasibility Study Agreement, dated \_\_\_\_\_, by and between New Service Customer and Transmission Provider, and to the extent supplemented as set forth in section 4 of the System Impact Study Agreement, dated \_\_\_\_\_, by and between New Service Customer and Transmission Provider, is accurate and complete as of the date of execution of this Facilities Study Agreement.

**{For New Service Customers other than Interconnection Customers use the following paragraph 5}**

5. Except as otherwise specifically set forth in an attachment to this Agreement, New Service Customer represents and warrants that the information provided in section 4 of the System Impact Study Agreement, dated \_\_\_\_\_, by and between New Service Customer and Transmission Provider, is accurate and complete as of the date of execution of this Facilities Study Agreement.



## **MILESTONES**

6. Pursuant to Section 206.1 of the PJM Tariff, the parties agree that New Service Customer must meet the following milestone dates relating to the development of its generation or merchant transmission project(s) or New Service Request, as applicable, in order to retain the assigned Queue Position of its New Service Request(s) (as established pursuant to Section 201 of the PJM Tariff) while Transmission Provider is completing the Facilities Study:

### **[Specify Project Specific Milestones]**

**[As appropriate include the following standard Milestones, with any revisions necessary for the project at hand]**

- 6.1 Unless New Service Customer previously specified, in its initial drawing submitted to Transmission Provider, the location of the high-side of the generator step-up transformer, then on or before \_\_\_\_\_, New Service Customer must provide evidence of an ownership interest in, or right to acquire or control the location which shall be on the high voltage side of the Customer Facility generator step-up transformer(s), or in the case of a Customer Facility with a single step-up transformer for multiple generators, the high voltage side of the facility step-up transformer. The evidence of site control shall be a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider.
- 6.2 To the extent New Service Customer intends to elect the Option to Build as provided in Appendix 2 to Attachment P of the Tariff, and to the extent any new or additional property is required to accommodate required Attachment Facilities and/or network substation, on or before \_\_\_\_\_, New Service Customer must provide evidence of an ownership interest in, or right to acquire or control the location which shall be the location of the network substation which shall be built and subsequently transferred to the Interconnected Transmission Owner. The evidence of site control shall be a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider.

### **[Add Additional Project Specific Milestones as appropriate]**

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Should New Service Customer fail to achieve any of the foregoing milestones, its New Service Request(s) shall be deemed to be withdrawn and terminated and it will have to resubmit its New Service Request(s) for reassignment of a Queue Position and re-initiation of the New Service Request study process.

## PURPOSE AND SCOPE OF THE FACILITIES STUDY

7. Transmission Provider, in consultation with the affected Transmission Owner(s), shall commence a Facilities Study pursuant to Section 206 of the PJM Tariff to evaluate the Attachment Facilities, Local Upgrades and/or Network Upgrades necessary to accommodate New Service Customer's New Service Request assigned Queue Position **{insert queue position}**. **{Add corresponding info on customer's other projects if necessary.}**
  - A. **Scope of Facilities Study:** The purpose of the Facilities Study is to provide, commensurate with any mutually agreed parameters regarding the scope and degree of specificity described in Schedule A attached to this agreement, an assessment of project related system stability issues and conceptual engineering and, as appropriate, detailed design, plus cost estimates and project schedules, to implement the conclusions of the System Impact Study regarding the Attachment Facilities, Local Upgrades and Network Upgrades necessary to accommodate the New Service Customer's New Service Request(s). Cost estimates shall be determined in a manner consistent with Section 217 of the PJM Tariff. The nature and scope of the materials that Transmission Provider shall deliver to the New Service Customer upon completion of the Facilities Study shall be described in the PJM Manuals.
  - B. **Facilities Study Cost and Time Estimate:** Transmission Provider's estimates of the date for completion of the Facilities Study and of New Service Customer's cost responsibility for the Facilities Study are stated in section 3 of this Agreement. In the event that Transmission Provider determines that it will be unable to complete the Facilities Study by the estimated completion date stated in section 3 of this Agreement, it shall notify New Service Customer and will explain the reasons for the delay. New Service Customer agrees that its estimated cost responsibility stated in section 3 is subject to revision as provided in sections 14, 15 and 16 of this Agreement.
8. The Facilities Study necessarily will employ various assumptions regarding New Service Customer's New Service Request(s), other pending New Service Requests, and PJM's Regional Transmission Expansion Plan at the time of the study. **IN NO EVENT SHALL THIS AGREEMENT OR THE FACILITIES STUDY IN ANY WAY BE DEEMED TO OBLIGATE TRANSMISSION PROVIDER OR THE TRANSMISSION OWNERS TO CONSTRUCT ANY FACILITIES OR UPGRADES OR TO PROVIDE ANY TRANSMISSION OR INTERCONNECTION SERVICE TO OR ON BEHALF OF NEW SERVICE CUSTOMER EITHER AT THIS POINT IN TIME OR IN THE FUTURE.**

## CONFIDENTIALITY

9. New Service Customer agrees to provide all information requested by Transmission Provider necessary to complete the Facilities Study. Subject to section 10 of this

Agreement and to the extent required by Section 222 of the PJM Tariff, information provided pursuant to this section 9 shall be and remain confidential.

10. Until completion of the Facilities Study, Transmission Provider shall keep confidential all information provided to it by the New Service Customer. Upon completion of the Facilities Study, Transmission Provider shall provide a copy of the study to New Service Customer, and to all other New Service Customers whose New Service Requests were evaluated in the Facilities Study, along with (to the extent consistent with Transmission Provider's confidentiality obligations in Section 18.17 of the Operating Agreement) all related work papers. Transmission Provider also shall post on its website the existence of the Facilities Study. New Service Customer acknowledges and consents to such other, additional disclosures of information as may be required under the PJM Tariff or the FERC's rules and regulations.
11. New Service Customer acknowledges that, consistent with Part VI of the PJM Tariff, the affected Transmission Owner(s) will participate in the Facilities Study process and that Transmission Provider may disseminate information to the affected Transmission Owner(s) and may consult with them regarding part or all of the Facilities Study.

#### **COST RESPONSIBILITY**

12.
  - A. New Service Customer shall reimburse Transmission Provider for all, or for an allocated portion of, the actual cost of the Facilities Study in accordance with its cost responsibility as determined under Section 206 of the PJM Tariff.
  - B. Prior to initiating the Facilities Study, Transmission Provider shall bill New Service Customer for New Service Customer's share of the cost of work on the study that is scheduled to be completed during the first three months after work commences. Thereafter, on or before the 5th business day of every third month, Transmission Provider shall bill New Service Customer for New Service Customer's share of the cost of work expected to be completed on the Facilities Study during the ensuing three months. New Service Customer shall pay each bill within twenty (20) days after receipt thereof. In the event New Service Customer fails, other than as provided below regarding billing disputes, to make timely payment of any invoice for work on the Facilities Study, its New Service Request shall be deemed to be terminated and withdrawn as of the date when payment was due. Notwithstanding the foregoing, in the event that the total estimated cost of the Facilities Study does not exceed the amount of the deposit required under Section 206 of the PJM Tariff, Transmission Provider shall apply the deposit in payment of the invoices for the cost of the Facilities Study. Upon written request by the New Service Customer pursuant to Section 206.4.1.1 of the PJM Tariff, Transmission Provider may provide a quarterly cost reconciliation. Subject to the following sentence regarding the final cost reconciliation upon completion of the Facility Study, such a quarterly cost reconciliation will have a one-quarter lag, e.g., reconciliation of costs for the first calendar quarter of work will be provided at the start of the third calendar quarter of work. Within 120 days after Transmission Provider completes the Facilities Study, Transmission Provider shall provide a final invoice presenting an accounting of, and the

appropriate party shall make any payment to the other that is necessary to resolve, any difference between (a) New Service Customer's cost responsibility under this Agreement and the PJM Tariff for the actual cost of the Facilities Study and (b) New Service Customer's aggregate payments hereunder, including its deposits.

C. In the event of a billing dispute, Transmission Provider shall continue to perform its obligations under this Agreement so long as (1) New Service Customer continues to make all payments not in dispute, and (2) New Service Customer's aggregate deposits held by Transmission Provider under this Agreement while the dispute is pending exceeds the amount in dispute, or (3) New Service Customer pays to Transmission Provider or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If New Service Customer fails to meet any of these requirements, then its New Service Request shall be deemed to be terminated and withdrawn as of the date when payment was due.

13. Concurrent with execution of this Agreement, New Service Customer will pay Transmission Provider a cash deposit, as provided by Section 206 of the PJM Tariff, equal to the greater of \$100,000 or New Service Customer's estimated cost responsibility for the first three months of work on the Facilities Study. Notwithstanding the foregoing, an Interconnection Customer with a proposed Customer Facility that is: (a) equal to or less than 20 MW but greater than 2 MW shall pay a refundable deposit in the amount of \$50,000; or (b) equal to or less than 2 MW shall pay a refundable deposit in the amount of \$15,000. New Service Customer's quarterly estimated cost responsibility shall equal its estimated cost responsibility for the work on the Facilities Study that is scheduled to be completed during each three-month period after such work commences. If New Service Customer fails timely to provide the deposit required by this section, its New Service Request shall be deemed terminated and withdrawn and this Agreement shall be null and void. New Service Customer acknowledges that it may become obligated to pay one or more additional deposits pursuant to sections 14 and 15 below. Except as otherwise provided in section 12.B above, Transmission Provider shall continue to hold the amounts on deposit under this agreement until settlement of the final invoice.
14. If the Facilities Study, as described in section 7.A of this Agreement, is to include evaluation of more than one New Service Request and one or more of those requests is terminated and withdrawn, subject to the terms of section 15 of this Agreement, Transmission Provider will redetermine and reallocate the costs of the Facilities Study among the remaining participating New Service Customers in accord with Section 206 of the PJM Tariff. In that event, and subject to the terms of section 15, within 30 days after the date for execution and return of Facilities Study Agreements as determined under Section 206 of the PJM Tariff, Transmission Provider will provide the New Service Customer with a written statement of the New Service Customer's revised responsibility for the estimated cost of the Facilities Study, determined in accordance with Section 206 of the PJM Tariff. In the event that New Service Customer's revised cost responsibility exceeds the sum of its previous deposits for the Facilities Study, it shall deliver to Transmission Provider, within 10 days after New Service Customer's receipt of its revised cost responsibility, an additional cash deposit equal to the amount of the excess.

If New Service Customer fails timely to provide an additional deposit that is required under this section, its New Service Request shall be deemed terminated and withdrawn as of the date by which its additional deposit was due. In the event that New Service Customer's revised cost responsibility under the notice described in this section is less than the sum of its previous deposits for the Facilities Study, Transmission Provider shall return to New Service Customer, with its notice of the revised cost responsibility, the amount of the difference.

15. A. This section shall apply prior to commencement of the Facilities Study (1) if the Facilities Study is to include multiple New Service Requests; and (2) if, in Transmission Provider's reasonable judgment, the termination and withdrawal of one or more of those New Service Requests significantly changes the group of New Service Requests to be included in the Facilities Study from the group that was included in the System Impact Study. For the purposes of this section, a change to the group of New Service Requests to be included in the Facilities Study shall be significant if, in Transmission Provider's reasonable engineering judgment, the change is likely to cause the system constraints relating to, and/or the facilities and upgrades necessary to accommodate, the group of New Service Requests remaining to be included in the Facilities Study to differ materially from the system constraints relating to, and/or from the facilities and upgrades necessary to accommodate, the group of New Service Requests that the System Impact Study evaluated.

B. In the event of a significant change to the group of New Service Requests that the System Impact Study evaluated, within 15 days after the date for execution and return of Facilities Study Agreements as determined under Section 206 of the PJM Tariff, Transmission Provider shall provide New Service Customer with an explanation of the nature and extent of the change in the affected group of New Service Requests and of the extent to which Transmission Provider has determined that it must re-assess the results of the System Impact Study. Within 30 days after it provides the explanation described in the preceding sentence, Transmission Provider shall provide New Service Customer with a revised estimate of the time needed, and of the likely cost, to complete the Facilities Study, and, if the study continues to include evaluation of more than one New Service Customer's New Service Request(s), New Service Customer's allocated share of the estimated cost of the revised Facilities Study, determined in accord with Section 206 of the PJM Tariff.

C. In the event that New Service Customer's revised cost responsibility exceeds the sum of its previous deposits for the Facilities Study, it shall deliver to Transmission Provider, within 10 days after New Service Customer's receipt of its revised cost responsibility, an additional cash deposit equal to the amount of the excess. If New Service Customer fails timely to provide an additional deposit that is required under this section, its New Service Request shall be deemed terminated and withdrawn as of the date by which its additional deposit was due. In the event that New Service Customer's revised cost responsibility under the notice described in this section is less than the sum of its previous deposits for the Facilities Study, Transmission Provider shall return to

New Service Customer, with its notice of the revised cost responsibility, the amount of the difference.

16. A. If the Facilities Study includes New Service Customer's New Service Request(s) only, New Service Customer may terminate its participation in the study at any time by providing written notice of termination to Transmission Provider. New Service Customer's notice of termination (1) shall be effective as of the end of the business day following the day that Transmission Provider receives such notice and (2) concurrently shall have the effect of terminating and withdrawing New Service Customer's New Service Request(s). New Service Customer will be responsible for all costs of the Facilities Study that Transmission Provider incurred prior to the effective date of the notice of termination. Within thirty (30) days after the effective date of New Service Customer's notice of termination, Transmission Provider will deliver to New Service Customer a statement of New Service Customer's responsibility for the costs of the Facilities Study incurred up to the date of termination. In the event that New Service Customer's cost responsibility as of the date of termination exceeds the sum of its deposits then held by Transmission Provider for the Facilities Study, Transmission Provider's statement will include an invoice in the amount of such excess. New Service Customer will pay that invoice within ten (10) days after it receives it. In the event that New Service Customer does not pay the invoice within ten (10) days after receipt, New Service Customer shall owe the invoice amount plus interest at the applicable rate prescribed in 18 C.F.R. § 35.19a (a)(2)(iii), accrued from the day after the date payment was due until the date of payment. In the event that New Service Customer's cost responsibility as of the date of termination was less than the sum of its deposits for the Facilities Study, Transmission Provider's statement will include a payment to New Service Customer in the amount of the difference.
- B. If the Facilities Study includes any New Service Request(s) other than that (those) of New Service Customer, termination and withdrawal of New Service Customer's New Service Request(s) at any time after Transmission Provider has commenced the Facilities Study will not alter New Service Customer's responsibility for the costs of the Facilities Study under this Agreement and the PJM Tariff.

#### **DISCLAIMER OF WARRANTY, LIMITATION OF LIABILITY**

17. In analyzing and preparing the Facilities Study, Transmission Provider, the Transmission Owners, and any other subcontractors employed by Transmission Provider shall have to rely on information provided by 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 OWNERS, NOR ANY OTHER SUBCONTRACTORS EMPLOYED BY 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 FACILITIES STUDY. 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.

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

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

**MISCELLANEOUS**

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

**Transmission Provider**

PJM Interconnection, L.L.C.  
2750 Monroe Blvd.  
Audubon, PA 19403

**New Service Customer**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

20. No waiver by either party of one or more defaults by the other in performance of any of the provisions of this Agreement shall operate or be construed as a waiver of any other or further default or defaults, whether of a like or different character.
21. This Agreement or any part thereof, may not be amended, modified, assigned or waived other than by a writing signed by all parties hereto.
22. This Agreement shall be binding upon the parties hereto, their heirs, executors, administrators, successors, and assigns.

23. Neither this Agreement nor the Facilities Study performed hereunder shall be construed as an application for service under Part II or Part III of the PJM Tariff.
24. The provisions of Part VI of the PJM Tariff are incorporated herein and made a part hereof.
25. Capitalized terms used but not otherwise defined herein shall have the meaning ascribed to them in the PJM Tariff.
26. This Facilities Study Agreement shall become effective on the date it is executed by all parties and shall remain in effect until the earlier of (a) the date on which the Transmission Provider tenders the completed Facilities Study and, as applicable, a proposed Interconnection Service Agreement or Upgrade Construction Service Agreement to New Service Customer pursuant to Section 212 or Section 213, respectively, of the PJM Tariff, or (b) termination and withdrawal of the New Service Request(s) to which the Facilities Study hereunder relates.
27. **No Third-Party Beneficiaries**  
This 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.
28. **Multiple Counterparts**  
This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.
29. **No Partnership**  
This 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.
30. **Severability**  
If any provision or portion of this 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 Agreement shall remain in full force and effect.
31. **Governing Law, Regulatory Authority, and Rules**  
For Interconnection Requests, the validity, interpretation and enforcement of this 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 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.

32. **Reservation of Rights**

The Transmission Provider shall have the right to make a unilateral filing with FERC to modify this 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 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 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, Transmission Provider and the New Service Customer have caused this Facilities 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

**Schedule A**  
**Details of Design and Cost Estimates/Quality**  
**For the Facilities Study**

[insert details regarding degree of accuracy of cost estimates and associated scope of design as mutually agreed by Transmission Provider and New Service Customer]

## **1.4A Other Interconnection Options**

### **1.4A.1 Limited Operation:**

If any of the Transmission Owner Interconnection Facilities are not reasonably expected to be completed prior to the Interconnection Customer's planned date of Initial Operation, and provided that the Interconnected Transmission Owner has accepted the Customer Interconnection Facilities pursuant to the Interconnection Construction Service Agreement, Transmission Provider shall, upon the request and at the expense of Interconnection Customer, perform appropriate power flow or other operating studies on a timely basis to determine the extent to which the Customer Facility and the Customer Interconnection Facilities may operate prior to the completion of the Transmission Owner Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and the Interconnection Service Agreement. In accordance with the results of such studies and subject to such conditions as Transmission Provider determines to be reasonable and appropriate, Transmission Provider shall (a) permit Interconnection Customer to operate the Customer Facility and the Customer Interconnection Facilities, and (b) grant Interconnection Customer limited, interim Interconnection Rights commensurate with the extent to which operation of the Customer Facility is permitted.

### **1.4A.2 Provisional Interconnection Service:**

Upon the request of Interconnection Customer, and prior to completion of requisite Interconnection Facilities, Network Upgrades, Local Upgrades, or system protection facilities Interconnection Customer may request limited Interconnection Service at the discretion of Transmission Provider based upon an evaluation that will consider the results of available studies, which terms shall be memorialized in the Interconnection Service Agreement. Consistent with Tariff, Part VI, Subpart B, section 212.4, Interconnection Customer may execute the Interconnection Service Agreement, request dispute resolution or request that the Interconnection Service Agreement be filed unexecuted with the Commission. Transmission Provider shall determine, through available studies or additional studies as necessary, whether stability, short circuit, thermal, and/or voltage issues would arise if Interconnection Customer interconnects without modifications to the Generating Facility or the Transmission System. Transmission Provider shall determine whether any Interconnection Facilities, Network Upgrades, Local Upgrades, or system protection facilities that are necessary to meet the requirements of NERC, or any applicable Regional Entity for the interconnection of a new, modified and/or expanded Generating Facility are in place prior to the commencement of Interconnection Service from the Generating Facility. Where available studies indicate that such Interconnection Facilities, Network Upgrades, Local Upgrades, and/or system protection facilities that are required for the interconnection of a new, modified and/or expanded Generating Facility are not currently in place, Transmission Provider will perform a study, at the Interconnection Customer's expense, to confirm the facilities that are required for Provisional Interconnection Service. The maximum permissible output of the Generating Facility shall be studied and updated annually and at the Interconnection Customer's expense. The results will be communicated to the Interconnection Customer in writing upon completion of the study. Interconnection Customer assumes all risk and liabilities with respect to the Provisional

Interconnection Service, including changes in output limits and Interconnection Facilities, Network Upgrades, Local Upgrades, and/or system protection facilities cost responsibilities.

**ATTACHMENT RR**  
**Form of**  
**Surplus Interconnection Study Agreement**

**RECITALS**

1. This Surplus Interconnection Study Agreement (the “Agreement”), dated as of \_\_\_\_\_, is entered into, by and between \_\_\_\_\_ (“Surplus Interconnection Customer”) and PJM Interconnection, L.L.C. (“Transmission Provider”) (individually referred to as a “Party,” or collectively referred to as the “Parties”) pursuant to the PJM Interconnection, L.L.C. Open Access Transmission Tariff (“Tariff”), Tariff, Part IV and Tariff, Part VI. Capitalized terms used in this agreement, unless otherwise indicated, shall have the meanings ascribed to them in the Tariff.
2. By submitting this Agreement and complying with Tariff, Part IV, Subpart A, section 36.4 and Tariff, Part IV, Subpart A, section 36.1.1B, the Surplus Interconnection Customer has submitted a Surplus Interconnection Request. In accordance with Tariff, Part IV, Subpart A, section 36.1.1B.1.i, the Surplus Interconnection Customer has also submitted with this Agreement the applicable required deposit to the Transmission Provider.
3. By submitting this Agreement to the Transmission Provider, the Surplus Interconnection Customer requests to utilize Surplus Interconnection Service on the Transmission System of an existing Generating Facility with the following specifications:
  - a. Identification of the specific, existing Generating Facility already interconnected to the PJM Transmission System providing Surplus Interconnection Service, including whether the Surplus Interconnection Customer requesting Surplus Interconnection Service is the owner or affiliate of the existing Generating Facility, and details regarding the existing Generating Facility’s current Interconnection Service Agreement.

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If the Surplus Interconnection Customer is an unaffiliated third party, the Surplus Interconnection Customer must submit with this Agreement the following information and documentation acceptable to the Transmission Provider:

- i. Name and address of the current owner of the existing Generating Facility, including details specific to the existing Generating Facility’s most current Interconnection Service Agreement, including the Service Agreement Number:
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ii. Written evidence from the owner of the existing Generating Facility granting Surplus Interconnection Customer permission to utilize the existing Generating Facility's unused portion of Interconnection Service established in the existing Generating Facility's Interconnection Service Agreement; and

iii. Written documentation stating that the owner of the surplus generating unit and the owner of the existing Generating Facility will have entered into, prior to the owner of the existing Generating Facility executing a revised Interconnection Service Agreement, a shared facilities agreement between the owner of the existing Generating Facility and the owner of the surplus generating unit detailing their respective roles and responsibilities relative to the Surplus Interconnection Service.

b. Evidence of ownership interest in, or right to acquire or control, the surplus generating unit site for a minimum of three years, such as a deed, option agreement, lease or other similar document acceptable to the Transmission Provider. Include both a written description of the evidence to be relied upon and attach a Word or PDF version copy thereof.

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c. Location of proposed surplus generating unit site or existing surplus generating unit (include both a written description (e.g., street address, global positioning coordinates) and attach a map in PDF format depicting the property boundaries and the location of the surplus generating unit site):

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d. The megawatt size of the proposed surplus generating unit or the amount of increase in megawatt capability of an existing surplus generating unit.

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e. Identify the fuel type of the surplus generating unit or upgrade thereto:

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f. A PDF format attachment of the site plan/single line diagram together with a description of the equipment configuration, including a set of preliminary electrical design specifications, and if the surplus generating unit is a wind generation facility, then also submit a set of preliminary electrical design specifications depicting the wind generation facility as a single equivalent generator:

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g. Planned date the new surplus generating unit (or increase in megawatt capability of an existing surplus generating unit) will be in service:

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h. Other related information, including for example, but not limited to, identifying: all of Surplus Interconnection Customer's prior Interconnection Requests or Surplus Interconnection Requests; and stating whether the Surplus Interconnection Customer has submitted a previous Surplus Interconnection Request for this particular project:

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i. Describe the circumstances under which Surplus Interconnection Service will be available at the existing Point of Interconnection:

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j. If any Energy Storage Resource, the primary frequency response operating range for a surplus generating unit:

Minimum State of Charge: \_\_\_\_\_; and

Maximum State of Charge: \_\_\_\_\_.

**PURPOSE OF THE SURPLUS INTERCONNECTION STUDY**

4. Consistent with Tariff, Part IV, Subpart A, section 36.4, the Transmission Provider shall conduct a Surplus Interconnection Study to provide the Surplus Interconnection Customer with a determination of whether the surplus generating unit is eligible for

Surplus Interconnection Service. In the event that the Transmission Provider is unable to complete the Surplus Interconnection Study within the timeframe prescribed in Tariff, Part IV, Subpart A, section 36.4.1, the Transmission Provider shall notify the Surplus Interconnection Customer and explain the reasons for the delay.

5. The Surplus Interconnection Study conducted hereunder will provide only a sensitivity analysis based on the data specified by the Surplus Interconnection Customer in its Surplus Interconnection Request. The Surplus Interconnection Study necessarily will employ various assumptions regarding the Surplus Interconnection Request, other pending New Service Requests and PJM's Regional Transmission Expansion Plan at the time of the study. The Surplus Interconnection Study will not obligate the Transmission Provider or the Transmission Owner(s) to interconnect with the Surplus Interconnection Customer or construct any facilities or upgrades.

### **CONFIDENTIALITY**

6. The Interconnection Customer agrees to provide all information requested by the Transmission Provider necessary to complete the Surplus Interconnection Study. Subject to Paragraph 7 of this Agreement and to the extent required by Tariff, Part VI, Subpart B, section 222, information provided pursuant to this Paragraph 6 shall be and remain confidential.
7. Until completion of the Surplus Interconnection Study, the Transmission Provider shall keep confidential all information provided to it by the Surplus Interconnection Customer. Upon completion of the Surplus Interconnection Study and, to the extent required by Commission regulations, will be made publicly available upon request, except that the identity of the Surplus Interconnection Customer shall remain confidential.
8. Surplus Interconnection Customer acknowledges that, consistent with the Tariff, the Transmission Provider may contract with consultants, including the Transmission Owners, to provide services or expertise in the Surplus Interconnection Study process and that the Transmission Provider may disseminate information to the Transmission Owners.

### **COST RESPONSIBILITY**

9. The Surplus Interconnection Customer shall reimburse the Transmission Provider for the actual cost of the Surplus Interconnection Study. The deposit paid by the Surplus Interconnection Customer described in Paragraph 2 of this Agreement shall be applied toward the Surplus Interconnection Customer's Surplus Interconnection Study cost responsibility. The Surplus Interconnection Customer shall be responsible for and must pay all actual study costs. If at any time the Transmission Provider notifies the Surplus Interconnection Customer of estimated additional study costs, the Surplus Interconnection Customer must pay such estimated additional study costs within ten (10) Business Days of Transmission Provider sending the Surplus Interconnection Customer notification of such estimated additional study costs. If the Surplus Interconnection Customer fails to pay such estimated additional study costs within ten (10) Business Days



of Transmission Provider sending the Surplus Interconnection Customer notification of such estimated additional study costs, then the Surplus Interconnection Request shall be deemed to be terminated and withdrawn.

### **DISCLAIMER OF WARRANTY, LIMITATION OF LIABILITY**

10. In analyzing and preparing the Surplus Interconnection 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 Surplus Interconnection Customer and possibly by third parties, including the owner of the existing Generating Facility, 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 SURPLUS INTERCONNECTION STUDY. The Surplus Interconnection 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 Agreement nor the Surplus Interconnection 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 Surplus Interconnection Customer either at this point in time or in the future.
  
11. 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 under this 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 Surplus Interconnection Study Agreement.

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

**MISCELLANEOUS**

- 12. Any notice or request made to or by any Party regarding this Agreement shall be made to the representative of the other Party as indicated below.

**Transmission Provider**

PJM Interconnection, L.L.C.  
2750 Monroe Blvd.  
Audubon, PA 19403

**Surplus Interconnection Customer**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 13. No waiver by either Party of one or more defaults by the other in performance of any of the provisions of this Agreement shall operate or be construed as a waiver of any other or further default or defaults, whether of a like or different character.
- 14. This Agreement or any part thereof, may not be amended, modified, or waived other than by a writing signed by all Parties hereto.
- 15. This Agreement shall be binding upon the Parties hereto, their heirs, executors, administrators, successors, and assigns.
- 16. Neither this Agreement nor the Surplus Interconnection Study performed hereunder shall be construed as an application for service under Tariff, Part II or Tariff, Part III.
- 17. The provisions of Tariff, Part IV that relate to Surplus Interconnection Service are incorporated herein and made a part hereof.

**18. Governing Law, Regulatory Authority, and Rules**

The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the state of \_\_\_\_\_ (the state where the Point of Interconnection is located), without regard to its conflicts of law principles. This 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.

**19. No Third-Party Beneficiaries**

Except as stated in Paragraph 11 of this Agreement, this 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.

**20. Multiple Counterparts**

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all of which constitute one and the same instrument.

**21. No Partnership**

This 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.

**22. Severability**

If any provision or portion of this 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 Agreement shall remain in full force and effect.

**23. Reservation of Rights**

The Transmission Provider shall have the right to make a unilateral filing with the Federal Energy Regulatory Commission ("FERC") to modify this 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 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 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.

**CERTIFICATION**

**By initialing the line next to each of the following required elements, Surplus Interconnection Customer hereby certifies that it has submitted with this executed Agreement each of the required elements (if this Surplus Interconnection Request is being**

**submitted electronically, each of the required elements must be submitted electronically as individual PDF files, together with an electronic PDF copy of this signed Agreement):**

\_\_\_\_\_ **Specification of the location of the proposed surplus generating unit site or existing surplus generating unit (including both a written description (e.g., street address, global positioning coordinates) and attach a map in PDF format depicting the property boundaries and the location of the surplus generating unit site)**

\_\_\_\_\_ **If the Surplus Interconnection Customer is an unaffiliated third party, the information and evidence set forth in Paragraph 3(a)(i) – (iii) of this Agreement**

**Evidence of an ownership interest in, or right to acquire or control the surplus generating unit site**

\_\_\_\_\_ **The megawatt size of the proposed surplus generating unit or the amount of increase in megawatt capability of an existing surplus generating unit**

\_\_\_\_\_ **Identification of the fuel type of the proposed surplus generating unit**

\_\_\_\_\_ **Description of the equipment configuration and a set of preliminary electrical design specifications, and, if the surplus generating unit is a wind generation facility, then the set of preliminary electrical design specifications must depict the wind plant as a single equivalent generator**

\_\_\_\_\_ **The planned date that the proposed surplus generating unit (or increase in megawatt capability of an existing surplus generating unit) will be in service**

\_\_\_\_\_ **All additional information prescribed by the Transmission Provider in the PJM Manuals**

\_\_\_\_\_ **The full amount of the required deposit**

IN WITNESS WHEREOF, the Transmission Provider and the Surplus Interconnection Customer have caused this Agreement to be executed by their respective authorized officials.

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

By: \_\_\_\_\_  
Name Title Date

\_\_\_\_\_  
Printed Name

**Surplus Interconnection Customer: [Name of Party]**

By: \_\_\_\_\_  
Name Title Date

\_\_\_\_\_  
Printed Name