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May 15, 2018

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

*Re: PJM Interconnection, L.L.C., Docket No. ER18-1629-000
Compliance Filing for Order No. 842*

Dear Secretary Bose:

On February 15, 2018, the Federal Energy Regulatory Commission's (the "Commission" or "FERC") issued Order No. 842, amending the Commission's *pro forma* large generator interconnection agreement ("LGIA") and *pro forma* small generator interconnection agreement ("SGIA") to require newly interconnecting large and small generating facilities, both synchronous and non-synchronous, to install, maintain, and operate equipment capable of providing primary frequency response as a condition of interconnection.¹ Pursuant to Section 206 of the Federal Power Act ("FPA"),² PJM Interconnection, L.L.C. ("PJM") submits this transmittal letter and revisions to the PJM Open Access Transmission Tariff ("Tariff") to comply with Order No. 842.

¹ Order No. 842, *Essential Reliability Services and the Evolving Bulk-Power System—Primary Frequency Response*, 162 FERC ¶ 61,128, 83 Fed. Reg. 9636 (2018) ("Order No. 842"), rehearing pending.

² 16 U.S.C. § 824e.

I. SATISFACTION OF THE COMPLIANCE REQUIREMENTS

A. *New Sections of the Pro Forma LGIA and SGIA*

In Order No. 842, the Commission added new sections 9.6.4, 9.6.4.1, 9.6.4.2, 9.6.4.3, and 9.6.4.4 to the *pro forma* LGIA. Similarly, the Commission added new sections 1.8.4, 1.8.4.1, 1.8.4.2, 1.8.4.3, and 1.8.4.4 to the *pro forma* SGIA, which are nearly identical to the new sections of the *pro forma* LGIA.

As discussed below, the PJM Tariff contains a single interconnection service agreement for both large and small generation, which is Attachment O of the PJM Tariff (the “PJM ISA”). PJM proposes to add new sections 4.7.2, 4.7.2.1, 4.7.2.2, 4.7.2.3, and 4.7.2.4 to Appendix 2 of the PJM ISA. Aside from the relatively minor variances requested below, these new PJM Tariff sections contain language that is identical to the new sections of the *pro forma* LGIA and *pro forma* SGIA in Order No. 842.

B. *Revisions to the Pro Forma Large Generator Interconnection Procedure and Small Generator Interconnection Procedure*

In Order No. 842, the Commission modified the *pro forma* Large Generator Interconnection Procedure (“LGIP”) and *pro forma* Small Generator Interconnection Procedure (“SGIP”) to require newly interconnecting electric storage resources to include the details of the operating range in their interconnection request. In accordance with the Commission’s directives, PJM is revising sections 36.1, 110.1, 111.1, 112.1, and 112A.1 of the interconnection procedures in the PJM Tariff to require that generation interconnection customers provide the, “Primary frequency response operating range for electric storage resources.” Similarly, PJM revised Attachment N (*Generation Interconnection Feasibility Study Agreement*), and Attachment Y (*Forms of Screens Process Interconnection Request (For Generation Facilities of 2 MW or Less)*) to include the “Minimum State of Charge” and “Maximum State of Charge”

fields that the Commission added to the LGIP and SGIP. These revisions to the PJM Tariff are identical to the corresponding revisions to the LGIP and SGIP in Order No. 842 and will apply to both large and small generator interconnections.

C. Independent Entity Variations

In Order No. 842, the Commission required that independent system operators (“ISOs”) and regional transmission operators (“RTOs”) demonstrate that the relevant new and previously-approved independent entity variations³ from the *pro forma* LGIA and *pro forma* SGIA as modified by the Commission are justifiable. PJM proposes five variations to the PJM Tariff from the *pro forma* LGIA and *pro forma* SGIA revisions required by the Commission in Order No. 842.⁴

First, as opposed to revising a *pro forma* LGIA and *pro forma* SGIA, PJM proposes a variation to include the primary frequency response requirements in only the PJM ISA, which is the interconnection service agreement that PJM uses for both large and small generator interconnections. As mentioned above, the PJM Tariff does not contain a *pro forma* LGIA and *pro forma* SGIA. In Order No. 2006, the Commission required public utilities to adopt the

³ Under this standard, the Commission affords an RTO greater flexibility to customize its interconnection procedures and agreements than a non-independent Transmission Provider because an RTO does not own generation, and thus lacks the incentive to discriminate in favor of certain generation or to obstruct access to the grid by independent generators. Nonetheless, when an RTO is the filing entity, as is the case here, the Commission will review the proposed variations to ensure that they do not provide an unwarranted opportunity for undue discrimination or produce an interconnection process that is unjust and unreasonable. *See* July 7, 2006 Order, Docket Nos. ER06-199-000, et al. PJM Interconnection, L.L.C.

⁴ In addition to the five independent entity variations below, PJM proposes to replace each instance of “electric storage resource” in the revised *pro forma* SGIA and *pro forma* LGIA with “Energy Storage Resource” in the PJM ISA because “Energy Storage Resource” is already a defined term in the PJM ISA. The Commission did not require a specific definition for electric storage resource and, therefore, PJM does not believe this revision is a variance. Moreover, as the Commission notes in Order No. 842, the definition of “Electric Storage Resource” is a matter that will be dealt with by the Commission in other proceedings. (*See* Order No. 842 at P 16, fn. 36.). However, out of an abundance of caution, to the extent the Commission believes this revision is a variance, PJM requests the Commission grant such variance because “Energy Storage Resource” under the PJM Tariff includes resources that store and inject of energy onto the grid at a later time and this matter will be addressed in other proceedings currently pending.

Commission's *pro forma* SGIA.⁵ While Order No. 2006 required public utilities to amend their open access transmission tariffs to include the new rules, as in Order No. 2003, it also allowed RTOs to seek independent entity variations. In its compliance filing, PJM obtained an independent entity variation to allow PJM to use a single interconnection service agreement for both large and small generators to permit continuity among PJM's large and small generation interconnection procedures and facilitate efficient administration of the agreements.⁶

Continuing to use a single interconnection agreement satisfies the Commission's standard for an independent entity variation by meeting the Commission's goal in Order No. 842 of ensuring the primary frequency response requirements in the PJM Tariff apply to both large and small generators interconnecting within PJM. The Commission's primary frequency response requirements and the associated revisions to the *pro forma* SGIA and *pro forma* LGIA are nearly identical. Therefore, including the Commission's requirements in the PJM ISA will ensure such requirements are applied to both large and small generators.

Second, PJM proposes a variance to replace each instance of "Interconnection Customer" in the *pro forma* SGIA and *pro forma* LGIA with "Generation Interconnection Customer" with "Interconnection Customer" in new sections 4.7.2, 4.7.2.1, 4.7.2.2, 4.7.2.3, and 4.7.2.4 in Appendix 2 of the PJM ISA. Under the PJM Tariff, an interconnection customer may be a transmission or generation interconnection customer. However, the Commission's requirements in Order No. 842 apply only to generation interconnection customers, as do new sections 4.7.2, 4.7.2.1, 4.7.2.2, 4.7.2.3, and 4.7.2.4 in Appendix 2 of the PJM ISA. Therefore, in the context of

⁵ *Standardization of Small Generator Interconnection Agreements and Procedures*, Order No. 2006, FERC Stats. & Regs. ¶ 31,180, *order on reh'g*, Order No. 2006-A, FERC Stats. & Regs. ¶ 31,196 (2005), *order on clarification*, Order No. 2006-B, FERC Stats. & Regs. ¶ 31,221 (2006).

⁶ *PJM Interconnection*, Order on Compliance Filing, Docket No. ER06-199-000, P 11 (July 7, 2006).

the PJM Tariff, it is appropriate to use “Generation Interconnection Customer” consistent with Order No. 842.

Third, PJM proposes a variance to replace references to “Small Generating Facility” in the Commission’s *pro forma* SGIA and “Large Generating Facility” in the Commission’s *pro forma* LGIA with “Customer Facility.” As PJM stated above, the PJM Tariff contains one interconnection service agreement (i.e., Attachment O) that applies to both large and small generators as approved by the Commission pursuant to independent entity variations. As such, the currently-effective provisions in section 4.7 of Attachment O, Appendix 2, of the PJM Tariff—where PJM proposes to add the primary frequency response requirements—also applies to both large and small generator interconnections. Therefore, PJM proposes to use “Customer Facility,” which refers to both large and small generation facilities in the PJM Tariff.

Fourth, PJM proposes to create new Schedule I in the PJM ISA and replace references to “Appendix C” required in the *pro forma* LGIA and “Attachment 5” in the *pro forma* SGIA with references to “Schedule I” in the PJM ISA. Schedule I of the PJM ISA will contain the additional operating range details pertaining to primary frequency response for energy storage resources. This variance is appropriate because the PJM ISA does not currently contain either an “Appendix C,” “Attachment 5,” or similar attachment in which to place the primary frequency response details for energy storage resources.

Fifth, PJM is not eliminating references to “speed governors” or making any other changes required by the Commission to Article 9.6.2.1 because the PJM Tariff and ISA do not contain Article 9.6.2.1 or a similar section.

II. EFFECTIVE DATE

PJM requests a variance from Order Nos. 842 to allow for a compliance date of October 1, 2018. An October 1, 2018, compliance date will allow the proposed revisions to coincide with the beginning of a new interconnection queue. PJM recognizes this compliance date is later than the compliance date of Order Nos. 842, but believes that good cause exists for allowing the proposed revisions offered herein to take effect on October 1, 2018. Importantly, implementing the revised procedures on the compliance date of Order No. 842 (i.e., May 15, 2018) would subject some current PJM interconnection queue projects to the new procedures, while those in the same queue prior to May 15, 2018, would be subject to the prior procedures. Moving the compliance date to coincide with the beginning of a new interconnection queue not only is administratively easier for PJM to implement, but also ensure that all prospective interconnection customers within their respective interconnection queues are treated similarly. The Commission granted similar requests for variances in the past to allow the proposed PJM compliance filings to coincide with the beginning of a new interconnection queue.⁷

III. DOCUMENTS ENCLOSED

Along with this transmittal letter, PJM submits the following attachments:

1. Attachment 1: an electronic version of the redlined sections of the Tariff with the revisions proposed herein; and
2. Attachment 2: an electronic version of the clean sections of the Tariff with the revisions proposed herein.

⁷ See, e.g., *PJM Interconnection, L.L.C.*, Order on Compliance Filing, Docket No. ER14-2590-000 (Dec. 19, 2014); see also *PJM Interconnection, L.L.C.*, Letter Order, Compliance Filing Under Order Nos. 827 and 828, Docket No. ER17-108-000 (Jan. 5, 2017).

IV. CORRESPONDENCE AND COMMUNICATIONS

Correspondence and communications regarding this filing should be sent to the following individuals:

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V. SERVICE

PJM has served a copy of this filing on all PJM Members and on all state utility regulatory commissions in the PJM Region by posting this filing electronically. In accordance with the Commission’s regulations,⁸ PJM will post a copy of this filing to the FERC Filings section of its Web site, located at <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 Region⁹ alerting them of the filing and its availability on PJM’s Web site. PJM also serves the parties listed on the Commission’s official service list for this docket. Notwithstanding the foregoing, if the document is not immediately available by using the referenced link, it will be available within 24 hours of the filing. A copy of this filing will also be available on the Commission’s eLibrary Web site located at <http://www.ferc.gov/docs-filing/elibrary.asp> in accordance with the Commission’s regulations and Order No. 714.

⁸ See 18C.F.R §§ 35.2(e) and 385.2010(f)(3).

⁹ PJM already maintains updates and regularly uses e-mail lists for all PJM members and affected state commissions.

VI. CONCLUSION

Wherefore, for the foregoing reasons, PJM respectfully requests that the Commission accept the revisions to the PJM Tariff proposed in this filing.

Respectfully submitted,




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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 15th day of May, 2018.

A handwritten signature in black ink, appearing to read "James M. Burlew", is written over a horizontal line.

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- 13.0 Breach, Cure And Default
 - 13.1 Breach
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- 13.3 Cure and Default
- 13.4 Right to Compel Performance
- 13.5 Remedies Cumulative
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 - 14.3 Survival of Rights
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 - 16.1 Term
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- 19.0 Inspection and Testing of Completed Facilities
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- 20.0 Energization of Completed Facilities
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- 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

36.1 General:

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

36.1.01 Generation Interconnection Request:

Except as otherwise provided in this Subpart A with respect to Behind The Meter Generation, an Interconnection Customer that seeks to interconnect new generation in, or to increase the capacity of generation already interconnected in, the PJM Region shall submit to the Transmission Provider a Generation Interconnection Request. 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 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 unit site or existing 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 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 generating unit or the amount of increase in MW capability of an existing generating unit, 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; and
- h. if Behind The Meter Generation is identified in the Generation Interconnection Feasibility Study Agreement, all of the requirements in Section 36.1A of the Tariff 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 Section 36.2A of the Tariff), 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 Section 36.2A of the Tariff), 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 Part VI of the Tariff, 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 Section 201 of the Tariff, 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. If the information required pursuant to Section 36.1.01 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 Part IV of the Tariff. 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 Subpart G of Part IV of the Tariff and the PJM Manuals.

36.1.03 Transmission Interconnection Request:

An Interconnection Customer that seeks to interconnect or add Merchant Transmission Facilities to the Transmission System, or to increase the capacity of existing Merchant Transmission Facilities interconnected with the Transmission System 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 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 Section 235 of the Tariff, identification of the point on the Transmission System where the Transmission Interconnection Customer wishes to receive Incremental Deliverability Rights created by the construction or installation of its proposed Merchant Transmission Facilities; 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 Section 36.2A of the Tariff), 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 Part VI of the Tariff, 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 Section 201 on the date and time of receipt of all the required information set forth in this Section 36.1.03.
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 Part IV or Part VI of the Tariff. 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, an Interconnection Customer that proposes Merchant Network Upgrades (including advancing pursuant to 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 Schedule 6 of the Operating Agreement) shall submit an Upgrade Request, with the required information and the required deposit for a System Impact Study, as set forth in 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 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 Section 1.7.4(i) of Schedule 1 to the Operating Agreement, to the extent its generating facility is dispatchable, an Interconnection Customer shall submit an Economic Minimum in the real-time market that is no greater than the higher of its physical operating minimum or its Capacity Interconnection Rights.

36.1.2 No Applicability to Transmission Service:

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

36.1.3 [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 Section 202.

36.1.7 Base Case Data:

Transmission Provider shall provide Interconnection Customer with base power flow, short circuit and stability databases, including all underlying assumptions, and contingency list upon

request and subject to the confidentiality provisions of Section 223 of the Tariff. Transmission Provider may require Interconnection Customer to sign a confidentiality agreement before the release of commercially sensitive information or Critical Energy Infrastructure Information in the Base Case data. Such databases and lists, hereinafter referred to as Base Cases, shall include all (i) generation projects and (ii) transmission projects, including merchant transmission projects, that are included in the then-current, approved Regional Transmission Expansion Plan.

110.1 Application

A Generation Interconnection Customer desiring the interconnection of a new Generation Capacity Resource of 20 MW or less or the increase in capacity by 20 MW or less of an Existing Generation Capacity Resource, must 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.
 - a. To be assigned a PJM Queue Position pursuant to 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:
 - i. specification of the location of the proposed generating unit site or existing 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
 - ii. evidence of an ownership interest in, or right to acquire or control the generating unit site for a minimum of two years, such as a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider; and
 - iii. the MW size of the proposed generating unit or the amount of increase in MW capability of an existing generating unit, and identification of any MW portion of the facility's capability that will be a Capacity Resource; and
 - iv. identification of the fuel type of the proposed generating unit or upgrade thereto; and
 - v. 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
 - vi. 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

- vii. any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; and
- viii. If Behind the Meter Generation is identified in the Generation Interconnection Feasibility Study Agreement, all of the requirements in Section 36.1A of the Tariff must also be met; and
- ix. Deposit.
 - (1) A deposit shall be submitted to Transmission Provider, as follows:
 - (a) A deposit of \$10,000 if the Generation Interconnection Request is received in the first four calendar months of the current New Services Queue; or
 - (b) A deposit of \$12,000 if the Generation Interconnection Request is received in the fifth calendar month of the current New Services Queue; or
 - (c) A deposit of \$15,000 if the Generation Interconnection Request is received in the sixth calendar month of the current New Services Queue.
 - (2) 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:
 - (a) 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

- (b) Any restudies required as a result of the rejection, termination and/or withdrawal of such Generation Interconnection Request; 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.
- (3) 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:
 - (a) The cost of the Queue Position acceptance review; and
 - (b) The cost of the deficiency review of the Interconnection Customer's Generation Interconnection Request (to determine whether the Generation Interconnection Request is valid); and
 - (c) The dollar amount of the Interconnection Customer's cost responsibility for the Generation Interconnection Feasibility Study; and
 - (d) If the Generation Interconnection Request is deemed to be modified (pursuant to Section 36.2A of the Tariff), 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:
 - (i) The costs of any restudies required as a result of the modification (pursuant to Section 36.2A of the Tariff), rejection,

termination and/or withdrawal of such Generation Interconnection Request; and/or

- (ii) 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
 - (iii) 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.
 - (iv) 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.
- (4) Upon completion of the Feasibility Study, the Transmission Provider shall apply any remaining refundable deposit monies toward:
 - (a) The Interconnection Customer's cost responsibility for any other studies conducted for the Generation Interconnection Request under Part VI of the Tariff, which shall be applied prior to the deposit monies collected for such other studies; and/or
 - (b) 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.
- (5) 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.

- (6) 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).
- (7) 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, Interconnection Request or Queue Position.

x. 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 two years, if a Generation Interconnection Request meets all requirements set forth above the Transmission Provider shall start the deficiency review. Interconnection Customers that fail to provide site control evidence while their requests are available for deficiency review 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 Section 201 of the Tariff, Transmission Provider shall assign Queue Positions as of the date and time of receipt of all information required pursuant to Section 110.1. If the information required pursuant to Section 110.1 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 shall not disclose the identity of the Generation Interconnection Customer, except as otherwise provided in Part IV of the Tariff. The list and the priority of Generation Interconnection Requests shall be included on the Transmission Provider's website as part of the New Services Queue.

111.1 Application

The Interconnection Customer desiring the interconnection of a Small Generation Resource greater than 2 MW or the increase in capability, by 20 MW or less but greater than 2 MW (synchronous) or 5 MW (inverter-based) of an existing resource, must 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.
 - a. To be assigned a PJM Queue Position pursuant to 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:
 - i. specification of the location of the proposed generating unit site or existing 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
 - ii. evidence of an ownership interest in, or right to acquire or control the generating unit site for a minimum of two years, such as a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider; and
 - iii. the MW size of the proposed generating unit or the amount of increase in MW capability of an existing generating unit, and identification of any MW portion of the facility's capability that will be a Capacity Resource; and
 - iv. identification of the fuel type of the proposed generating unit or upgrade thereto; and
 - v. 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

- vi. 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
- vii. any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; and
- viii. If Behind the Meter Generation is identified in the Generation Interconnection Feasibility Study Agreement, all of the requirements in Section 36.1A of the Tariff must also be met; and
- ix. Deposit.
 - (1) A deposit shall be submitted to Transmission Provider, as follows:
 - (a) A deposit of \$10,000 if the Generation Interconnection Request is received in the first four calendar months of the current New Services Queue; or
 - (b) A deposit of \$12,000 if the Generation Interconnection Request is received in the fifth calendar month of the current New Services Queue; or
 - (c) A deposit of \$15,000 if the Generation Interconnection Request is received in the sixth calendar month of the current New Services Queue.
 - (2) 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:
 - (a) 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

- (b) Any restudies required as a result of the rejection, termination and/or withdrawal of such Generation Interconnection Request; 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.
- (3) 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:
- (a) The cost of the Queue Position acceptance review; and
 - (b) The cost of the deficiency review of the Interconnection Customer's Generation Interconnection Request (to determine whether the Generation Interconnection Request is valid); and
 - (c) The dollar amount of the Interconnection Customer's cost responsibility for the Generation Interconnection Feasibility Study; and
 - (d) If the Generation Interconnection Request is deemed to be modified (pursuant to Section 36.2A of the Tariff), 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:
 - (i) The costs of any restudies required as a result of the modification (pursuant to

Section 36.2A of the Tariff), rejection, termination and/or withdrawal of such Generation Interconnection Request; and/or

- (ii) 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
 - (iii) 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.
 - (iv) 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.
- (4) Upon completion of the Feasibility Study, the Transmission Provider shall apply any remaining refundable deposit monies toward:
 - (a) The Interconnection Customer's cost responsibility for any other studies conducted for the Generation Interconnection Request under Part VI of the Tariff, which shall be applied prior to the deposit monies collected for such other studies; and/or
 - (b) 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.

- (5) 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.
- (6) 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).
- (7) 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, Interconnection Request or Queue Position.

x. 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 two years, if a Generation Interconnection Request meets all requirements set forth above the Transmission Provider shall start the deficiency review. Interconnection Customers that fail to provide site control evidence while their requests are available for deficiency review 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 Section 201 of the Tariff, Transmission Provider shall assign Queue Positions as of the date and time of receipt of all information required pursuant to Section 111.1. If the information required pursuant to Section 111.1

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

112.1 Application

The Generation Interconnection Customer desiring the interconnection of a temporary Energy Resource of 20 MW or less but greater than 2 MW (synchronous) or 5 MW (inverter-based) must 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.
 - a. To be assigned a PJM Queue Position pursuant to 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:
 - i. specification of the location of the proposed generating unit site or existing 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
 - ii. evidence of an ownership interest in, or right to acquire or control the generating unit site for a minimum of two years, such as a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider; and
 - iii. the MW size of the proposed generating unit or the amount of increase in MW capability of an existing generating unit, and identification of any MW portion of the facility's capability that will be a Capacity Resource; and
 - iv. identification of the fuel type of the proposed generating unit or upgrade thereto; and
 - v. 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
 - vi. 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

- vii. any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; and
- viii. If Behind the Meter Generation is identified in the Generation Interconnection Feasibility Study Agreement, all of the requirements in Section 36.1A of the Tariff must also be met; and
- ix. Deposit.
 - (1) A deposit shall be submitted to Transmission Provider, as follows:
 - (a) A deposit of \$10,000 if the Generation Interconnection Request is received in the first four calendar months of the current New Services Queue; or
 - (b) A deposit of \$12,000 if the Generation Interconnection Request is received in the fifth calendar month of the current New Services Queue; or
 - (c) A deposit of \$15,000 if the Generation Interconnection Request is received in the sixth calendar month of the current New Services Queue.
 - (2) 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:
 - (a) 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

- (b) Any restudies required as a result of the rejection, termination and/or withdrawal of such Generation Interconnection Request; 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.
- (3) 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:
 - (a) The cost of the Queue Position acceptance review; and
 - (b) The cost of the deficiency review of the Interconnection Customer's Generation Interconnection Request (to determine whether the Generation Interconnection Request is valid); and
 - (c) The dollar amount of the Interconnection Customer's cost responsibility for the Generation Interconnection Feasibility Study; and
 - (d) If the Generation Interconnection Request is deemed to be modified (pursuant to Section 36.2A of the Tariff), 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:
 - (i) The costs of any restudies required as a result of the modification (pursuant to Section 36.2A of the Tariff), rejection,

termination and/or withdrawal of such Generation Interconnection Request; and/or

- (ii) 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
 - (iii) 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.
 - (iv) 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.
- (4) Upon completion of the Feasibility Study, the Transmission Provider shall apply any remaining refundable deposit monies toward:
 - (a) The Interconnection Customer's cost responsibility for any other studies conducted for the Generation Interconnection Request under Part VI of the Tariff, which shall be applied prior to the deposit monies collected for such other studies; and/or
 - (b) 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.
- (5) 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.

- (6) 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).
- (7) 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, Interconnection Request or Queue Position.

x. 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 two years, if a Generation Interconnection Request meets all requirements set forth above the Transmission Provider shall start the deficiency review. Interconnection Customers that fail to provide site control evidence while their requests are available for deficiency review 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 Section 201 of the Tariff, Transmission Provider shall assign Queue Positions as of the date and time of receipt of all information required pursuant to Section 112.1. If the information required pursuant to Section 112.1 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. Because temporary Energy Resources are not granted any long term rights with respect to the transmission system, such requests shall not be identified in the New Services Queue on the PJM website. A separate queue of such requests shall be maintained in order to facilitate processing.

112A.1 Application

The Interconnection Customer desiring the interconnection of a new permanent or temporary Energy Resource of 2 MW or less (synchronous) or 5 MW or less (inverter-based) must submit to the Transmission Provider an Interconnection Request. The Transmission Provider shall acknowledge receipt of the 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 Interconnection Request to the Transmission Provider's acknowledgment.

1. Interconnection Request Requirements.
 - a. To be assigned a PJM Queue Position pursuant to Section 201, an Interconnection Customer must submit a complete and fully executed Form of Screens Process Interconnection Request (For Generation Facilities of 2 MW or Less Synchronous 5 MW or Less Inverter-Based), a form of which is located in the Tariff, Attachment Y. To be considered complete at the time of submission, the Interconnection Customer's Form of Screens Process Interconnection Request (For Generation Facilities of 2 MW or Less Synchronous 5 MW or Less Inverter-Based) must include, at a minimum, each of the following:
 - i. Interconnection Customer Information; and
 - ii. Energy Resource Information; and
 - iii. Energy Resource Characteristic Data; and
 - iv. Interconnection Facilities Information; and
 - v. Diagrams and Site Control; and
 - vi. Deposit.
 - (1) A deposit shall be submitted to Transmission Provider, as follows:
 - (a) A deposit of \$2,000 if the Interconnection Request is received in the first four calendar months of the current New Services Queue; or
 - (b) A deposit of \$3,000 if the Interconnection Request is received in the fifth calendar month of the current New Services Queue; or
 - (c) A deposit of \$5,000 if the Interconnection Request is received in the sixth calendar month of the current New Services Queue.

- (2) 10% of each total deposit amount is non-refundable. Any unused non-refundable deposit monies shall be returned to the Interconnection Customer upon Initial Operation. However, if, before reaching Initial Operation, the Interconnection Customer withdraws its Interconnection Request, or the Interconnection Request is otherwise deemed rejected or terminated and withdrawn, any unused portion of the non-refundable deposit monies shall be used to fund:
- (a) 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 Interconnection Request and/or associated Queue Position; and/or
 - (b) Any restudies required as a result of the rejection, termination and/or withdrawal of such Interconnection Request; 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 and/or Queue Positions by the Interconnection Customer.
- (3) 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:
- (a) The cost of the screens evaluation and/or supplemental screens evaluations; and
 - (b) The dollar amount of the Interconnection Customer's cost responsibility for the Interconnection Feasibility Study; and
 - (c) If the Interconnection Request is deemed to be modified (pursuant to Section 36.2A of the Tariff), rejected, terminated and/or withdrawn during the deficiency review and/or deficiency response period, as described further below, or during the

screens evaluation 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 Interconnection Request being modified, rejected, terminated and/or withdrawn, and any remaining refundable deposit monies shall be applied to cover:

- (i) The costs of any restudies required as a result of the modification (pursuant to Section 36.2A of the Tariff), rejection, termination and/or withdrawal of such Interconnection Request; and/or
 - (ii) 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 Interconnection Request and/or associated Queue Position; and/or
 - (iii) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Generation Interconnection Requests and/or Queue Positions by the Interconnection Customer.
 - (iv) 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.
- (4) Upon completion of the screens evaluations, the Transmission Provider shall apply any remaining refundable deposit monies toward:
 - (a) The Interconnection Customer's cost responsibility for any other studies conducted for the Interconnection Request under Part VI of the Tariff,

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

- (b) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Generation Interconnection Requests and/or Queue Positions by the Interconnection Customer.
- (5) If any refundable deposit monies remain after the screens evaluations are 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 and/or Queue Positions by the Interconnection Customer have been paid, such remaining deposit monies shall be returned to the Interconnection Customer.
- (6) The Interconnection Customer must submit the total required deposit amount with the Interconnection Request. If the Interconnection Customer fails to submit the total required deposit amount with the Interconnection Request, the Interconnection Request shall be deemed to be terminated and withdrawn (i.e., the Interconnection Request shall be terminated prior to reaching the screens evaluations and/or deficiency review stage).
- (7) 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.

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

- 2. Deficiency Review. Within five Business Days of the Interconnection Customer submitting an Interconnection Request, the Transmission Provider shall provide a deficiency review of the Interconnection Request to determine whether the Interconnection Customer submitted a valid Interconnection Request.
 - a. If an Interconnection Request meets all of the requirements set forth above, the Transmission Provider shall start the deficiency review.
 - b. If there are deficiencies in the 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 Interconnection Request that such 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 and/or monies that the Transmission Provider's deficiency notice identified as being required to constitute a valid 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 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 Interconnection Requests 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 assigned.

4. In accordance with Section 201 of the Tariff, Transmission Provider shall assign Queue Positions as of the date and time of receipt of all information required pursuant to Section 112A. If the information required pursuant to Section 112A 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 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 Interconnection Request, including its Queue Position;
 - vi. The type of Interconnection Service requested;
 - vii. The availability of any studies related to the Interconnection Request;
 - viii. The date of the 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 Interconnection Request that has not resulted in a completed interconnection, an explanation of why it was not completed.
 - b. This list shall not disclose the identity of the Interconnection Customer, except as otherwise provided in Part IV of the Tariff. The list and the priority of Interconnection Requests shall be included on the Transmission Provider's website as part of the New Services Queue.

ATTACHMENT N
Form of
Generation Interconnection Feasibility Study Agreement

RECITALS

1. This Generation Interconnection Feasibility Study Agreement, dated as of _____, is entered into, by and between _____ (“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 Part IV and Part VI of the PJM Interconnection, L.L.C. Open Access Transmission Tariff (“PJM Tariff”) (the “Agreement”). Capitalized terms used in this agreement, unless otherwise indicated, shall have the meanings ascribed to them in the PJM Tariff.
2. By submitting this Agreement and complying with Section 36.1.01, 110.1, 111.1, or 112.1, as applicable, of the PJM Tariff, the Interconnection Customer has submitted an Interconnection Request. In accordance with Section 36.1.01, 110.1, 111.1, or 112.1, as applicable, of the PJM Tariff, the 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 Interconnection Customer requests interconnection to the Transmission System of a generating project with the following specifications:
 - a. Location of generating unit site (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):

 - b. Identification of evidence of ownership interest in, or right to acquire or control, the generating site for a minimum of three years for large generation, or for a minimum of two years for small generation. Include both a written description of the evidence to be relied upon and attach a Word or PDF version copy thereof. If the evidence of ownership interest in, or right to acquire or control the generating site is not yet available, provide a detailed explanation of why such evidence is not available and provide a good faith estimated date upon which such evidence shall be submitted to the Transmission Provider. Though site control evidence may be submitted separately from this Agreement, the Interconnection Request is still subject to the overall deficiency review period and deficiency response period time constraints provided for in Section 36.1.01, 110.1, 111.1, or 112.1, as applicable, of the PJM Tariff, and shall not be assigned a Queue Position without site control evidence acceptable to the Transmission Provider.:

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- c. Specification of Requested Maximum Facility Output and Requested Capacity Interconnection Rights. The requested Maximum Facility Output megawatts and requested Capacity Interconnection Rights megawatts indicated in this section may be reduced as this Interconnection Request proceeds in the Transmission Provider Interconnection Request process, but may not be increased after this Agreement is submitted to the Transmission Provider.

- i. For new generating units, complete the following chart:

Total Requested Maximum Facility Output (as defined in the PJM Tariff) in Megawatts	
Total Requested Capacity Interconnection Rights (as defined in the PJM Tariff) in Megawatts	

- ii. For existing generating units that will be adding megawatt capability, complete the following chart:

	Existing Facility	Proposed Facility Incremental Increase	Total
Maximum Facility Output (as defined in the PJM Tariff) in Megawatts			
Capacity Interconnection Rights (as defined in the PJM Tariff) in Megawatts			

- iii. For new Behind The Meter generating units, complete the following chart:

Gross Generator Output in Megawatts	
Behind the Meter Load in Megawatts (the sum of the MW generation auxiliary load and any other MW load to be served behind the Point of Interconnection)	
Total Requested Maximum Facility Output (as defined in the PJM Tariff) in Megawatts	
Total Requested Capacity Interconnection Rights (as defined in the PJM Tariff) in Megawatts	

- iv. For existing Behind The Meter generating units that will be adding megawatt capability, complete the following chart:

	Existing Facility	Requested Facility Increase	Total
Gross Generator Output in Megawatts			
Behind the Meter Load in Megawatts (the sum of the MW generation auxiliary load and any other MW load to be served behind the Point of Interconnection)			
Maximum Facility Output (as defined in the PJM Tariff) to be exported from the Behind the Meter Generator onto the PJM System, in Megawatts			
Capacity Interconnection Rights, in Megawatts			

- d. Identify the fuel type of the new or existing generating unit:

- e. 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 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:

- f. Planned date the new generating unit or increase in capability will be in service:

- g. Other related information, including for example, but not limited to, identifying: all of Interconnection Customer's prior Queue Positions; stating whether the Interconnection Customer has submitted a previous Interconnection Request for this particular project; and, if this Interconnection Request proposes an increase in capability to an existing generating unit, then identify whether the existing generating unit is subject to an existing Interconnection Agreement and/or Power Purchase Agreement:
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THE FOLLOWING APPLIES TO BEHIND THE METER GENERATION:

- a. If Behind the Meter Generation is identified in this Agreement, all of the requirements in Section 36.1A of the PJM Tariff must also be met.
- b. Identify the type and size of the load located (or to be located) at the site of such generation, and attach a PDF format single line diagram depicting the location of the load in relation to the site of such generation:
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- c. Describe the electrical connections between the generation facility and the load.
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THE FOLLOWING APPLIES TO ENERGY STORAGE RESOURCES:

Primary frequency response operating range for Energy Storage Resources:

Minimum State of Charge: _____; and

Maximum State of Charge: _____.

PURPOSE OF THE FEASIBILITY STUDY

4. Consistent with Section 36.2 of the PJM Tariff, the Transmission Provider shall conduct a Generation Interconnection Feasibility Study to provide the Interconnection Customer with preliminary determinations of: (i) the type and scope of the Attachment Facilities, Local Upgrades, and Network Upgrades that will be necessary to accommodate the Interconnection Customer's Interconnection Request; (ii) the time that will be required to construct such facilities and upgrades; and (iii) the Interconnection Customer's cost responsibility for the necessary facilities and upgrades. In the event that the Transmission Provider is unable to complete the Generation Interconnection Feasibility

Study within the timeframe prescribed in Section 36.2 of the PJM Tariff, the Transmission Provider shall notify the Interconnection Customer and explain the reasons for the delay.

5. The Generation Interconnection Feasibility Study conducted hereunder will provide only preliminary non-final estimates of the cost and length of time required to accommodate the Interconnection Customer's Interconnection Request. More comprehensive estimates will be developed only upon execution of a System Impact Study Agreement and a Facilities Study Agreement in accordance with Part VI of the PJM Tariff. The Generation Interconnection Feasibility Study necessarily will employ various assumptions regarding the Interconnection Request, other pending requests, and PJM's Regional Transmission Expansion Plan at the time of the study. The Generation Interconnection Feasibility Study shall not obligate the Transmission Provider or the Transmission Owners to interconnect with the 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 Generation Interconnection Feasibility Study. Subject to paragraph 7 of this Agreement and to the extent required by Section 222 of the PJM Tariff, information provided pursuant to this Section 6 shall be and remain confidential.
7. Until completion of the Generation Interconnection Feasibility Study, the Transmission Provider shall keep confidential all information provided to it by the Interconnection Customer. Upon completion of the Generation Interconnection Feasibility Study, the study will be listed on the Transmission Provider's website and, to the extent required by Commission regulations, will be made publicly available upon request, except that the identity of the Interconnection Customer shall remain confidential and will not be posted on the Transmission Provider's website.
8. Interconnection Customer acknowledges that, consistent with the PJM Tariff, the Transmission Provider may contract with consultants, including the Transmission Owners, to provide services or expertise in the Generation Interconnection Feasibility Study process and that the Transmission Provider may disseminate information to the Transmission Owners.

COST RESPONSIBILITY

9. The Interconnection Customer shall reimburse the Transmission Provider for the actual cost of the Generation Interconnection Feasibility Study. The refundable portion of the deposit paid by the Interconnection Customer described in Section 2 of this Agreement shall be applied toward the Interconnection Customer's Generation Interconnection Feasibility Study cost responsibility. Pursuant to Section 36.1.01, 110, 111, or 112 of the PJM Tariff, as applicable, during the deficiency review of this Agreement, in the event

that the Transmission Provider anticipates that the actual study costs will exceed the refundable portion of the deposit described in Section 2 of this agreement, 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. If the Transmission Provider sends the Interconnection Customer notification of estimated additional study costs during the deficiency review period (as described in Sections 36.1.01, 110, 111, or 112), then the Interconnection Customer must either: (1) withdraw the Generation Interconnection Request during the deficiency response period (as described in Sections 36.1.01, 110, 111, or 112); or (2) pay all additional estimated costs prior to the expiration of the deficiency response period (as described in Sections 36.1.01, 110, 111, or 112). If the Interconnection Customer fails to complete either (1) or (2), then the Generation Interconnection Request shall be deemed to be terminated and withdrawn. 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.

DISCLAIMER OF WARRANTY, LIMITATION OF LIABILITY

10. In analyzing and preparing the Generation Interconnection Feasibility 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 Interconnection 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 FEASIBILITY STUDY. The 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 Generation Interconnection Feasibility 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 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 Generation Interconnection Feasibility Study Agreement.

Without limitation of the foregoing, the 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 Generation Interconnection Feasibility 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 either 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

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 Generation Interconnection Feasibility Study performed hereunder shall be construed as an application for service under Part II or Part III of the PJM Tariff.
17. The provisions of Part IV of the PJM Tariff 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**
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, Interconnection Customer hereby certifies that it has submitted with this executed Agreement each of the required elements (if this 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 generating unit site or existing 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 generating unit site)**
- _____ **Evidence of an ownership interest in, or right to acquire or control the generating unit site**
- _____ **The megawatt size of the proposed generating unit or the amount of increase in megawatt capability of an existing generating unit, and identification of any megawatt portion of the facility's capability that will be a Capacity Resource**
- _____ **Identification of the fuel type of the proposed generating unit or upgrade thereto**
- _____ **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**
- _____ **The planned date that the proposed generating unit or increase in megawatt 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

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

_____ **The full amount (including both the refundable and non-refundable portions) of the required deposit**

IN WITNESS WHEREOF, the Transmission Provider and the 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

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

By: _____
Name Title Date

Printed Name

**FORM OF
INTERCONNECTION SERVICE AGREEMENT**

**By and Among
PJM Interconnection, L.L.C.**

**And
[Name of Interconnection Customer]**

**And
[Name of Interconnected Transmission Owner]
(PJM Queue Position #__)**

- 1.0 Parties. This Interconnection Service Agreement (“ISA”) including the Specifications, Schedules and Appendices attached hereto and incorporated herein, is entered into by and between PJM Interconnection, L.L.C., the Regional Transmission Organization for the PJM Region (hereinafter “Transmission Provider” or “PJM”), _____ (“Interconnection Customer” [OPTIONAL: or “[short name]”]) and _____ (“Interconnected Transmission Owner” [OPTIONAL: or “[short name]”]). All capitalized terms herein shall have the meanings set forth in the appended definitions of such terms as stated in Part I of the PJM Open Access Transmission Tariff (“Tariff”). [Use as/when applicable: This ISA supersedes the _____ {insert details to identify the agreement being superseded, such as whether it is an Interim Interconnection Service Agreement, Interconnection Service Agreement, or Interconnection Agreement, the effective date of the agreement, the service agreement number designation, and the FERC docket number, if applicable, for the agreement being superseded.}]]
- 2.0 Authority. This ISA is entered into pursuant to Part VI of the Tariff. Interconnection Customer has requested an Interconnection Service Agreement under the Tariff, and Transmission Provider has determined that Interconnection Customer is eligible under the Tariff to obtain this ISA. The standard terms and conditions for interconnection as set forth in Appendix 2 to this ISA are hereby specifically incorporated as provisions of this ISA. Transmission Provider, Interconnected Transmission Owner and Interconnection Customer agree to and assume all of the rights and obligations of the Transmission Provider, Interconnected Transmission Owner and Interconnection Customer, respectively, as set forth in Appendix 2 to this ISA.
- 3.0 Customer Facility Specifications. Attached are Specifications for the Customer Facility that Interconnection Customer proposes to interconnect with the Transmission System. Interconnection Customer represents and warrants that, upon completion of construction of such facilities, it will own or control the Customer Facility identified in section 1.0 of the Specifications attached hereto and made a part hereof. In the event that Interconnection Customer will not own the Customer Facility, Interconnection Customer represents and warrants that it is authorized by the owner(s) thereof to enter into this ISA and to represent such control.
- 4.0 Effective Date. Subject to any necessary regulatory acceptance, this ISA shall become effective on the date it is executed by all Interconnection Parties, or, if the agreement is

filed with FERC unexecuted, upon the date specified by FERC. This ISA shall terminate on such date as mutually agreed upon by the parties, unless earlier terminated in accordance with the terms set forth in Appendix 2 to this ISA. The term of the ISA shall be as provided in Section 1.3 of Appendix 2 to this ISA. Interconnection Service shall commence as provided in Section 1.2 of Appendix 2 to this ISA.

- 5.0 Security. In accord with Section 212.4 of the Tariff, Interconnection Customer shall provide the Transmission Provider (for the benefit of the Interconnected Transmission Owner) with a letter of credit from an agreed provider or other form of security reasonably acceptable to the Transmission Provider and that names the Transmission Provider as beneficiary ("Security") in the amount of \$_____. This amount represents the sum of the estimated Costs, determined in accordance with Sections 212 and 217 of the Tariff, for which the Interconnection Customer will be responsible, less any Costs already paid by Interconnection Customer. Interconnection Customer acknowledges that its ultimate cost responsibility in accordance with Section 217 of the Tariff will be based upon the actual Costs of the facilities described in the Specifications, whether greater or lesser than the amount of the payment security provided under this section.

[Include the following if Interconnection Customer requests deferral of the security as provided for in Section 212.4(c) of the Tariff:

For any portion of the security that may be deferred in accordance with Section 212.4(c) of the Tariff, and as requested by Interconnection Customer, Interconnection Customer shall provide the security specified in this Section 5.0 within 120 days after the Interconnection Customer executes this ISA, provided that Interconnection Customer shall pay a deposit of at least \$200,000 or 125% of the estimated costs that will be incurred during the 120-day period, whichever is greater, to fund continued design work and/or procurement activities, with \$100,000 of such deposit being non-refundable.]

Should Interconnection Customer fail to provide security at the time the Interconnection Customer executes this ISA, or, if deferred, by the end of the 120-day period, this ISA shall be terminated.

- 6.0 Project Specific Milestones. In addition to the milestones stated in Section 212.5 of the Tariff, as applicable, during the term of this ISA, Interconnection Customer shall ensure that it meets each of the following development milestones:

[Specify Project Specific Milestones]

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

- 6.1 Substantial Site work completed. On or before _____ Interconnection Customer must demonstrate completion of at least 20% of project site construction. At this time, Interconnection Customer must submit to Interconnected Transmission Owner and Transmission Provider initial drawings, certified by a professional engineer, of the Customer Interconnection Facilities.
- 6.2 Delivery of major electrical equipment. On or before _____, Interconnection Customer must demonstrate that ___ generating units have been delivered to Interconnection Customer's project site.
- 6.3 Commercial Operation. (i) On or before _____, Interconnection Customer must demonstrate commercial operation of ___ generating units; (ii) On or before _____, Interconnection Customer must demonstrate commercial operation of ___ additional generating units. Demonstrating commercial operation includes achieving Initial Operation in accordance with Section 1.4 of Appendix 2 to this ISA and making commercial sales or use of energy, as well as, if applicable, obtaining capacity qualification in accordance with the requirements of the Reliability Assurance Agreement Among Load Serving Entities in the PJM Region.
- [if a specific situation requires a CSA by a certain date then use the following: Interconnection Construction Service Agreement. On or before _____, Interconnection Customer must have either (a) executed an Interconnection Construction Service Agreement for Interconnection Facilities for which Interconnection Customer has cost responsibility; (b) requested dispute resolution under Section 12 of the PJM Tariff, or if concerning the Regional Transmission Expansion Plan, consistent with Schedule 5 of the Operating Agreement; or (c) requested that the Transmission Provider file the Interconnection Construction Service Agreement unexecuted with the Commission.]
- 6.4 Within one (1) month following commercial operation of generating unit(s), Interconnection Customer must provide certified documentation demonstrating that "as-built" Customer Facility and Customer Interconnection Facilities are in accordance with applicable PJM studies and agreements. Interconnection Customer must also provide PJM with "as-built" electrical modeling data or confirm that previously submitted data remains valid.

[Add Additional Project Specific Milestones as appropriate]

Interconnection Customer shall demonstrate the occurrence of each of the foregoing milestones to Transmission Provider's reasonable satisfaction. Transmission Provider may reasonably extend any such milestone dates, in the event of delays that Interconnection Customer (i) did not cause and (ii) could not have remedied through the exercise of due diligence. The milestone dates stated in this ISA shall be deemed to be extended coextensively with any suspension of work initiated by Interconnection Customer in accordance with the Interconnection Construction Service Agreement.

- 7.0 Provision of Interconnection Service. Transmission Provider and Interconnected Transmission Owner agree to provide for the interconnection to the Transmission System in the PJM Region of Interconnection Customer's Customer Facility identified in the Specifications in accordance with Part IV and Part VI of the Tariff, the Operating Agreement of PJM Interconnection, L.L.C. ("Operating Agreement"), and this ISA, as they may be amended from time to time.
- 8.0 Assumption of Tariff Obligations. Interconnection Customer agrees to abide by all rules and procedures pertaining to generation and transmission in the PJM Region, including but not limited to the rules and procedures concerning the dispatch of generation or scheduling transmission set forth in the Tariff, the Operating Agreement and the PJM Manuals.
- 9.0 Facilities Study. In analyzing and preparing the [Facilities Study] [System Impact Study {if a Facilities Study was not required}], and in designing and constructing the Attachment Facilities, Local Upgrades and/or Network Upgrades described in the Specifications attached to this ISA, Transmission Provider, the Interconnected Transmission Owner(s), and any other subcontractors employed by Transmission Provider have had to, and shall have to, rely on information provided by Interconnection Customer and possibly by third parties and may not have control over the accuracy of such information. Accordingly, NEITHER TRANSMISSION PROVIDER, THE INTERCONNECTED TRANSMISSION OWNER(s), NOR ANY OTHER SUBCONTRACTORS EMPLOYED BY TRANSMISSION PROVIDER OR INTERCONNECTED TRANSMISSION OWNER 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 OR THE SYSTEM IMPACT STUDY IF A FACILITIES STUDY WAS NOT REQUIRED OR OF THE ATTACHMENT FACILITIES, THE LOCAL UPGRADES AND/OR THE NETWORK UPGRADES, PROVIDED, HOWEVER, that Transmission Provider warrants that the Transmission Owner Interconnection Facilities and any Merchant Transmission Upgrades described in the Specifications will be designed and constructed (to the extent that Interconnected Transmission Owner is responsible for design and construction thereof) and operated in accordance with Good Utility Practice, as such term is defined in the Operating Agreement. 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.
- 10.0 Construction of Transmission Owner Interconnection Facilities
- 10.1. Cost Responsibility. Interconnection Customer shall be responsible for and shall pay upon demand all Costs associated with the interconnection of the Customer Facility as specified in the Tariff. These Costs may include, but are not limited to,

an Attachment Facilities charge, a Local Upgrades charge, a Network Upgrades charge and other charges. A description of the facilities required and an estimate of the Costs of these facilities are included in Sections 3.0 and 4.0 of the Specifications to this ISA.

- 10.2. Billing and Payments. Transmission Provider shall bill the Interconnection Customer for the Costs associated with the facilities contemplated by this ISA, estimates of which are set forth in the Specifications to this ISA, and the Interconnection Customer shall pay such Costs, in accordance with Section 11 of Appendix 2 to this ISA and the applicable Interconnection Construction Service Agreement. Upon receipt of each of Interconnection Customer's payments of such bills, Transmission Provider shall reimburse the applicable Interconnected Transmission Owner. Pursuant to Section 212.4 of the Tariff, Interconnection Customer requests that Transmission Provider provide a quarterly cost reconciliation:

_____ Yes

_____ No

- 10.3. Contract Option. In the event that the Interconnection Customer and Interconnected Transmission Owner agree to utilize the Negotiated Contract Option provided by the Interconnection Construction Service Agreement to establish, subject to FERC acceptance, non-standard terms regarding cost responsibility, payment, billing and/or financing, the terms of Sections 10.1 and/or 10.2 of this Section 10.0 shall be superseded to the extent required to conform to such negotiated terms, as stated in a schedule attached to the parties' Interconnection Construction Service Agreement relating to interconnection of the Customer Facility.

- 10.4 In the event that the Interconnection Customer elects to construct some or all of the Transmission Owner Interconnection Facilities under the Option to Build of the Interconnection Construction Service Agreement, billing and payment for the Costs associated with the facilities contemplated by this ISA shall relate only to such portion of the Interconnection Facilities as the Interconnected Transmission Owner is responsible for building.

11.0 Interconnection Specifications

- 11.1 Point of Interconnection. The Point of Interconnection shall be as identified on the one-line diagram attached as Schedule B to this ISA.
- 11.2 List and Ownership of Interconnection Facilities. The Interconnection Facilities to be constructed and ownership of the components thereof are identified in Section 3.0 of the Specifications attached to this ISA.

11.3 Ownership and Location of Metering Equipment. The Metering Equipment to be constructed, the capability of the Metering Equipment to be constructed, and the ownership thereof, are identified on the attached Schedule C to this ISA.

11.4 Applicable Technical Standards. The Applicable Technical Requirements and Standards that apply to the Customer Facility and the Interconnection Facilities are identified in Schedule D to this ISA.

12.0 Power Factor Requirement.

Consistent with Section 4.7 of Appendix 2 to this ISA, the power factor requirement is as follows:

[For Generation Interconnection Customers]

{The following language should be included for new large and small synchronous generation facilities that will have the Tariff specified power factor. This section does not apply if the Interconnection Request is for an incremental increase in generating capability.}

The Interconnection Customer shall design its Customer Facility with the ability to maintain a power factor of at least 0.95 leading to 0.90 lagging measured at the [generator's terminals] [Point of Interconnection].

{For all wind or non-synchronous generation facilities which have entered the New Services Queue prior to May 1, 2015, include the appropriate alternative from the language below. This section does not apply if the Interconnection Request is for an incremental increase in generating capability.}

The result of the System Impact Study indicated that, for the safety and reliability of the Transmission System, no power factor requirement is required for the [wind-powered] [non-synchronous] Customer Facility.

{or}

The results of the System Impact Study require that, for the safety or reliability of the Transmission System, the Generation Interconnection Customer shall design its [wind-powered] [non-synchronous] Customer Facility with the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the Point of Interconnection.

{include the following language if the Interconnection Request is for an incremental increase in capacity or energy output to a synchronized generation facility}

The existing __ MW portion of the Customer Facility shall retain its existing ability to maintain a power factor of at least 0.95 leading to 0.90 lagging measured at the [generator's terminals] [Point of Interconnection].

The increase of ____ MW to the Customer Facility associated with this ISA shall be designed with the ability to maintain a power factor of at least 1.0 (unity) to 0.90 lagging measured at the [generator's terminals] [Point of Interconnection].

{For new wind or non-synchronous generation facilities which have entered the New Service Queue on or after May 1, 2015, and before November 1, 2016, the following applies:}

The Generation Interconnection Customer shall design its [wind-powered] [non-synchronous] Customer Facility with the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the generator's terminals.

{For new wind or non-synchronous generation facilities which have entered the New Service Queue after November 1, 2016, the following applies:}

The Generation Interconnection Customer shall design its [wind-powered] [non-synchronous] Customer Facility with the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the high-side of the facility substation transformers.

{For all wind or non-synchronous generation facilities that have entered the New Services Queue prior to May 1, 2015, include the appropriate alternative from the language below for Interconnection Requests for an incremental increase in capacity or energy output to all wind or non-synchronized generation facility.}

The results of the System Impact Study indicate that, for the safety or reliability of the Transmission System, no power factor requirement is necessary for the [existing ____ MW or the increase of ____ MW associated with this ISA] [increase of ____ MW associated with this ISA, but that the existing ____ MW of the Customer Facility must retain its ability to retain a power factor of at least 0.95 leading to 0.95 lagging measured at the Point of Interconnection] [existing ____ MW of the Customer Facility but that the increase of ____ MW associated with this ISA must be designed with the ability to maintain a power factor requirement of 1.0 (unity) to 0.90 lagging measured at the Point of Interconnection].

{or}

The results of the System Impact Study indicate that, for the safety or reliability of the Transmission System, (i) the existing ____ MW portion of the Customer Facility shall retain its existing ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the Point of Interconnection and (ii) the increase of ____ MW to the Customer Facility associated with this ISA shall be designed with the ability to maintain a power factor of at least 1.0 (unity) to 0.95 lagging measured at the Point of Interconnection.

{For all wind or non-synchronous generation facilities requesting an incremental increase in capacity or energy output which have entered the New Services Queue on or after May 1, 2015, and before November 1, 2016, include the following requirements: }

{NOTE: This section does not apply to requests for an incremental increase in capacity or energy output for wind or non-synchronous generation facilities which were commercially operable or had entered the New Services Queue prior to May 1, 2015. }

The existing [wind-powered] [non-synchronous] __ MW portion of the Customer Facility shall retain the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the generator's terminals.

The increase of __ MW to the [wind-powered] [non-synchronous] Customer Facility associated with this ISA shall be designed with the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the generator's terminals.

{For all wind or non-synchronous generation facilities requesting an incremental increase in capacity or energy output which have entered the New Services Queue after November 1, 2016, and were not commercially operable prior to November 1, 2016 include the following requirements: }

The existing [wind-powered] [non-synchronous] __ MW portion of the Customer Facility shall retain the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the high-side of the facility substation transformers.

The increase of __ MW to the [wind-powered] [non-synchronous] Customer Facility associated with this ISA shall be designed with the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the high-side of the facility substation transformers.

{For all wind or non-synchronous generation facilities requesting an incremental increase in capacity or energy output which have entered the New Services Queue on or after November 1, 2016, and were commercially operable prior to November 1, 2016, include the following requirements: }

The result of the System Impact Study indicated that, for the safety and reliability of the Transmission System, no power factor requirement is required for the [wind-powered] [non-synchronous] Customer Facility.

{or }

The results of the System Impact Study require that, for the safety or reliability of the Transmission System, the Generation Interconnection Customer shall design its [wind-powered] [non-synchronous] Customer Facility with the ability to maintain a power

factor of at least 0.95 leading to 0.95 lagging measured at the high-side of the facility substation transformers.

[For Transmission Interconnection Customers]

{The following language should be included only for new Merchant Transmission Facilities}

Transmission Interconnection Customer shall design its Merchant D.C. Transmission Facilities and/ or Controllable A.C. Merchant Transmission Facilities, to maintain a power factor at the Point of Interconnection of at least 0.95 leading and 0.95 lagging, when such Customer Facility is operating at any level within its approved operating range.

[Include section 12A.0 only when applicable, i.e., only for a facility for which Transmission Provider and Interconnected Transmission Owner deem an RTU (or equivalent) to be unnecessary]

- 12A.0 RTU. In accordance with Section 8.5.2 of Appendix 2 to this ISA, that provision's requirement for installation of a remote terminal unit or equivalent data collection and transfer equipment is hereby waived for purposes of this ISA.
- 13.0 Charges. In accordance with Sections 10 and 11 of Appendix 2 to this ISA, the Interconnection Customer shall pay to the Transmission Provider the charges applicable after Initial Operation, as set forth in Schedule E to this ISA. Promptly after receipt of such payments, the Transmission Provider shall forward such payments to the appropriate Interconnected Transmission Owner.
- 14.0 Third Party Beneficiaries. No third party beneficiary rights are created under this ISA, except, however, that, subject to modification of the payment terms stated in Section 10 of this ISA pursuant to the Negotiated Contract Option, payment obligations imposed on Interconnection Customer under this ISA are agreed and acknowledged to be for the benefit of the Interconnected Transmission Owner(s). Interconnection Customer expressly agrees that the Interconnected Transmission Owner(s) shall be entitled to take such legal recourse as it deems appropriate against Interconnection Customer for the payment of any Costs or charges authorized under this ISA or the Tariff with respect to Interconnection Service for which Interconnection Customer fails, in whole or in part, to pay as provided in this ISA, the Tariff and/or the Operating Agreement.
- 15.0 Waiver. No waiver by either party of one or more defaults by the other in performance of any of the provisions of this ISA shall operate or be construed as a waiver of any other or further default or defaults, whether of a like or different character.
- 16.0 Amendment. This ISA or any part thereof, may not be amended, modified, or waived other than by a written document signed by all parties hereto.

17.0 Construction With Other Parts Of The Tariff. This ISA shall not be construed as an application for service under Part II or Part III of the Tariff.

18.0 Notices. Any notice or request made by either party regarding this ISA shall be made, in accordance with the terms of Appendix 2 to this ISA, to the representatives of the other party and as applicable, to the Interconnected Transmission Owner(s), as indicated below:

Transmission Provider:

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

Interconnection Customer:

Interconnected Transmission Owner:

19.0 Incorporation Of Other Documents. All portions of the Tariff and the Operating Agreement pertinent to the subject matter of this ISA and not otherwise made a part hereof are hereby incorporated herein and made a part hereof.

20.0 Addendum of Non-Standard Terms and Conditions for Interconnection Service. Subject to FERC approval, the parties agree that the terms and conditions set forth in Schedule F hereto are hereby incorporated herein by reference and be made a part of this ISA. In the event of any conflict between a provision of Schedule F that FERC has accepted and any provision of Appendix 2 to this ISA that relates to the same subject matter, the pertinent provision of Schedule F shall control.

21.0 Addendum of Interconnection Customer's Agreement to Conform with IRS Safe Harbor Provisions for Non-Taxable Status. To the extent required, in accordance with Section 24.1 of Appendix 2 to this ISA, Schedule G to this ISA shall set forth the Interconnection Customer's agreement to conform with the IRS safe harbor provisions for non-taxable status.

22.0 Addendum of Interconnection Requirements for all Wind or Non-synchronous Generation Facilities. To the extent required, Schedule H to this ISA sets forth interconnection requirements for a wind or non-synchronous generation facilities and is hereby incorporated by reference and made a part of this ISA.

23.0 All interconnection parties agree to comply with all infrastructure security requirements of the North American Electric Reliability Corporation.

IN WITNESS WHEREOF, Transmission Provider, Interconnection Customer and Interconnected Transmission Owner have caused this ISA to be executed by their respective authorized officials.

(PJM Queue Position #____)

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

By:_____

Name	Title	Date
------	-------	------

Printed name of signer:_____

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

By:_____

Name	Title	Date
------	-------	------

Printed name of signer: _____

Interconnected Transmission Owner: **[Name of Party]**

By:_____

Name	Title	Date
------	-------	------

Printed name of signer: _____

**SPECIFICATIONS FOR
INTERCONNECTION SERVICE AGREEMENT**

**By and Among
PJM INTERCONNECTION, L.L.C.**

And

[Name of Interconnection Customer]

And

[Name of Interconnected Transmission Owner]

(PJM Queue Position # ____)

1.0 Description of [generating unit(s)] [Merchant Transmission Facilities] (the Customer Facility) to be interconnected with the Transmission System in the PJM Region:

a. Name of Customer Facility:

b. Location of Customer Facility:

c. Size in megawatts of Customer Facility:

{ The following language should be included only for generating units

For Generation Interconnection Customer:

Maximum Facility Output of _____MW }

{The following language applies when a Generation Interconnection Request involves an increase of the capacity of an existing generating facility:

The stated size of the generating unit includes an increase in the Maximum Facility Output of the generating unit of ____ MW over Interconnection Customer's previous interconnection. This increase is a result of the Interconnection Request associated with this Interconnection Service Agreement. }

{ The following language should be included only for Merchant Transmission Facilities

For Transmission Interconnection Customer:

Nominal Rated Capability: _____MW}

d. Description of the equipment configuration:

2.0 Rights

[for Generation Interconnection Customers]

2.1 Capacity Interconnection Rights: {this section will not apply if the Customer Facility is exclusively an Energy Resource and thus is granted no CIRs; see alternate section 2.1 below}

Pursuant to and subject to the applicable terms of the Tariff, the Interconnection Customer shall have Capacity Interconnection Rights at the Point(s) of Interconnection specified in this Interconnection Service Agreement in the amount of ____ MW. {Instructions: this number is the total of the Capacity Interconnection Rights that are granted as a result of the Interconnection Request, plus any prior Capacity Interconnection Rights}

{include the following language when the projected Initial Operation is in advance of the study year used for the System Impact Study and Capacity Interconnection Rights are only interim until the study year: }

Pursuant to and subject to the applicable terms of the Tariff, the Interconnection Customer shall have Capacity Interconnection Rights at the Point(s) of Interconnection specified in this Interconnection Service Agreement in the amount of ____MW commencing _____. During the time period from the effective date of this ISA until _____ (the “interim time period”), the Interconnection Customer may be awarded interim Capacity Interconnection Rights in the amount not to exceed ____MW. The availability and amount of such interim Capacity Interconnection Rights shall be dependent upon completion and the results of an interim deliverability study. Any interim Capacity Interconnection Rights awarded during the interim time period shall terminate on _____.

{include the following language to the extent applicable for interconnection of additional generation at an existing generating facility: }

The amount of Capacity Interconnection Rights specified above (____ MW) includes ____ MW of Capacity Interconnection Rights that the Interconnection Customer had at the same Point(s) of Interconnection prior to its Interconnection Request associated with this Interconnection Service Agreement, and ____MW of Capacity Interconnection Rights granted as a result of such Interconnection Request.

{include the following language when the CIRs are only interim and have a termination date or event:}

Interconnection Customer shall have ____ MW of Capacity Interconnection Rights for the time period from ____ to _____. These Capacity Interconnection Rights are interim and will terminate upon {explain circumstances -- e.g. interim agreement; completion of another facility, etc.}

- 2.1a To the extent that any portion of the Customer Facility described in section 1.0 is not a Capacity Resource with Capacity Interconnection Rights, such portion of the Customer Facility shall be an Energy Resource. PJM reserves the right to limit total injections to the Maximum Facility Output in the event reliability would be affected by output greater than such quantity.

{this version of section 2.1 will be used in lieu of section 2.1 above when a generating facility will be an Energy Resource and therefore will not be granted any CIRs:}

[2.1 The generating unit(s) described in section 1.0 shall be an Energy Resource. Pursuant to this Interconnection Service Agreement, the generating unit will be permitted to inject ____ MW (nominal) into the system. PJM reserves the right to limit injections to this quantity in the event reliability would be affected by output greater than such quantity.]

[for Transmission Interconnection Customers]

- 2.1 Transmission Injection Rights: [applicable only to Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities that interconnect with a control area outside PJM]

Pursuant to Section 232 of the Tariff, Interconnection Customer shall have Transmission Injection Rights at each indicated Point of Interconnection in the following quantity(ies):

- 2.2 Transmission Withdrawal Rights: [applicable only to Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities that interconnect with a control area outside PJM]

Pursuant to Section 232 of the Tariff, Interconnection Customer shall have Transmission Withdrawal Rights at each indicated Point of Interconnection in the following quantity(ies):

[Include Section 2.2A only if customer is interconnecting Controllable A.C. Merchant Transmission Facilities]

2.2A Interconnection Customer is interconnecting Controllable A.C. Merchant Transmission Facilities as defined in the appended Section 1.6B of the Tariff, and has elected, pursuant to the appended Section 41.1 of the Tariff, to receive Transmission Injection Rights and Transmission Withdrawal Rights in lieu of the other applicable rights for which it may be eligible under Subpart C of Part VI of the Tariff. Accordingly, Interconnection Customer hereby agrees that the Transmission Injection Rights and Transmission Withdrawal Rights awarded to it pursuant to the Tariff and this ISA are, and throughout the duration of this ISA shall be, conditioned on Interconnection Customer's continuous operation of its Controllable A.C. Merchant Transmission Facilities in a controllable manner, i.e., in a manner effectively the same as operation of D.C. transmission facilities.

2.3 Incremental Deliverability Rights:

Pursuant to Section 235 of the Tariff, Interconnection Customer shall have Incremental Deliverability Rights at each indicated Point of Interconnection in the following quantity(ies):

2.4 Incremental Available Transfer Capability Revenue Rights:

Pursuant to Section 233 of the Tariff, Interconnection Customer shall have Incremental Available Transfer Capability Revenue Rights at each indicated Point of Interconnection in the following quantities:

2.5 Incremental Auction Revenue Rights:

Pursuant to Section 231 of the Tariff, Interconnection Customer shall have Incremental Auction Revenue Rights in the following quantities:

2.6 Incremental Capacity Transfer Rights:

Pursuant to Section 234 of the Tariff, Interconnection Customer shall have Incremental Capacity Transfer Rights between the following associated source(s) and sink(s) in the indicated quantities:

3.0 Construction Responsibility and Ownership of Interconnection Facilities

a. Interconnection Customer.

(1) Interconnection Customer shall construct and, unless otherwise indicated, shall own, the following Interconnection Facilities:

[Specify Facilities To Be Constructed]

(2) In the event that, in accordance with the Interconnection Construction Service Agreement, Interconnection Customer has exercised the Option to Build, it is hereby permitted to build in accordance with and subject to the conditions and limitations set forth in that Section, the following portions of the Transmission Owner Interconnection Facilities which constitute or are part of the Customer Facility:

[Specify Facilities To Be Constructed]

Ownership of the facilities built by Interconnection Customer pursuant to the Option to Build shall be as provided in the Interconnection Construction Service Agreement.

- b. Interconnected Transmission Owner {or Name of Interconnected Transmission Owner if more than one Interconnected Transmission Owner}

[Specify Facilities To Be Constructed and Owned]

- c. [if applicable, include the following][Name of any additional Transmission Owner constructing facilities with which Interconnection Customer and Transmission Provider will also execute an Interconnection Construction Service Agreement]

[Specify Facilities To Be Constructed and Owned]

- 4.0 Subject to modification pursuant to the Negotiated Contract Option and/or the Option to Build under the Interconnection Construction Service Agreement, Interconnection Customer shall be subject to the estimated charges detailed below, which shall be billed and paid in accordance with Appendix 2, Section 11 of this ISA and the applicable Interconnection Construction Service Agreement.

4.1 Attachment Facilities Charge: \$_____

[Optional: Provide Charge and Identify Interconnected Transmission Owner]

4.2 Network Upgrades Charge: \$_____

[Optional: Provide Breakdown of Charge Based on Interconnected Transmission Owner responsibilities]

4.3 Local Upgrades Charge: \$_____

[Optional: Provide Breakdown of Charge Based on Interconnected Transmission Owner responsibilities]

4.4 Other Charges: \$_____

[Optional: Provide Breakdown of Charge Based on Interconnected Transmission Owner responsibilities]

4.5 Cost breakdown:

\$ Direct Labor
\$ Direct Material
\$ Indirect Labor
\$ Indirect Material

[Additional items for breakdown as necessary]

\$ Total

4.6 Security Amount Breakdown:

\$ Estimated Cost of Non-Direct Connection Local Upgrades and/or Non-Direct Connection Network Upgrades

plus \$ Estimated cost of the work (for the first three months after construction commences in earnest) on the required Attachment Facilities, Direct Connection Local Upgrades, and Direct Connection Network Upgrades

plus \$ Option to Build Security for Attachment Facilities, Direct Connection Local Upgrades, and Direct Connection Network Upgrades (including Cancellation Costs)

{Use if Interconnected Transmission Owner work will be completed in the first quarter:

\$ Costs included for three-month work completion estimate Security x 0.25}

\$ Total Security required with ISA (this value should be in Section 5.0 of this ISA)

less \$ Costs already paid by Interconnection Customer

\$ Total Security **{if the resultant is negative, use: reduction with this ISA; if the resultant is zero or positive use: required with this ISA}**

APPENDICES:

- **APPENDIX 1 - DEFINITIONS**
- **APPENDIX 2 - STANDARD TERMS AND CONDITIONS FOR INTERCONNECTIONS**

SCHEDULES:

- **SCHEDULE A - CUSTOMER FACILITY LOCATION/SITE PLAN**
- **SCHEDULE B - SINGLE-LINE DIAGRAM**
- **SCHEDULE C - LIST OF METERING EQUIPMENT**
- **SCHEDULE D - APPLICABLE TECHNICAL REQUIREMENTS AND STANDARDS**
- **SCHEDULE E - SCHEDULE OF CHARGES**
- **SCHEDULE F - SCHEDULE OF NON-STANDARD TERMS & CONDITIONS**
- **SCHEDULE G - INTERCONNECTION CUSTOMER'S AGREEMENT TO CONFORM WITH IRS SAFE HARBOR PROVISIONS FOR NON-TAXABLE STATUS**
- **SCHEDULE H - INTERCONNECTION REQUIREMENTS FOR A WIND GENERATION FACILITY**
- **SCHEDULE I – INTERCONNECTION SPECIFICATIONS FOR AN ENERGY STORAGE RESOURCE**

4.7 Reactive Power and Primary Frequency Response

4.7.1 Reactive Power

4.7.1.1 Reactive Power Design Criteria

4.7.1.1.1 New Facilities:

For all new generating facilities to be interconnected pursuant to the Tariff, other than wind-powered and other non-synchronous generation facilities, the Generation Interconnection Customer shall design its Customer Facility to maintain a composite power delivery at continuous rated power output at a power factor of at least 0.95 leading to 0.90 lagging. For all new wind-powered and other non-synchronous generation facilities the Generation Interconnection Customer shall design its Customer Facility with the ability to maintain a composite power delivery at a power factor of at least 0.95 leading to 0.95 lagging across the full range of continuous rated power output. For all wind-powered and other non-synchronous generation facilities entering the New Service Queue on or after November 1, 2016, the power factor requirement shall be measured at the high-side of the facility substation transformers. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two. For all wind-powered and other non-synchronous generation facilities entering the New Service Queue on or after May 1, 2015, and before November 1, 2016, the power factor requirement shall be measured at the generator's terminals. For new generation resources of more than 20 MW, other than wind-powered and other non-synchronous generating facilities, the power factor requirement shall be measured at the generator's terminals. For new generation resources of 20 MW or less, and all wind-powered and other non-synchronous generation facilities entering the New Service Queue prior to May 1, 2015, the power factor requirement shall be measured at the Point of Interconnection. Any different reactive power design criteria that Transmission Provider determines to be appropriate for a wind-powered or other non-synchronous generation facility shall be stated in the Interconnection Service Agreement. A Transmission Interconnection Customer interconnecting Merchant D.C. Transmission Facilities and/ or Controllable A.C. Merchant Transmission Facilities shall design its Customer Facility to maintain a power factor at the Point of Interconnection of at least 0.95 leading and 0.95 lagging, when the Customer Facility is operating at any level within its approved operating range.

4.7.1.1.2 Increases in Generating Capacity or Energy Output:

All increases in the capacity or energy output of any generation facility interconnected with the Transmission System, other than wind-powered and other non-synchronous generating facilities, shall be designed with the ability to maintain a composite power delivery at continuous rated power output at a power factor for all incremental MW of capacity or energy output, of at least 1.0 (unity) to 0.90 lagging. Wind-powered generation facilities and other non-synchronous generation facilities entering the New Service Queue on or after November 1, 2016, shall be designed with the ability to maintain a composite power delivery at a power factor for all

incremental MW of capacity or energy output of at least 0.95 leading to 0.95 lagging measured at the high-side of the facility substation transformers across the full range of continuous rated power output. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two. Wind-powered generation facilities and other non-synchronous generation facilities entering the New Service Queue on or after May 1, 2015, and before November 1, 2016, shall be designed with the ability to maintain a composite power delivery at a power factor for all incremental MW of capacity or energy output, of at least 0.95 leading to 0.95 lagging measured at the generator's terminals under conditions in which a wind-powered generation facility's real power output exceeds 25 percent of its continuous rated power output and, for all other non-synchronous generation facilities, across the full range of continuous rated power output. Wind-powered generation facilities and other non-synchronous generation facilities entering the New Service Queue prior to May 1, 2015 shall be designed with the ability to maintain a composite power delivery at continuous rated power output at a power factor for all incremental MW of capacity of energy output of at least 1.0 (unity) to 0.95 lagging measured at the generator's terminals. The power factor requirement associated with increases in capacity or energy output of more than 20 MW to synchronous generation facilities interconnected with the Transmission System shall be measured at the generator's terminals. The power factor requirement associated with increases in capacity or energy output of 20 MW or less to synchronous generation facilities interconnected to the Transmission System shall be measured at the Point of Interconnection.

4.7.1.2 Obligation to Supply Reactive Power:

Interconnection Customer agrees, as and when so directed by Transmission Provider or when so directed by the Interconnected Transmission Owner acting on behalf or at the direction of Transmission Provider, to operate the Customer Facility to produce reactive power within the design limitations of the Customer Facility pursuant to voltage schedules, reactive power schedules or power factor schedules established by Transmission Provider or, as appropriate, the Interconnected Transmission Owner. Transmission Provider shall maintain oversight over such schedules to ensure that all sources of reactive power in the PJM Region, as applicable, are treated in an equitable and not unduly discriminatory manner. Interconnection Customer agrees that Transmission Provider and the Interconnected Transmission Owner, acting on behalf or at the direction of Transmission Provider, may make changes to the schedules that they respectively establish as necessary to maintain the reliability of the Transmission System.

4.7.1.3 Deviations from Schedules:

In the event that operation of the Customer Facility of an Interconnection Customer causes the Transmission System or the Interconnected Transmission Owner's facilities to deviate from appropriate voltage schedules and/or reactive power schedules as specified by Transmission Provider or the Interconnected Transmission Owner's operations control center (acting on behalf or at the direction of Transmission Provider), or that otherwise is inconsistent with Good Utility Practice and results in an unreasonable deterioration of the quality of electric service to other customers of Transmission Provider or the Interconnected Transmission Owner, the

Interconnection Customer shall, upon discovery of the problem or upon notice from Transmission Provider or the Interconnected Transmission Owner, acting on behalf or at the direction of Transmission Provider, take whatever steps are reasonably necessary to alleviate the situation at its expense, in accord with Good Utility Practice and within the reactive capability of the Customer Facility. In the event that the Interconnection Customer does not alleviate the situation within a reasonable period of time following Transmission Provider's or the Interconnected Transmission Owner's notice thereof, the Interconnected Transmission Owner, with Transmission Provider's approval, upon notice to the Interconnection Customer and at the Interconnection Customer's expense, may take appropriate action, including installation on the Transmission System of power factor correction or other equipment, as is reasonably required, consistent with Good Utility Practice, to remedy the situation cited in Transmission Provider's or the Interconnected Transmission Owner's notice to the Interconnection Customer under this section.

4.7.1.4 Payment for Reactive Power:

Any payments to the Interconnection Customer for reactive power shall be in accordance with Schedule 2 of the Tariff.

4.7.2 Primary Frequency Response:

Section 4.7.2 of this ISA and its subsections apply to New Service Requests received on or after October 1, 2018.

Generation Interconnection Customer shall ensure the primary frequency response capability of its Customer Facility by installing, maintaining, and operating a functioning governor or equivalent controls. The term "functioning governor or equivalent controls" as used herein shall mean the required hardware and/or software that provides frequency responsive real power control with the ability to sense changes in system frequency and autonomously adjust the Customer Facility's real power output in accordance with the droop and deadband parameters and in the direction needed to correct frequency deviations. Generation Interconnection Customer is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent droop and ± 0.036 Hz deadband; or (2) in accordance with the relevant droop, deadband, and timely and sustained response settings from an approved NERC Reliability Standard providing for equivalent or more stringent parameters. The droop characteristic shall be: (1) based on the nameplate capacity of the Customer Facility, and shall be linear in the range of frequencies between 59 to 61 Hz that are outside of the deadband parameter; or (2) based on an approved NERC Reliability Standard providing for an equivalent or more stringent parameter. The deadband parameter shall be: the range of frequencies above and below nominal (60 Hz) in which the governor or equivalent controls is not expected to adjust the Customer Facility's real power output in response to frequency deviations. The deadband shall be implemented: (1) without a step to the droop curve, that is, once the frequency deviation exceeds the deadband parameter, the expected change in the Customer Facility's real power output in response to frequency deviations shall start from zero and then increase (for under-frequency deviations) or decrease (for over-frequency deviations) linearly in proportion to the magnitude of the frequency deviation; or (2) in accordance with an approved NERC Reliability Standard providing for an equivalent or more stringent parameter. Generation Interconnection Customer shall notify Transmission Provider that the primary frequency response capability of

the Customer Facility has been tested and confirmed during commissioning. Once Generation Interconnection Customer has synchronized the Customer Facility with the Transmission System, Generation Interconnection Customer shall operate the Customer Facility consistent with the provisions specified in sections 4.7.2.1 and 4.7.2.2 of this agreement. The primary frequency response requirements contained herein shall apply to both synchronous and non-synchronous Customer Facilities.

4.7.2.1 Governor or Equivalent Controls:

Whenever the Customer Facility is operated in parallel with the Transmission System, Generation Interconnection Customer shall operate the Customer Facility with its governor or equivalent controls in service and responsive to frequency. Generation Interconnection Customer shall: (1) in coordination with Transmission Provider and/or the relevant balancing authority, set the deadband parameter to: (1) a maximum of ± 0.036 Hz and set the droop parameter to a maximum of 5 percent; or (2) implement the relevant droop and deadband settings from an approved NERC Reliability Standard that provides for equivalent or more stringent parameters. Generation Interconnection Customer shall be required to provide the status and settings of the governor or equivalent controls to Transmission Provider and/or the relevant balancing authority upon request. If Generation Interconnection Customer needs to operate the Customer Facility with its governor or equivalent controls not in service, Generation Interconnection Customer shall immediately notify Transmission Provider and the relevant balancing authority, and provide both with the following information: (1) the operating status of the governor or equivalent controls (i.e., whether it is currently out of service or when it will be taken out of service); (2) the reasons for removing the governor or equivalent controls from service; and (3) a reasonable estimate of when the governor or equivalent controls will be returned to service. Generation Interconnection Customer shall make Reasonable Efforts to return its governor or equivalent controls into service as soon as practicable. Generation Interconnection Customer shall make Reasonable Efforts to keep outages of the Customer Facility's governor or equivalent controls to a minimum whenever the Customer Facility is operated in parallel with the Transmission System.

4.7.2.2 Timely and Sustained Response:

Generation Interconnection Customer shall ensure that the Customer Facility's real power response to sustained frequency deviations outside of the deadband setting is automatically provided and shall begin immediately after frequency deviates outside of the deadband, and to the extent the Customer Facility has operating capability in the direction needed to correct the frequency deviation. Generation Interconnection Customer shall not block or otherwise inhibit the ability of the governor or equivalent controls to respond and shall ensure that the response is not inhibited, except under certain operational constraints including, but not limited to, ambient temperature limitations, physical energy limitations, outages of mechanical equipment, or regulatory requirements. The Customer Facility shall sustain the real power response at least until system frequency returns to a value within the deadband setting of the governor or equivalent controls. A Commission-approved Reliability Standard with equivalent or more stringent requirements shall supersede the above requirements.

4.7.2.3 Exemptions:

Customer Facilities that are regulated by the United States Nuclear Regulatory Commission shall be exempt from sections 4.7.2, 4.7.2.1, and 4.7.2.2 of this agreement. Customer Facilities that are behind the meter generation that is sized-to-load (i.e., the thermal load and the generation are near-balanced in real-time operation and the generation is primarily controlled to maintain the unique thermal, chemical, or mechanical output necessary for the operating requirements of its host facility) shall be required to install primary frequency response capability in accordance with the droop and deadband capability requirements specified in section 4.7.2, but shall be otherwise exempt from the operating requirements in sections 4.7.2, 4.7.2.1, 4.7.2.2, and 4.7.2.4 of this agreement.

4.7.2.4 Energy Storage Resources:

Generation Interconnection Customer interconnecting an Energy Storage Resource shall establish an operating range in Schedule I of this ISA that specifies a minimum state of charge and a maximum state of charge between which the Energy Storage Resource will be required to provide primary frequency response consistent with the conditions set forth in sections 4.7.2, 4.7.2.1, 4.7.2.2, and 4.7.2.3 of this agreement. Schedule I shall specify whether the operating range is static or dynamic, and shall consider (1) the expected magnitude of frequency deviations in the interconnection; (2) the expected duration that system frequency will remain outside of the deadband parameter in the interconnection; (3) the expected incidence of frequency deviations outside of the deadband parameter in the interconnection; (4) the physical capabilities of the Energy Storage Resource; (5) operational limitations of the Energy Storage Resource due to manufacturer specifications; and (6) any other relevant factors agreed to by Transmission Provider and Generation Interconnection Customer, and in consultation with the relevant transmission owner or balancing authority as appropriate. If the operating range is dynamic, then Schedule I must establish how frequently the operating range will be reevaluated and the factors that may be considered during its reevaluation.

Generation Interconnection Customer's Energy Storage Resource is required to provide timely and sustained primary frequency response consistent with section 4.7.2.2 of this agreement when it is online and dispatched to inject electricity to the Transmission System and/or receive electricity from the Transmission System. This excludes circumstances when the Energy Storage Resource is not dispatched to inject electricity to the Transmission System and/or dispatched to receive electricity from the Transmission System. If Generation Interconnection Customer's Energy Storage Resource is charging at the time of a frequency deviation outside of its deadband parameter, it is to increase (for over-frequency deviations) or decrease (for under-frequency deviations) the rate at which it is charging in accordance with its droop parameter. Generation Interconnection Customer's Energy Storage Resource is not required to change from charging to discharging, or vice versa, unless the response necessitated by the droop and deadband settings requires it to do so and it is technically capable of making such a transition.

{Include the following Schedule I in the ISAs for New Service Requests received on or after October 1, 2018.}

SCHEDULE I

INTERCONNECTION SPECIFICATIONS FOR AN ENERGY STORAGE RESOURCE

{Include the appropriate language from the alternatives below.}

{Include the following language if the Customer Facility is not an Energy Storage Resource:}

Not Required

{Include the following language if the Customer Facility is an Energy Storage Resource:}

This Schedule I specifies information for Energy Storage Resource will be required to provide primary frequency response consistent with the conditions set forth in Tariff, Attachment O, Appendix 2, sections 4.7.2, 4.7.2.1, 4.7.2.2, 4.7.2.3, and 4.7.2.4 of this ISA.

1.0 Minimum State of Charge and Maximum State of Charge

Primary frequency response operating range for Energy Storage Resources:

Minimum State of Charge: _____; and

Maximum State of Charge: _____.

2.0 Static or Dynamic Operating Range

{Specify whether the operating range is static or dynamic. If the operating range is dynamic, then this Schedule I must establish how frequently the operating range will be reevaluated and the factors that may be considered during its reevaluation.}

Attachment Y

Form of Screens Process Interconnection Request (For Generation Facilities of 2 MW or less synchronous 5 MW or less inverter-based)

1.0 Instructions

Interconnection Customer must submit the Screens Process Interconnection Request to Transmission Provider by hand delivery, mail, e-mail, or fax.

2.0 Processing Fee or Deposit:

Interconnection Customer is required to provide the Transmission Provider the applicable deposit. A portion of the deposit is non-refundable pursuant to Section 112A.

The base and initial per MW deposit received will be credited toward the amount of the Generation Interconnection Customer's cost responsibility pursuant to Section 112A.

3.0 Interconnection Customer Information

Legal Name of the Interconnection Customer (or, if an individual, individual's name)

Name: _____

Contact Person: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Facility Location (if different from above): _____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

Alternative Contact Information (if different from the Interconnection Customer)

Contact Name: _____

Title: _____

Address: _____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

4.0 Energy Resource Information

Will the Energy Resource be used for any of the following?

Net Metering? Yes ___ No ___

To Supply Power to the Interconnection Customer? Yes ___ No ___

To Supply Power to Others? Yes ___ No ___

For installations at locations with existing electric service to which the proposed Energy Resource will interconnect, provide:

(Local Electric Service Provider)

Contact Name: _____

Title: _____

Address: _____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

Requested Point of Interconnection: _____

Interconnection Customer's Requested In-Service Date: _____

Energy Source: ___ Solar ___ Wind ___ Hydro ___ Hydro Type (e.g. Run-of-River): _____
Diesel ___ Natural Gas ___ Fuel Oil ___ Other (state type) _____

Prime Mover: ___ Fuel Cell ___ Recip Engine ___ Gas Turb ___ Steam Turb
___ Microturbine ___ PV ___ Other

Type of Generator: ___ Synchronous ___ Induction ___ Inverter

Generator Nameplate Rating: _____ kW (Typical) Generator Nameplate kVAR: _____

Interconnection Customer or Customer-Site Load: _____ kW (if none, so state)

Typical Reactive Load (if known): _____

Maximum Physical Export Capability Requested: _____ kW

List components of the Small Energy Resource equipment package that are currently certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

Is the prime mover compatible with the certified protective relay package? ___Yes ___No

Generator (or solar collector)

Manufacturer, Model Name & Number: _____

Version Number: _____

Nameplate Output Power Rating in kW: (Summer) _____ (Winter) _____

Nameplate Output Power Rating in kVA: (Summer) _____ (Winter) _____

Individual Generator Power Factor

Rated Power Factor: Leading: _____ Lagging: _____

Total Number of Generators in wind farm to be interconnected pursuant to this

Interconnection Request: _____ Elevation: _____ ___Single phase ___Three phase

Inverter Manufacturer, Model Name & Number (if used): _____

List of adjustable set points for the protective equipment or software: _____

Note: A completed Power Systems Load Flow data sheet must be supplied with the Interconnection Request.

5.0 Energy Resource Characteristic Data (for inverter-based machines)

Max design fault contribution current: _____ Instantaneous ___ or RMS? ___

Harmonics Characteristics: _____

Start-up requirements: _____

6.0 Energy Resource Characteristic Data (for rotating machines)

RPM Frequency: _____

(*) Neutral Grounding Resistor (If Applicable): _____

Synchronous Generators:

Direct Axis Synchronous Reactance, X_d : _____ P.U.

Direct Axis Transient Reactance, X'_d : _____ P.U.

Direct Axis Subtransient Reactance, X''_d : _____ P.U.

Negative Sequence Reactance, X_2 : _____ P.U.

Zero Sequence Reactance, X_0 : _____ P.U.

KVA Base: _____

Field Volts: _____

Field Amperes: _____

Induction Generators:

Motoring Power (kW): _____

I²t or K (Heating Time Constant): _____

Rotor Resistance, R_r : _____

Stator Resistance, R_s : _____

Stator Reactance, X_s : _____

Rotor Reactance, X_r : _____

Magnetizing Reactance, X_m : _____

Short Circuit Reactance, X_d'' : _____

Exciting Current: _____

Temperature Rise: _____

Frame Size: _____

Design Letter: _____

Reactive Power Required In Vars (No Load): _____

Reactive Power Required In Vars (Full Load): _____

Total Rotating Inertia, H: _____ Per Unit on kVA Base

Note: Please contact the Transmission Provider prior to submitting the Interconnection Request to determine if the specified information above is required.

Excitation and Governor System Data for Synchronous Generators Only

Provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the appropriate regional reliability council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted.

7.0 Interconnection Facilities Information

Will a transformer be used between the generator and the point of common coupling? _Yes _No

Will the transformer be provided by the Interconnection Customer? ____Yes ____No

Transformer Data (If Applicable, for Interconnection Customer-Owned Transformer):

Is the transformer: ____single phase ____three phase? Size: ____kVA

Transformer Impedance: ____% on ____kVA Base

If Three Phase:

Transformer Primary: ____Volts ____Delta ____Wye ____Wye Grounded

Transformer Secondary: ____Volts ____Delta ____Wye ____Wye Grounded

Transformer Tertiary: ____Volts ____Delta ____Wye ____Wye Grounded

Transformer Fuse Data (If Applicable, for Interconnection Customer-Owned Fuse):

(Attach copy of fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)

Manufacturer: ____ Type: ____ Size: ____ Speed: ____

Interconnecting Circuit Breaker (if applicable):

Manufacturer: ____ Type: ____

Load Rating (Amps): ____ Interrupting Rating (Amps): ____ Trip Speed (Cycles): ____

Interconnection Protective Relays (If Applicable):

If Microprocessor-Controlled:

List of Functions and Adjustable Setpoints for the protective equipment or software:

Setpoint Function			
		Minimum	Maximum
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

If Discrete Components:

(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____

Current Transformer Data (If Applicable):

(Enclose Copy of Manufacturer's Excitation and Ratio Correction Curves)

Manufacturer: _____
Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

Manufacturer: _____
Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

Potential Transformer Data (If Applicable):

Manufacturer: _____
Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

Manufacturer: _____
Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

8.0 Diagrams and Site Control Documentation

Enclose copy of site electrical one-line diagram showing the configuration of all Energy Resource equipment, current and potential circuits, and protection and control schemes. This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Energy Resource is larger than 50 kW. Is one-line diagram enclosed? ____Yes ____No

Enclose copy of any site documentation that indicates the precise physical location of the proposed Energy Resource (e.g., USGS topographic map or other diagram or documentation).

Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer's address) _____

Enclose copy of any site documentation that describes and details the operation of the protection and control schemes. Is available documentation enclosed? ____Yes ____No

Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).
Are schematic drawings enclosed? ____Yes ____No

Provide demonstration of site control through an exclusive option to purchase the property on which the generation project is to be developed, a property deed, or a range of tax or corporate documents that identify property ownership. Site control must either be in the name of the party submitting the generation interconnection request or documentation must be provided establishing the business relationship between the project developer and the party having site control.

Interconnection Customer hereby certifies that, to the best of my knowledge, all the information provided in this Screens Process Interconnection Request is true and correct.

9.0 Primary Frequency Response Information for Energy Storage Resources

Primary Frequency Response Information for Energy Storage Resources:

Minimum State of Charge: _____; and

Maximum State of Charge: _____.

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

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

By: _____
Name Title Date

Printed name of signer: _____

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

By: _____
Name Title Date

Printed name of signer: _____

Attachment B

Revisions to the PJM Tariff
(Clean Tariff)

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36.1 General:

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

36.1.01 Generation Interconnection Request:

Except as otherwise provided in this Subpart A with respect to Behind The Meter Generation, an Interconnection Customer that seeks to interconnect new generation in, or to increase the capacity of generation already interconnected in, the PJM Region shall submit to the Transmission Provider a Generation Interconnection Request. 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 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 unit site or existing 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 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 generating unit or the amount of increase in MW capability of an existing generating unit, 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; and
- h. if Behind The Meter Generation is identified in the Generation Interconnection Feasibility Study Agreement, all of the requirements in Section 36.1A of the Tariff 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 Section 36.2A of the Tariff), 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 Section 36.2A of the Tariff), 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 Part VI of the Tariff, 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 Section 201 of the Tariff, 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. If the information required pursuant to Section 36.1.01 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 Part IV of the Tariff. 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 Subpart G of Part IV of the Tariff and the PJM Manuals.

36.1.03 Transmission Interconnection Request:

An Interconnection Customer that seeks to interconnect or add Merchant Transmission Facilities to the Transmission System, or to increase the capacity of existing Merchant Transmission Facilities interconnected with the Transmission System 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 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 Section 235 of the Tariff, identification of the point on the Transmission System where the Transmission Interconnection Customer wishes to receive Incremental Deliverability Rights created by the construction or installation of its proposed Merchant Transmission Facilities; 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 Section 36.2A of the Tariff), 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 Part VI of the Tariff, 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 Section 201 on the date and time of receipt of all the required information set forth in this Section 36.1.03.
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 Part IV or Part VI of the Tariff. 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, an Interconnection Customer that proposes Merchant Network Upgrades (including advancing pursuant to 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 Schedule 6 of the Operating Agreement) shall submit an Upgrade Request, with the required information and the required deposit for a System Impact Study, as set forth in 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 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 Section 1.7.4(i) of Schedule 1 to the Operating Agreement, to the extent its generating facility is dispatchable, an Interconnection Customer shall submit an Economic Minimum in the real-time market that is no greater than the higher of its physical operating minimum or its Capacity Interconnection Rights.

36.1.2 No Applicability to Transmission Service:

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

36.1.3 [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 Section 202.

36.1.7 Base Case Data:

Transmission Provider shall provide Interconnection Customer with base power flow, short circuit and stability databases, including all underlying assumptions, and contingency list upon

request and subject to the confidentiality provisions of Section 223 of the Tariff. Transmission Provider may require Interconnection Customer to sign a confidentiality agreement before the release of commercially sensitive information or Critical Energy Infrastructure Information in the Base Case data. Such databases and lists, hereinafter referred to as Base Cases, shall include all (i) generation projects and (ii) transmission projects, including merchant transmission projects, that are included in the then-current, approved Regional Transmission Expansion Plan.

110.1 Application

A Generation Interconnection Customer desiring the interconnection of a new Generation Capacity Resource of 20 MW or less or the increase in capacity by 20 MW or less of an Existing Generation Capacity Resource, must 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.
 - a. To be assigned a PJM Queue Position pursuant to 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:
 - i. specification of the location of the proposed generating unit site or existing 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
 - ii. evidence of an ownership interest in, or right to acquire or control the generating unit site for a minimum of two years, such as a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider; and
 - iii. the MW size of the proposed generating unit or the amount of increase in MW capability of an existing generating unit, and identification of any MW portion of the facility's capability that will be a Capacity Resource; and
 - iv. identification of the fuel type of the proposed generating unit or upgrade thereto; and
 - v. 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
 - vi. 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

- vii. any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; and
- viii. If Behind the Meter Generation is identified in the Generation Interconnection Feasibility Study Agreement, all of the requirements in Section 36.1A of the Tariff must also be met; and
- ix. Deposit.
 - (1) A deposit shall be submitted to Transmission Provider, as follows:
 - (a) A deposit of \$10,000 if the Generation Interconnection Request is received in the first four calendar months of the current New Services Queue; or
 - (b) A deposit of \$12,000 if the Generation Interconnection Request is received in the fifth calendar month of the current New Services Queue; or
 - (c) A deposit of \$15,000 if the Generation Interconnection Request is received in the sixth calendar month of the current New Services Queue.
 - (2) 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:
 - (a) 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

- (b) Any restudies required as a result of the rejection, termination and/or withdrawal of such Generation Interconnection Request; 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.
- (3) 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:
- (a) The cost of the Queue Position acceptance review; and
 - (b) The cost of the deficiency review of the Interconnection Customer's Generation Interconnection Request (to determine whether the Generation Interconnection Request is valid); and
 - (c) The dollar amount of the Interconnection Customer's cost responsibility for the Generation Interconnection Feasibility Study; and
 - (d) If the Generation Interconnection Request is deemed to be modified (pursuant to Section 36.2A of the Tariff), 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:
 - (i) The costs of any restudies required as a result of the modification (pursuant to Section 36.2A of the Tariff), rejection,

termination and/or withdrawal of such Generation Interconnection Request; and/or

- (ii) 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
 - (iii) 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.
 - (iv) 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.
- (4) Upon completion of the Feasibility Study, the Transmission Provider shall apply any remaining refundable deposit monies toward:
 - (a) The Interconnection Customer's cost responsibility for any other studies conducted for the Generation Interconnection Request under Part VI of the Tariff, which shall be applied prior to the deposit monies collected for such other studies; and/or
 - (b) 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.
- (5) 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.

- (6) 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).
- (7) 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, Interconnection Request or Queue Position.

- x. 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 two years, if a Generation Interconnection Request meets all requirements set forth above the Transmission Provider shall start the deficiency review. Interconnection Customers that fail to provide site control evidence while their requests are available for deficiency review 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 Section 201 of the Tariff, Transmission Provider shall assign Queue Positions as of the date and time of receipt of all information required pursuant to Section 110.1. If the information required pursuant to Section 110.1 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 shall not disclose the identity of the Generation Interconnection Customer, except as otherwise provided in Part IV of the Tariff. The list and the priority of Generation Interconnection Requests shall be included on the Transmission Provider's website as part of the New Services Queue.

111.1 Application

The Interconnection Customer desiring the interconnection of a Small Generation Resource greater than 2 MW or the increase in capability, by 20 MW or less but greater than 2 MW (synchronous) or 5 MW (inverter-based) of an existing resource, must 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.
 - a. To be assigned a PJM Queue Position pursuant to 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:
 - i. specification of the location of the proposed generating unit site or existing 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
 - ii. evidence of an ownership interest in, or right to acquire or control the generating unit site for a minimum of two years, such as a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider; and
 - iii. the MW size of the proposed generating unit or the amount of increase in MW capability of an existing generating unit, and identification of any MW portion of the facility's capability that will be a Capacity Resource; and
 - iv. identification of the fuel type of the proposed generating unit or upgrade thereto; and
 - v. 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

- vi. 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
- vii. any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; and
- viii. If Behind the Meter Generation is identified in the Generation Interconnection Feasibility Study Agreement, all of the requirements in Section 36.1A of the Tariff must also be met; and
- ix. Deposit.
 - (1) A deposit shall be submitted to Transmission Provider, as follows:
 - (a) A deposit of \$10,000 if the Generation Interconnection Request is received in the first four calendar months of the current New Services Queue; or
 - (b) A deposit of \$12,000 if the Generation Interconnection Request is received in the fifth calendar month of the current New Services Queue; or
 - (c) A deposit of \$15,000 if the Generation Interconnection Request is received in the sixth calendar month of the current New Services Queue.
 - (2) 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:
 - (a) 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

- (b) Any restudies required as a result of the rejection, termination and/or withdrawal of such Generation Interconnection Request; 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.
- (3) 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:
- (a) The cost of the Queue Position acceptance review; and
 - (b) The cost of the deficiency review of the Interconnection Customer's Generation Interconnection Request (to determine whether the Generation Interconnection Request is valid); and
 - (c) The dollar amount of the Interconnection Customer's cost responsibility for the Generation Interconnection Feasibility Study; and
 - (d) If the Generation Interconnection Request is deemed to be modified (pursuant to Section 36.2A of the Tariff), 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:
 - (i) The costs of any restudies required as a result of the modification (pursuant to

Section 36.2A of the Tariff), rejection, termination and/or withdrawal of such Generation Interconnection Request; and/or

- (ii) 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
 - (iii) 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.
 - (iv) 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.
- (4) Upon completion of the Feasibility Study, the Transmission Provider shall apply any remaining refundable deposit monies toward:
 - (a) The Interconnection Customer's cost responsibility for any other studies conducted for the Generation Interconnection Request under Part VI of the Tariff, which shall be applied prior to the deposit monies collected for such other studies; and/or
 - (b) 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.

- (5) 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.
- (6) 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).
- (7) 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, Interconnection Request or Queue Position.

x. 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 two years, if a Generation Interconnection Request meets all requirements set forth above the Transmission Provider shall start the deficiency review. Interconnection Customers that fail to provide site control evidence while their requests are available for deficiency review 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 Section 201 of the Tariff, Transmission Provider shall assign Queue Positions as of the date and time of receipt of all information required pursuant to Section 111.1. If the information required pursuant to Section 111.1

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

112.1 Application

The Generation Interconnection Customer desiring the interconnection of a temporary Energy Resource of 20 MW or less but greater than 2 MW (synchronous) or 5 MW (inverter-based) must 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.
 - a. To be assigned a PJM Queue Position pursuant to 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:
 - i. specification of the location of the proposed generating unit site or existing 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
 - ii. evidence of an ownership interest in, or right to acquire or control the generating unit site for a minimum of two years, such as a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider; and
 - iii. the MW size of the proposed generating unit or the amount of increase in MW capability of an existing generating unit, and identification of any MW portion of the facility's capability that will be a Capacity Resource; and
 - iv. identification of the fuel type of the proposed generating unit or upgrade thereto; and
 - v. 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
 - vi. 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

- vii. any additional information as may be prescribed by the Transmission Provider in the PJM Manuals; and
- viii. If Behind the Meter Generation is identified in the Generation Interconnection Feasibility Study Agreement, all of the requirements in Section 36.1A of the Tariff must also be met; and
- ix. Deposit.
 - (1) A deposit shall be submitted to Transmission Provider, as follows:
 - (a) A deposit of \$10,000 if the Generation Interconnection Request is received in the first four calendar months of the current New Services Queue; or
 - (b) A deposit of \$12,000 if the Generation Interconnection Request is received in the fifth calendar month of the current New Services Queue; or
 - (c) A deposit of \$15,000 if the Generation Interconnection Request is received in the sixth calendar month of the current New Services Queue.
 - (2) 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:
 - (a) 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

- (b) Any restudies required as a result of the rejection, termination and/or withdrawal of such Generation Interconnection Request; 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.
- (3) 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:
 - (a) The cost of the Queue Position acceptance review; and
 - (b) The cost of the deficiency review of the Interconnection Customer's Generation Interconnection Request (to determine whether the Generation Interconnection Request is valid); and
 - (c) The dollar amount of the Interconnection Customer's cost responsibility for the Generation Interconnection Feasibility Study; and
 - (d) If the Generation Interconnection Request is deemed to be modified (pursuant to Section 36.2A of the Tariff), 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:
 - (i) The costs of any restudies required as a result of the modification (pursuant to Section 36.2A of the Tariff), rejection,

termination and/or withdrawal of such Generation Interconnection Request; and/or

- (ii) 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
 - (iii) 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.
 - (iv) 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.
- (4) Upon completion of the Feasibility Study, the Transmission Provider shall apply any remaining refundable deposit monies toward:
 - (a) The Interconnection Customer's cost responsibility for any other studies conducted for the Generation Interconnection Request under Part VI of the Tariff, which shall be applied prior to the deposit monies collected for such other studies; and/or
 - (b) 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.
- (5) 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.

- (6) 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).
- (7) 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, Interconnection Request or Queue Position.

- x. 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 two years, if a Generation Interconnection Request meets all requirements set forth above the Transmission Provider shall start the deficiency review. Interconnection Customers that fail to provide site control evidence while their requests are available for deficiency review 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 Section 201 of the Tariff, Transmission Provider shall assign Queue Positions as of the date and time of receipt of all information required pursuant to Section 112.1. If the information required pursuant to Section 112.1 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. Because temporary Energy Resources are not granted any long term rights with respect to the transmission system, such requests shall not be identified in the New Services Queue on the PJM website. A separate queue of such requests shall be maintained in order to facilitate processing.

112A.1 Application

The Interconnection Customer desiring the interconnection of a new permanent or temporary Energy Resource of 2 MW or less (synchronous) or 5 MW or less (inverter-based) must submit to the Transmission Provider an Interconnection Request. The Transmission Provider shall acknowledge receipt of the 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 Interconnection Request to the Transmission Provider's acknowledgment.

1. Interconnection Request Requirements.
 - a. To be assigned a PJM Queue Position pursuant to Section 201, an Interconnection Customer must submit a complete and fully executed Form of Screens Process Interconnection Request (For Generation Facilities of 2 MW or Less Synchronous 5 MW or Less Inverter-Based), a form of which is located in the Tariff, Attachment Y. To be considered complete at the time of submission, the Interconnection Customer's Form of Screens Process Interconnection Request (For Generation Facilities of 2 MW or Less Synchronous 5 MW or Less Inverter-Based) must include, at a minimum, each of the following:
 - i. Interconnection Customer Information; and
 - ii. Energy Resource Information; and
 - iii. Energy Resource Characteristic Data; and
 - iv. Interconnection Facilities Information; and
 - v. Diagrams and Site Control; and
 - vi. Deposit.
 - (1) A deposit shall be submitted to Transmission Provider, as follows:
 - (a) A deposit of \$2,000 if the Interconnection Request is received in the first four calendar months of the current New Services Queue; or
 - (b) A deposit of \$3,000 if the Interconnection Request is received in the fifth calendar month of the current New Services Queue; or
 - (c) A deposit of \$5,000 if the Interconnection Request is received in the sixth calendar month of the current New Services Queue.

- (2) 10% of each total deposit amount is non-refundable. Any unused non-refundable deposit monies shall be returned to the Interconnection Customer upon Initial Operation. However, if, before reaching Initial Operation, the Interconnection Customer withdraws its Interconnection Request, or the Interconnection Request is otherwise deemed rejected or terminated and withdrawn, any unused portion of the non-refundable deposit monies shall be used to fund:
- (a) 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 Interconnection Request and/or associated Queue Position; and/or
 - (b) Any restudies required as a result of the rejection, termination and/or withdrawal of such Interconnection Request; 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 and/or Queue Positions by the Interconnection Customer.
- (3) 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:
- (a) The cost of the screens evaluation and/or supplemental screens evaluations; and
 - (b) The dollar amount of the Interconnection Customer's cost responsibility for the Interconnection Feasibility Study; and
 - (c) If the Interconnection Request is deemed to be modified (pursuant to Section 36.2A of the Tariff), rejected, terminated and/or withdrawn during the deficiency review and/or deficiency response period, as described further below, or during the

screens evaluation 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 Interconnection Request being modified, rejected, terminated and/or withdrawn, and any remaining refundable deposit monies shall be applied to cover:

- (i) The costs of any restudies required as a result of the modification (pursuant to Section 36.2A of the Tariff), rejection, termination and/or withdrawal of such Interconnection Request; and/or
 - (ii) 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 Interconnection Request and/or associated Queue Position; and/or
 - (iii) Any outstanding monies owed by the Interconnection Customer in connection with outstanding invoices related to prior New Service Requests and/or Generation Interconnection Requests and/or Queue Positions by the Interconnection Customer.
 - (iv) 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.
- (4) Upon completion of the screens evaluations, the Transmission Provider shall apply any remaining refundable deposit monies toward:
 - (a) The Interconnection Customer's cost responsibility for any other studies conducted for the Interconnection Request under Part VI of the Tariff,

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

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

- (5) If any refundable deposit monies remain after the screens evaluations are 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 and/or Queue Positions by the Interconnection Customer have been paid, such remaining deposit monies shall be returned to the Interconnection Customer.
- (6) The Interconnection Customer must submit the total required deposit amount with the Interconnection Request. If the Interconnection Customer fails to submit the total required deposit amount with the Interconnection Request, the Interconnection Request shall be deemed to be terminated and withdrawn (i.e., the Interconnection Request shall be terminated prior to reaching the screens evaluations and/or deficiency review stage).
- (7) 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.

- vii. Primary frequency response operating range for Energy Storage Resources.

- 2. Deficiency Review. Within five Business Days of the Interconnection Customer submitting an Interconnection Request, the Transmission Provider shall provide a deficiency review of the Interconnection Request to determine whether the Interconnection Customer submitted a valid Interconnection Request.
 - a. If an Interconnection Request meets all of the requirements set forth above, the Transmission Provider shall start the deficiency review.
 - b. If there are deficiencies in the 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 Interconnection Request that such 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 and/or monies that the Transmission Provider's deficiency notice identified as being required to constitute a valid 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 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 Interconnection Requests 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 assigned.

4. In accordance with Section 201 of the Tariff, Transmission Provider shall assign Queue Positions as of the date and time of receipt of all information required pursuant to Section 112A. If the information required pursuant to Section 112A 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 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 Interconnection Request, including its Queue Position;
 - vi. The type of Interconnection Service requested;
 - vii. The availability of any studies related to the Interconnection Request;
 - viii. The date of the 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 Interconnection Request that has not resulted in a completed interconnection, an explanation of why it was not completed.
 - b. This list shall not disclose the identity of the Interconnection Customer, except as otherwise provided in Part IV of the Tariff. The list and the priority of Interconnection Requests shall be included on the Transmission Provider's website as part of the New Services Queue.

ATTACHMENT N
Form of
Generation Interconnection Feasibility Study Agreement

RECITALS

1. This Generation Interconnection Feasibility Study Agreement, dated as of _____, is entered into, by and between _____ (“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 Part IV and Part VI of the PJM Interconnection, L.L.C. Open Access Transmission Tariff (“PJM Tariff”) (the “Agreement”). Capitalized terms used in this agreement, unless otherwise indicated, shall have the meanings ascribed to them in the PJM Tariff.
2. By submitting this Agreement and complying with Section 36.1.01, 110.1, 111.1, or 112.1, as applicable, of the PJM Tariff, the Interconnection Customer has submitted an Interconnection Request. In accordance with Section 36.1.01, 110.1, 111.1, or 112.1, as applicable, of the PJM Tariff, the 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 Interconnection Customer requests interconnection to the Transmission System of a generating project with the following specifications:
 - a. Location of generating unit site (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):

 - b. Identification of evidence of ownership interest in, or right to acquire or control, the generating site for a minimum of three years for large generation, or for a minimum of two years for small generation. Include both a written description of the evidence to be relied upon and attach a Word or PDF version copy thereof. If the evidence of ownership interest in, or right to acquire or control the generating site is not yet available, provide a detailed explanation of why such evidence is not available and provide a good faith estimated date upon which such evidence shall be submitted to the Transmission Provider. Though site control evidence may be submitted separately from this Agreement, the Interconnection Request is still subject to the overall deficiency review period and deficiency response period time constraints provided for in Section 36.1.01, 110.1, 111.1, or 112.1, as applicable, of the PJM Tariff, and shall not be assigned a Queue Position without site control evidence acceptable to the Transmission Provider.:

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- c. Specification of Requested Maximum Facility Output and Requested Capacity Interconnection Rights. The requested Maximum Facility Output megawatts and requested Capacity Interconnection Rights megawatts indicated in this section may be reduced as this Interconnection Request proceeds in the Transmission Provider Interconnection Request process, but may not be increased after this Agreement is submitted to the Transmission Provider.

- i. For new generating units, complete the following chart:

Total Requested Maximum Facility Output (as defined in the PJM Tariff) in Megawatts	
Total Requested Capacity Interconnection Rights (as defined in the PJM Tariff) in Megawatts	

- ii. For existing generating units that will be adding megawatt capability, complete the following chart:

	Existing Facility	Proposed Facility Incremental Increase	Total
Maximum Facility Output (as defined in the PJM Tariff) in Megawatts			
Capacity Interconnection Rights (as defined in the PJM Tariff) in Megawatts			

- iii. For new Behind The Meter generating units, complete the following chart:

Gross Generator Output in Megawatts	
Behind the Meter Load in Megawatts (the sum of the MW generation auxiliary load and any other MW load to be served behind the Point of Interconnection)	
Total Requested Maximum Facility Output (as defined in the PJM Tariff) in Megawatts	
Total Requested Capacity Interconnection Rights (as defined in the PJM Tariff) in Megawatts	

- iv. For existing Behind The Meter generating units that will be adding megawatt capability, complete the following chart:

	Existing Facility	Requested Facility Increase	Total
Gross Generator Output in Megawatts			
Behind the Meter Load in Megawatts (the sum of the MW generation auxiliary load and any other MW load to be served behind the Point of Interconnection)			
Maximum Facility Output (as defined in the PJM Tariff) to be exported from the Behind the Meter Generator onto the PJM System, in Megawatts			
Capacity Interconnection Rights, in Megawatts			

- d. Identify the fuel type of the new or existing generating unit:

- e. 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 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:

- f. Planned date the new generating unit or increase in capability will be in service:

- g. Other related information, including for example, but not limited to, identifying: all of Interconnection Customer's prior Queue Positions; stating whether the Interconnection Customer has submitted a previous Interconnection Request for this particular project; and, if this Interconnection Request proposes an increase in capability to an existing generating unit, then identify whether the existing generating unit is subject to an existing Interconnection Agreement and/or Power Purchase Agreement:
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-

THE FOLLOWING APPLIES TO BEHIND THE METER GENERATION:

- a. If Behind the Meter Generation is identified in this Agreement, all of the requirements in Section 36.1A of the PJM Tariff must also be met.
- b. Identify the type and size of the load located (or to be located) at the site of such generation, and attach a PDF format single line diagram depicting the location of the load in relation to the site of such generation:
-
-

- c. Describe the electrical connections between the generation facility and the load.
-
-

THE FOLLOWING APPLIES TO ENERGY STORAGE RESOURCES:

Primary frequency response operating range for Energy Storage Resources:

Minimum State of Charge: _____; and

Maximum State of Charge: _____.

PURPOSE OF THE FEASIBILITY STUDY

4. Consistent with Section 36.2 of the PJM Tariff, the Transmission Provider shall conduct a Generation Interconnection Feasibility Study to provide the Interconnection Customer with preliminary determinations of: (i) the type and scope of the Attachment Facilities, Local Upgrades, and Network Upgrades that will be necessary to accommodate the Interconnection Customer's Interconnection Request; (ii) the time that will be required to construct such facilities and upgrades; and (iii) the Interconnection Customer's cost responsibility for the necessary facilities and upgrades. In the event that the Transmission Provider is unable to complete the Generation Interconnection Feasibility

Study within the timeframe prescribed in Section 36.2 of the PJM Tariff, the Transmission Provider shall notify the Interconnection Customer and explain the reasons for the delay.

5. The Generation Interconnection Feasibility Study conducted hereunder will provide only preliminary non-final estimates of the cost and length of time required to accommodate the Interconnection Customer's Interconnection Request. More comprehensive estimates will be developed only upon execution of a System Impact Study Agreement and a Facilities Study Agreement in accordance with Part VI of the PJM Tariff. The Generation Interconnection Feasibility Study necessarily will employ various assumptions regarding the Interconnection Request, other pending requests, and PJM's Regional Transmission Expansion Plan at the time of the study. The Generation Interconnection Feasibility Study shall not obligate the Transmission Provider or the Transmission Owners to interconnect with the 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 Generation Interconnection Feasibility Study. Subject to paragraph 7 of this Agreement and to the extent required by Section 222 of the PJM Tariff, information provided pursuant to this Section 6 shall be and remain confidential.
7. Until completion of the Generation Interconnection Feasibility Study, the Transmission Provider shall keep confidential all information provided to it by the Interconnection Customer. Upon completion of the Generation Interconnection Feasibility Study, the study will be listed on the Transmission Provider's website and, to the extent required by Commission regulations, will be made publicly available upon request, except that the identity of the Interconnection Customer shall remain confidential and will not be posted on the Transmission Provider's website.
8. Interconnection Customer acknowledges that, consistent with the PJM Tariff, the Transmission Provider may contract with consultants, including the Transmission Owners, to provide services or expertise in the Generation Interconnection Feasibility Study process and that the Transmission Provider may disseminate information to the Transmission Owners.

COST RESPONSIBILITY

9. The Interconnection Customer shall reimburse the Transmission Provider for the actual cost of the Generation Interconnection Feasibility Study. The refundable portion of the deposit paid by the Interconnection Customer described in Section 2 of this Agreement shall be applied toward the Interconnection Customer's Generation Interconnection Feasibility Study cost responsibility. Pursuant to Section 36.1.01, 110, 111, or 112 of the PJM Tariff, as applicable, during the deficiency review of this Agreement, in the event

that the Transmission Provider anticipates that the actual study costs will exceed the refundable portion of the deposit described in Section 2 of this agreement, 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. If the Transmission Provider sends the Interconnection Customer notification of estimated additional study costs during the deficiency review period (as described in Sections 36.1.01, 110, 111, or 112), then the Interconnection Customer must either: (1) withdraw the Generation Interconnection Request during the deficiency response period (as described in Sections 36.1.01, 110, 111, or 112); or (2) pay all additional estimated costs prior to the expiration of the deficiency response period (as described in Sections 36.1.01, 110, 111, or 112). If the Interconnection Customer fails to complete either (1) or (2), then the Generation Interconnection Request shall be deemed to be terminated and withdrawn. 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.

DISCLAIMER OF WARRANTY, LIMITATION OF LIABILITY

10. In analyzing and preparing the Generation Interconnection Feasibility 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 Interconnection 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 FEASIBILITY STUDY. The 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 Generation Interconnection Feasibility 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 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 Generation Interconnection Feasibility Study Agreement.

Without limitation of the foregoing, the 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 Generation Interconnection Feasibility 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 either 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

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 Generation Interconnection Feasibility Study performed hereunder shall be construed as an application for service under Part II or Part III of the PJM Tariff.
17. The provisions of Part IV of the PJM Tariff 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**
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, Interconnection Customer hereby certifies that it has submitted with this executed Agreement each of the required elements (if this 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 generating unit site or existing 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 generating unit site)**
- _____ **Evidence of an ownership interest in, or right to acquire or control the generating unit site**
- _____ **The megawatt size of the proposed generating unit or the amount of increase in megawatt capability of an existing generating unit, and identification of any megawatt portion of the facility's capability that will be a Capacity Resource**
- _____ **Identification of the fuel type of the proposed generating unit or upgrade thereto**
- _____ **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**
- _____ **The planned date that the proposed generating unit or increase in megawatt 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

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

_____ **The full amount (including both the refundable and non-refundable portions) of the required deposit**

IN WITNESS WHEREOF, the Transmission Provider and the 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

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

By: _____
Name Title Date

Printed Name

**FORM OF
INTERCONNECTION SERVICE AGREEMENT**

**By and Among
PJM Interconnection, L.L.C.**

**And
[Name of Interconnection Customer]**

**And
[Name of Interconnected Transmission Owner]
(PJM Queue Position #__)**

- 1.0 Parties. This Interconnection Service Agreement (“ISA”) including the Specifications, Schedules and Appendices attached hereto and incorporated herein, is entered into by and between PJM Interconnection, L.L.C., the Regional Transmission Organization for the PJM Region (hereinafter “Transmission Provider” or “PJM”), _____ (“Interconnection Customer” [OPTIONAL: or “[short name]”]) and _____ (“Interconnected Transmission Owner” [OPTIONAL: or “[short name]”]). All capitalized terms herein shall have the meanings set forth in the appended definitions of such terms as stated in Part I of the PJM Open Access Transmission Tariff (“Tariff”). [Use as/when applicable: This ISA supersedes the _____ {insert details to identify the agreement being superseded, such as whether it is an Interim Interconnection Service Agreement, Interconnection Service Agreement, or Interconnection Agreement, the effective date of the agreement, the service agreement number designation, and the FERC docket number, if applicable, for the agreement being superseded.}]]
- 2.0 Authority. This ISA is entered into pursuant to Part VI of the Tariff. Interconnection Customer has requested an Interconnection Service Agreement under the Tariff, and Transmission Provider has determined that Interconnection Customer is eligible under the Tariff to obtain this ISA. The standard terms and conditions for interconnection as set forth in Appendix 2 to this ISA are hereby specifically incorporated as provisions of this ISA. Transmission Provider, Interconnected Transmission Owner and Interconnection Customer agree to and assume all of the rights and obligations of the Transmission Provider, Interconnected Transmission Owner and Interconnection Customer, respectively, as set forth in Appendix 2 to this ISA.
- 3.0 Customer Facility Specifications. Attached are Specifications for the Customer Facility that Interconnection Customer proposes to interconnect with the Transmission System. Interconnection Customer represents and warrants that, upon completion of construction of such facilities, it will own or control the Customer Facility identified in section 1.0 of the Specifications attached hereto and made a part hereof. In the event that Interconnection Customer will not own the Customer Facility, Interconnection Customer represents and warrants that it is authorized by the owner(s) thereof to enter into this ISA and to represent such control.
- 4.0 Effective Date. Subject to any necessary regulatory acceptance, this ISA shall become effective on the date it is executed by all Interconnection Parties, or, if the agreement is

filed with FERC unexecuted, upon the date specified by FERC. This ISA shall terminate on such date as mutually agreed upon by the parties, unless earlier terminated in accordance with the terms set forth in Appendix 2 to this ISA. The term of the ISA shall be as provided in Section 1.3 of Appendix 2 to this ISA. Interconnection Service shall commence as provided in Section 1.2 of Appendix 2 to this ISA.

- 5.0 Security. In accord with Section 212.4 of the Tariff, Interconnection Customer shall provide the Transmission Provider (for the benefit of the Interconnected Transmission Owner) with a letter of credit from an agreed provider or other form of security reasonably acceptable to the Transmission Provider and that names the Transmission Provider as beneficiary (“Security”) in the amount of \$_____. This amount represents the sum of the estimated Costs, determined in accordance with Sections 212 and 217 of the Tariff, for which the Interconnection Customer will be responsible, less any Costs already paid by Interconnection Customer. Interconnection Customer acknowledges that its ultimate cost responsibility in accordance with Section 217 of the Tariff will be based upon the actual Costs of the facilities described in the Specifications, whether greater or lesser than the amount of the payment security provided under this section.

[Include the following if Interconnection Customer requests deferral of the security as provided for in Section 212.4(c) of the Tariff:

For any portion of the security that may be deferred in accordance with Section 212.4(c) of the Tariff, and as requested by Interconnection Customer, Interconnection Customer shall provide the security specified in this Section 5.0 within 120 days after the Interconnection Customer executes this ISA, provided that Interconnection Customer shall pay a deposit of at least \$200,000 or 125% of the estimated costs that will be incurred during the 120-day period, whichever is greater, to fund continued design work and/or procurement activities, with \$100,000 of such deposit being non-refundable.]

Should Interconnection Customer fail to provide security at the time the Interconnection Customer executes this ISA, or, if deferred, by the end of the 120-day period, this ISA shall be terminated.

- 6.0 Project Specific Milestones. In addition to the milestones stated in Section 212.5 of the Tariff, as applicable, during the term of this ISA, Interconnection Customer shall ensure that it meets each of the following development milestones:

[Specify Project Specific Milestones]

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

- 6.1 Substantial Site work completed. On or before _____ Interconnection Customer must demonstrate completion of at least 20% of project site construction. At this time, Interconnection Customer must submit to Interconnected Transmission Owner and Transmission Provider initial drawings, certified by a professional engineer, of the Customer Interconnection Facilities.
- 6.2 Delivery of major electrical equipment. On or before _____, Interconnection Customer must demonstrate that ___ generating units have been delivered to Interconnection Customer's project site.
- 6.3 Commercial Operation. (i) On or before _____, Interconnection Customer must demonstrate commercial operation of ___ generating units; (ii) On or before _____, Interconnection Customer must demonstrate commercial operation of ___ additional generating units. Demonstrating commercial operation includes achieving Initial Operation in accordance with Section 1.4 of Appendix 2 to this ISA and making commercial sales or use of energy, as well as, if applicable, obtaining capacity qualification in accordance with the requirements of the Reliability Assurance Agreement Among Load Serving Entities in the PJM Region.
- [if a specific situation requires a CSA by a certain date then use the following: Interconnection Construction Service Agreement. On or before _____, Interconnection Customer must have either (a) executed an Interconnection Construction Service Agreement for Interconnection Facilities for which Interconnection Customer has cost responsibility; (b) requested dispute resolution under Section 12 of the PJM Tariff, or if concerning the Regional Transmission Expansion Plan, consistent with Schedule 5 of the Operating Agreement; or (c) requested that the Transmission Provider file the Interconnection Construction Service Agreement unexecuted with the Commission.]
- 6.4 Within one (1) month following commercial operation of generating unit(s), Interconnection Customer must provide certified documentation demonstrating that "as-built" Customer Facility and Customer Interconnection Facilities are in accordance with applicable PJM studies and agreements. Interconnection Customer must also provide PJM with "as-built" electrical modeling data or confirm that previously submitted data remains valid.

[Add Additional Project Specific Milestones as appropriate]

Interconnection Customer shall demonstrate the occurrence of each of the foregoing milestones to Transmission Provider's reasonable satisfaction. Transmission Provider may reasonably extend any such milestone dates, in the event of delays that Interconnection Customer (i) did not cause and (ii) could not have remedied through the exercise of due diligence. The milestone dates stated in this ISA shall be deemed to be extended coextensively with any suspension of work initiated by Interconnection Customer in accordance with the Interconnection Construction Service Agreement.

- 7.0 Provision of Interconnection Service. Transmission Provider and Interconnected Transmission Owner agree to provide for the interconnection to the Transmission System in the PJM Region of Interconnection Customer's Customer Facility identified in the Specifications in accordance with Part IV and Part VI of the Tariff, the Operating Agreement of PJM Interconnection, L.L.C. ("Operating Agreement"), and this ISA, as they may be amended from time to time.
- 8.0 Assumption of Tariff Obligations. Interconnection Customer agrees to abide by all rules and procedures pertaining to generation and transmission in the PJM Region, including but not limited to the rules and procedures concerning the dispatch of generation or scheduling transmission set forth in the Tariff, the Operating Agreement and the PJM Manuals.
- 9.0 Facilities Study. In analyzing and preparing the [Facilities Study] [System Impact Study {if a Facilities Study was not required}], and in designing and constructing the Attachment Facilities, Local Upgrades and/or Network Upgrades described in the Specifications attached to this ISA, Transmission Provider, the Interconnected Transmission Owner(s), and any other subcontractors employed by Transmission Provider have had to, and shall have to, rely on information provided by Interconnection Customer and possibly by third parties and may not have control over the accuracy of such information. Accordingly, NEITHER TRANSMISSION PROVIDER, THE INTERCONNECTED TRANSMISSION OWNER(s), NOR ANY OTHER SUBCONTRACTORS EMPLOYED BY TRANSMISSION PROVIDER OR INTERCONNECTED TRANSMISSION OWNER 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 OR THE SYSTEM IMPACT STUDY IF A FACILITIES STUDY WAS NOT REQUIRED OR OF THE ATTACHMENT FACILITIES, THE LOCAL UPGRADES AND/OR THE NETWORK UPGRADES, PROVIDED, HOWEVER, that Transmission Provider warrants that the Transmission Owner Interconnection Facilities and any Merchant Transmission Upgrades described in the Specifications will be designed and constructed (to the extent that Interconnected Transmission Owner is responsible for design and construction thereof) and operated in accordance with Good Utility Practice, as such term is defined in the Operating Agreement. 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.
- 10.0 Construction of Transmission Owner Interconnection Facilities
- 10.1. Cost Responsibility. Interconnection Customer shall be responsible for and shall pay upon demand all Costs associated with the interconnection of the Customer Facility as specified in the Tariff. These Costs may include, but are not limited to,

an Attachment Facilities charge, a Local Upgrades charge, a Network Upgrades charge and other charges. A description of the facilities required and an estimate of the Costs of these facilities are included in Sections 3.0 and 4.0 of the Specifications to this ISA.

- 10.2. Billing and Payments. Transmission Provider shall bill the Interconnection Customer for the Costs associated with the facilities contemplated by this ISA, estimates of which are set forth in the Specifications to this ISA, and the Interconnection Customer shall pay such Costs, in accordance with Section 11 of Appendix 2 to this ISA and the applicable Interconnection Construction Service Agreement. Upon receipt of each of Interconnection Customer's payments of such bills, Transmission Provider shall reimburse the applicable Interconnected Transmission Owner. Pursuant to Section 212.4 of the Tariff, Interconnection Customer requests that Transmission Provider provide a quarterly cost reconciliation:

_____ Yes

_____ No

- 10.3. Contract Option. In the event that the Interconnection Customer and Interconnected Transmission Owner agree to utilize the Negotiated Contract Option provided by the Interconnection Construction Service Agreement to establish, subject to FERC acceptance, non-standard terms regarding cost responsibility, payment, billing and/or financing, the terms of Sections 10.1 and/or 10.2 of this Section 10.0 shall be superseded to the extent required to conform to such negotiated terms, as stated in a schedule attached to the parties' Interconnection Construction Service Agreement relating to interconnection of the Customer Facility.
- 10.4 In the event that the Interconnection Customer elects to construct some or all of the Transmission Owner Interconnection Facilities under the Option to Build of the Interconnection Construction Service Agreement, billing and payment for the Costs associated with the facilities contemplated by this ISA shall relate only to such portion of the Interconnection Facilities as the Interconnected Transmission Owner is responsible for building.

11.0 Interconnection Specifications

- 11.1 Point of Interconnection. The Point of Interconnection shall be as identified on the one-line diagram attached as Schedule B to this ISA.
- 11.2 List and Ownership of Interconnection Facilities. The Interconnection Facilities to be constructed and ownership of the components thereof are identified in Section 3.0 of the Specifications attached to this ISA.

11.3 Ownership and Location of Metering Equipment. The Metering Equipment to be constructed, the capability of the Metering Equipment to be constructed, and the ownership thereof, are identified on the attached Schedule C to this ISA.

11.4 Applicable Technical Standards. The Applicable Technical Requirements and Standards that apply to the Customer Facility and the Interconnection Facilities are identified in Schedule D to this ISA.

12.0 Power Factor Requirement.

Consistent with Section 4.7 of Appendix 2 to this ISA, the power factor requirement is as follows:

[For Generation Interconnection Customers]

{The following language should be included for new large and small synchronous generation facilities that will have the Tariff specified power factor. This section does not apply if the Interconnection Request is for an incremental increase in generating capability.}

The Interconnection Customer shall design its Customer Facility with the ability to maintain a power factor of at least 0.95 leading to 0.90 lagging measured at the [generator's terminals] [Point of Interconnection].

{For all wind or non-synchronous generation facilities which have entered the New Services Queue prior to May 1, 2015, include the appropriate alternative from the language below. This section does not apply if the Interconnection Request is for an incremental increase in generating capability.}

The result of the System Impact Study indicated that, for the safety and reliability of the Transmission System, no power factor requirement is required for the [wind-powered] [non-synchronous] Customer Facility.

{or}

The results of the System Impact Study require that, for the safety or reliability of the Transmission System, the Generation Interconnection Customer shall design its [wind-powered] [non-synchronous] Customer Facility with the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the Point of Interconnection.

{include the following language if the Interconnection Request is for an incremental increase in capacity or energy output to a synchronized generation facility}

The existing __ MW portion of the Customer Facility shall retain its existing ability to maintain a power factor of at least 0.95 leading to 0.90 lagging measured at the [generator's terminals] [Point of Interconnection].

The increase of ____ MW to the Customer Facility associated with this ISA shall be designed with the ability to maintain a power factor of at least 1.0 (unity) to 0.90 lagging measured at the [generator's terminals] [Point of Interconnection].

{For new wind or non-synchronous generation facilities which have entered the New Service Queue on or after May 1, 2015, and before November 1, 2016, the following applies:}

The Generation Interconnection Customer shall design its [wind-powered] [non-synchronous] Customer Facility with the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the generator's terminals.

{For new wind or non-synchronous generation facilities which have entered the New Service Queue after November 1, 2016, the following applies:}

The Generation Interconnection Customer shall design its [wind-powered] [non-synchronous] Customer Facility with the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the high-side of the facility substation transformers.

{For all wind or non-synchronous generation facilities that have entered the New Services Queue prior to May 1, 2015, include the appropriate alternative from the language below for Interconnection Requests for an incremental increase in capacity or energy output to all wind or non-synchronized generation facility.}

The results of the System Impact Study indicate that, for the safety or reliability of the Transmission System, no power factor requirement is necessary for the [existing ____ MW or the increase of ____ MW associated with this ISA] [increase of ____ MW associated with this ISA, but that the existing ____ MW of the Customer Facility must retain its ability to retain a power factor of at least 0.95 leading to 0.95 lagging measured at the Point of Interconnection] [existing ____ MW of the Customer Facility but that the increase of ____ MW associated with this ISA must be designed with the ability to maintain a power factor requirement of 1.0 (unity) to 0.90 lagging measured at the Point of Interconnection].

{or}

The results of the System Impact Study indicate that, for the safety or reliability of the Transmission System, (i) the existing ____ MW portion of the Customer Facility shall retain its existing ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the Point of Interconnection and (ii) the increase of ____ MW to the Customer Facility associated with this ISA shall be designed with the ability to maintain a power factor of at least 1.0 (unity) to 0.95 lagging measured at the Point of Interconnection.

{For all wind or non-synchronous generation facilities requesting an incremental increase in capacity or energy output which have entered the New Services Queue on or after May 1, 2015, and before November 1, 2016, include the following requirements: }

{NOTE: This section does not apply to requests for an incremental increase in capacity or energy output for wind or non-synchronous generation facilities which were commercially operable or had entered the New Services Queue prior to May 1, 2015.}

The existing [wind-powered] [non-synchronous] __ MW portion of the Customer Facility shall retain the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the generator's terminals.

The increase of __ MW to the [wind-powered] [non-synchronous] Customer Facility associated with this ISA shall be designed with the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the generator's terminals.

{For all wind or non-synchronous generation facilities requesting an incremental increase in capacity or energy output which have entered the New Services Queue after November 1, 2016, and were not commercially operable prior to November 1, 2016 include the following requirements: }

The existing [wind-powered] [non-synchronous] __ MW portion of the Customer Facility shall retain the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the high-side of the facility substation transformers.

The increase of __ MW to the [wind-powered] [non-synchronous] Customer Facility associated with this ISA shall be designed with the ability to maintain a power factor of at least 0.95 leading to 0.95 lagging measured at the high-side of the facility substation transformers.

{For all wind or non-synchronous generation facilities requesting an incremental increase in capacity or energy output which have entered the New Services Queue on or after November 1, 2016, and were commercially operable prior to November 1, 2016, include the following requirements: }

The result of the System Impact Study indicated that, for the safety and reliability of the Transmission System, no power factor requirement is required for the [wind-powered] [non-synchronous] Customer Facility.

{or}

The results of the System Impact Study require that, for the safety or reliability of the Transmission System, the Generation Interconnection Customer shall design its [wind-powered] [non-synchronous] Customer Facility with the ability to maintain a power

factor of at least 0.95 leading to 0.95 lagging measured at the high-side of the facility substation transformers.

[For Transmission Interconnection Customers]

{The following language should be included only for new Merchant Transmission Facilities}

Transmission Interconnection Customer shall design its Merchant D.C. Transmission Facilities and/ or Controllable A.C. Merchant Transmission Facilities, to maintain a power factor at the Point of Interconnection of at least 0.95 leading and 0.95 lagging, when such Customer Facility is operating at any level within its approved operating range.

[Include section 12A.0 only when applicable, i.e., only for a facility for which Transmission Provider and Interconnected Transmission Owner deem an RTU (or equivalent) to be unnecessary]

- 12A.0 RTU. In accordance with Section 8.5.2 of Appendix 2 to this ISA, that provision's requirement for installation of a remote terminal unit or equivalent data collection and transfer equipment is hereby waived for purposes of this ISA.
- 13.0 Charges. In accordance with Sections 10 and 11 of Appendix 2 to this ISA, the Interconnection Customer shall pay to the Transmission Provider the charges applicable after Initial Operation, as set forth in Schedule E to this ISA. Promptly after receipt of such payments, the Transmission Provider shall forward such payments to the appropriate Interconnected Transmission Owner.
- 14.0 Third Party Beneficiaries. No third party beneficiary rights are created under this ISA, except, however, that, subject to modification of the payment terms stated in Section 10 of this ISA pursuant to the Negotiated Contract Option, payment obligations imposed on Interconnection Customer under this ISA are agreed and acknowledged to be for the benefit of the Interconnected Transmission Owner(s). Interconnection Customer expressly agrees that the Interconnected Transmission Owner(s) shall be entitled to take such legal recourse as it deems appropriate against Interconnection Customer for the payment of any Costs or charges authorized under this ISA or the Tariff with respect to Interconnection Service for which Interconnection Customer fails, in whole or in part, to pay as provided in this ISA, the Tariff and/or the Operating Agreement.
- 15.0 Waiver. No waiver by either party of one or more defaults by the other in performance of any of the provisions of this ISA shall operate or be construed as a waiver of any other or further default or defaults, whether of a like or different character.
- 16.0 Amendment. This ISA or any part thereof, may not be amended, modified, or waived other than by a written document signed by all parties hereto.

17.0 Construction With Other Parts Of The Tariff. This ISA shall not be construed as an application for service under Part II or Part III of the Tariff.

18.0 Notices. Any notice or request made by either party regarding this ISA shall be made, in accordance with the terms of Appendix 2 to this ISA, to the representatives of the other party and as applicable, to the Interconnected Transmission Owner(s), as indicated below:

Transmission Provider:

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

Interconnection Customer:

Interconnected Transmission Owner:

19.0 Incorporation Of Other Documents. All portions of the Tariff and the Operating Agreement pertinent to the subject matter of this ISA and not otherwise made a part hereof are hereby incorporated herein and made a part hereof.

20.0 Addendum of Non-Standard Terms and Conditions for Interconnection Service. Subject to FERC approval, the parties agree that the terms and conditions set forth in Schedule F hereto are hereby incorporated herein by reference and be made a part of this ISA. In the event of any conflict between a provision of Schedule F that FERC has accepted and any provision of Appendix 2 to this ISA that relates to the same subject matter, the pertinent provision of Schedule F shall control.

21.0 Addendum of Interconnection Customer's Agreement to Conform with IRS Safe Harbor Provisions for Non-Taxable Status. To the extent required, in accordance with Section 24.1 of Appendix 2 to this ISA, Schedule G to this ISA shall set forth the Interconnection Customer's agreement to conform with the IRS safe harbor provisions for non-taxable status.

22.0 Addendum of Interconnection Requirements for all Wind or Non-synchronous Generation Facilities. To the extent required, Schedule H to this ISA sets forth interconnection requirements for a wind or non-synchronous generation facilities and is hereby incorporated by reference and made a part of this ISA.

23.0 All interconnection parties agree to comply with all infrastructure security requirements of the North American Electric Reliability Corporation.

IN WITNESS WHEREOF, Transmission Provider, Interconnection Customer and Interconnected Transmission Owner have caused this ISA to be executed by their respective authorized officials.

(PJM Queue Position #____)

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

By:_____

Name	Title	Date
------	-------	------

Printed name of signer:_____

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

By:_____

Name	Title	Date
------	-------	------

Printed name of signer: _____

Interconnected Transmission Owner: **[Name of Party]**

By:_____

Name	Title	Date
------	-------	------

Printed name of signer: _____

**SPECIFICATIONS FOR
INTERCONNECTION SERVICE AGREEMENT**

**By and Among
PJM INTERCONNECTION, L.L.C.**

And

_____ **[Name of Interconnection Customer]**

And

_____ **[Name of Interconnected Transmission Owner]**
(PJM Queue Position # ____)

1.0 Description of [generating unit(s)] [Merchant Transmission Facilities] (the Customer Facility) to be interconnected with the Transmission System in the PJM Region:

a. Name of Customer Facility:

b. Location of Customer Facility:

c. Size in megawatts of Customer Facility:

{The following language should be included only for generating units

For Generation Interconnection Customer:

Maximum Facility Output of _____MW }

{The following language applies when a Generation Interconnection Request involves an increase of the capacity of an existing generating facility:

The stated size of the generating unit includes an increase in the Maximum Facility Output of the generating unit of ____ MW over Interconnection Customer's previous interconnection. This increase is a result of the Interconnection Request associated with this Interconnection Service Agreement. }

{The following language should be included only for Merchant Transmission Facilities

For Transmission Interconnection Customer:

Nominal Rated Capability: _____MW }

d. Description of the equipment configuration:

2.0 Rights

[for Generation Interconnection Customers]

2.1 Capacity Interconnection Rights: {this section will not apply if the Customer Facility is exclusively an Energy Resource and thus is granted no CIRs; see alternate section 2.1 below}

Pursuant to and subject to the applicable terms of the Tariff, the Interconnection Customer shall have Capacity Interconnection Rights at the Point(s) of Interconnection specified in this Interconnection Service Agreement in the amount of ____ MW. {Instructions: this number is the total of the Capacity Interconnection Rights that are granted as a result of the Interconnection Request, plus any prior Capacity Interconnection Rights}

{include the following language when the projected Initial Operation is in advance of the study year used for the System Impact Study and Capacity Interconnection Rights are only interim until the study year:}

Pursuant to and subject to the applicable terms of the Tariff, the Interconnection Customer shall have Capacity Interconnection Rights at the Point(s) of Interconnection specified in this Interconnection Service Agreement in the amount of ____MW commencing _____. During the time period from the effective date of this ISA until _____ (the “interim time period”), the Interconnection Customer may be awarded interim Capacity Interconnection Rights in the amount not to exceed ____MW. The availability and amount of such interim Capacity Interconnection Rights shall be dependent upon completion and the results of an interim deliverability study. Any interim Capacity Interconnection Rights awarded during the interim time period shall terminate on _____.

{include the following language to the extent applicable for interconnection of additional generation at an existing generating facility:}

The amount of Capacity Interconnection Rights specified above (____ MW) includes ____ MW of Capacity Interconnection Rights that the Interconnection Customer had at the same Point(s) of Interconnection prior to its Interconnection Request associated with this Interconnection Service Agreement, and ____MW of Capacity Interconnection Rights granted as a result of such Interconnection Request.

{include the following language when the CIRs are only interim and have a termination date or event:}

Interconnection Customer shall have ____ MW of Capacity Interconnection Rights for the time period from ____ to _____. These Capacity Interconnection Rights are interim and will terminate upon {explain circumstances -- e.g. interim agreement; completion of another facility, etc.}

- 2.1a To the extent that any portion of the Customer Facility described in section 1.0 is not a Capacity Resource with Capacity Interconnection Rights, such portion of the Customer Facility shall be an Energy Resource. PJM reserves the right to limit total injections to the Maximum Facility Output in the event reliability would be affected by output greater than such quantity.

{this version of section 2.1 will be used in lieu of section 2.1 above when a generating facility will be an Energy Resource and therefore will not be granted any CIRs:}

[2.1 The generating unit(s) described in section 1.0 shall be an Energy Resource. Pursuant to this Interconnection Service Agreement, the generating unit will be permitted to inject ____ MW (nominal) into the system. PJM reserves the right to limit injections to this quantity in the event reliability would be affected by output greater than such quantity.]

[for Transmission Interconnection Customers]

- 2.1 Transmission Injection Rights: [applicable only to Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities that interconnect with a control area outside PJM]

Pursuant to Section 232 of the Tariff, Interconnection Customer shall have Transmission Injection Rights at each indicated Point of Interconnection in the following quantity(ies):

- 2.2 Transmission Withdrawal Rights: [applicable only to Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities that interconnect with a control area outside PJM]

Pursuant to Section 232 of the Tariff, Interconnection Customer shall have Transmission Withdrawal Rights at each indicated Point of Interconnection in the following quantity(ies):

[Include Section 2.2A only if customer is interconnecting Controllable A.C. Merchant Transmission Facilities]

2.2A Interconnection Customer is interconnecting Controllable A.C. Merchant Transmission Facilities as defined in the appended Section 1.6B of the Tariff, and has elected, pursuant to the appended Section 41.1 of the Tariff, to receive Transmission Injection Rights and Transmission Withdrawal Rights in lieu of the other applicable rights for which it may be eligible under Subpart C of Part VI of the Tariff. Accordingly, Interconnection Customer hereby agrees that the Transmission Injection Rights and Transmission Withdrawal Rights awarded to it pursuant to the Tariff and this ISA are, and throughout the duration of this ISA shall be, conditioned on Interconnection Customer's continuous operation of its Controllable A.C. Merchant Transmission Facilities in a controllable manner, i.e., in a manner effectively the same as operation of D.C. transmission facilities.

2.3 Incremental Deliverability Rights:

Pursuant to Section 235 of the Tariff, Interconnection Customer shall have Incremental Deliverability Rights at each indicated Point of Interconnection in the following quantity(ies):

2.4 Incremental Available Transfer Capability Revenue Rights:

Pursuant to Section 233 of the Tariff, Interconnection Customer shall have Incremental Available Transfer Capability Revenue Rights at each indicated Point of Interconnection in the following quantities:

2.5 Incremental Auction Revenue Rights:

Pursuant to Section 231 of the Tariff, Interconnection Customer shall have Incremental Auction Revenue Rights in the following quantities:

2.6 Incremental Capacity Transfer Rights:

Pursuant to Section 234 of the Tariff, Interconnection Customer shall have Incremental Capacity Transfer Rights between the following associated source(s) and sink(s) in the indicated quantities:

3.0 Construction Responsibility and Ownership of Interconnection Facilities

a. Interconnection Customer.

(1) Interconnection Customer shall construct and, unless otherwise indicated, shall own, the following Interconnection Facilities:

[Specify Facilities To Be Constructed]

(2) In the event that, in accordance with the Interconnection Construction Service Agreement, Interconnection Customer has exercised the Option to Build, it is hereby permitted to build in accordance with and subject to the conditions and limitations set forth in that Section, the following portions of the Transmission Owner Interconnection Facilities which constitute or are part of the Customer Facility:

[Specify Facilities To Be Constructed]

Ownership of the facilities built by Interconnection Customer pursuant to the Option to Build shall be as provided in the Interconnection Construction Service Agreement.

- b. Interconnected Transmission Owner {or Name of Interconnected Transmission Owner if more than one Interconnected Transmission Owner}

[Specify Facilities To Be Constructed and Owned]

- c. [if applicable, include the following][Name of any additional Transmission Owner constructing facilities with which Interconnection Customer and Transmission Provider will also execute an Interconnection Construction Service Agreement]

[Specify Facilities To Be Constructed and Owned]

- 4.0 Subject to modification pursuant to the Negotiated Contract Option and/or the Option to Build under the Interconnection Construction Service Agreement, Interconnection Customer shall be subject to the estimated charges detailed below, which shall be billed and paid in accordance with Appendix 2, Section 11 of this ISA and the applicable Interconnection Construction Service Agreement.

4.1 Attachment Facilities Charge: \$_____

[Optional: Provide Charge and Identify Interconnected Transmission Owner]

4.2 Network Upgrades Charge: \$_____

[Optional: Provide Breakdown of Charge Based on Interconnected Transmission Owner responsibilities]

4.3 Local Upgrades Charge: \$_____

[Optional: Provide Breakdown of Charge Based on Interconnected Transmission Owner responsibilities]

4.4 Other Charges: \$_____

[Optional: Provide Breakdown of Charge Based on Interconnected Transmission Owner responsibilities]

4.5 Cost breakdown:

\$ Direct Labor
\$ Direct Material
\$ Indirect Labor
\$ Indirect Material

[Additional items for breakdown as necessary]

\$ Total

4.6 Security Amount Breakdown:

\$ Estimated Cost of Non-Direct Connection Local Upgrades and/or Non-Direct Connection Network Upgrades

plus \$ Estimated cost of the work (for the first three months after construction commences in earnest) on the required Attachment Facilities, Direct Connection Local Upgrades, and Direct Connection Network Upgrades

plus \$ Option to Build Security for Attachment Facilities, Direct Connection Local Upgrades, and Direct Connection Network Upgrades (including Cancellation Costs)

{Use if Interconnected Transmission Owner work will be completed in the first quarter:

\$ Costs included for three-month work completion estimate Security x 0.25}

\$ Total Security required with ISA (this value should be in Section 5.0 of this ISA)

less \$ Costs already paid by Interconnection Customer

\$ Total Security **{if the resultant is negative, use: reduction with this ISA; if the resultant is zero or positive use: required with this ISA}**

APPENDICES:

- **APPENDIX 1 - DEFINITIONS**
- **APPENDIX 2 - STANDARD TERMS AND CONDITIONS FOR INTERCONNECTIONS**

SCHEDULES:

- **SCHEDULE A - CUSTOMER FACILITY LOCATION/SITE PLAN**
- **SCHEDULE B - SINGLE-LINE DIAGRAM**
- **SCHEDULE C - LIST OF METERING EQUIPMENT**
- **SCHEDULE D - APPLICABLE TECHNICAL REQUIREMENTS AND STANDARDS**
- **SCHEDULE E - SCHEDULE OF CHARGES**
- **SCHEDULE F - SCHEDULE OF NON-STANDARD TERMS & CONDITIONS**
- **SCHEDULE G - INTERCONNECTION CUSTOMER'S AGREEMENT TO CONFORM WITH IRS SAFE HARBOR PROVISIONS FOR NON-TAXABLE STATUS**
- **SCHEDULE H - INTERCONNECTION REQUIREMENTS FOR A WIND GENERATION FACILITY**
- **SCHEDULE I – INTERCONNECTION SPECIFICATIONS FOR AN ENERGY STORAGE RESOURCE**

4.7 Reactive Power and Primary Frequency Response

4.7.1 Reactive Power

4.7.1.1 Reactive Power Design Criteria

4.7.1.1.1 New Facilities:

For all new generating facilities to be interconnected pursuant to the Tariff, other than wind-powered and other non-synchronous generation facilities, the Generation Interconnection Customer shall design its Customer Facility to maintain a composite power delivery at continuous rated power output at a power factor of at least 0.95 leading to 0.90 lagging. For all new wind-powered and other non-synchronous generation facilities the Generation Interconnection Customer shall design its Customer Facility with the ability to maintain a composite power delivery at a power factor of at least 0.95 leading to 0.95 lagging across the full range of continuous rated power output. For all wind-powered and other non-synchronous generation facilities entering the New Service Queue on or after November 1, 2016, the power factor requirement shall be measured at the high-side of the facility substation transformers. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two. For all wind-powered and other non-synchronous generation facilities entering the New Service Queue on or after May 1, 2015, and before November 1, 2016, the power factor requirement shall be measured at the generator's terminals. For new generation resources of more than 20 MW, other than wind-powered and other non-synchronous generating facilities, the power factor requirement shall be measured at the generator's terminals. For new generation resources of 20 MW or less, and all wind-powered and other non-synchronous generation facilities entering the New Service Queue prior to May 1, 2015, the power factor requirement shall be measured at the Point of Interconnection. Any different reactive power design criteria that Transmission Provider determines to be appropriate for a wind-powered or other non-synchronous generation facility shall be stated in the Interconnection Service Agreement. A Transmission Interconnection Customer interconnecting Merchant D.C. Transmission Facilities and/ or Controllable A.C. Merchant Transmission Facilities shall design its Customer Facility to maintain a power factor at the Point of Interconnection of at least 0.95 leading and 0.95 lagging, when the Customer Facility is operating at any level within its approved operating range.

4.7.1.1.2 Increases in Generating Capacity or Energy Output:

All increases in the capacity or energy output of any generation facility interconnected with the Transmission System, other than wind-powered and other non-synchronous generating facilities, shall be designed with the ability to maintain a composite power delivery at continuous rated power output at a power factor for all incremental MW of capacity or energy output, of at least 1.0 (unity) to 0.90 lagging. Wind-powered generation facilities and other non-synchronous generation facilities entering the New Service Queue on or after November 1, 2016, shall be designed with the ability to maintain a composite power delivery at a power factor for all

incremental MW of capacity or energy output of at least 0.95 leading to 0.95 lagging measured at the high-side of the facility substation transformers across the full range of continuous rated power output. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two. Wind-powered generation facilities and other non-synchronous generation facilities entering the New Service Queue on or after May 1, 2015, and before November 1, 2016, shall be designed with the ability to maintain a composite power delivery at a power factor for all incremental MW of capacity or energy output, of at least 0.95 leading to 0.95 lagging measured at the generator's terminals under conditions in which a wind-powered generation facility's real power output exceeds 25 percent of its continuous rated power output and, for all other non-synchronous generation facilities, across the full range of continuous rated power output. Wind-powered generation facilities and other non-synchronous generation facilities entering the New Service Queue prior to May 1, 2015 shall be designed with the ability to maintain a composite power delivery at continuous rated power output at a power factor for all incremental MW of capacity of energy output of at least 1.0 (unity) to 0.95 lagging measured at the generator's terminals. The power factor requirement associated with increases in capacity or energy output of more than 20 MW to synchronous generation facilities interconnected with the Transmission System shall be measured at the generator's terminals. The power factor requirement associated with increases in capacity or energy output of 20 MW or less to synchronous generation facilities interconnected to the Transmission System shall be measured at the Point of Interconnection.

4.7.1.2 Obligation to Supply Reactive Power:

Interconnection Customer agrees, as and when so directed by Transmission Provider or when so directed by the Interconnected Transmission Owner acting on behalf or at the direction of Transmission Provider, to operate the Customer Facility to produce reactive power within the design limitations of the Customer Facility pursuant to voltage schedules, reactive power schedules or power factor schedules established by Transmission Provider or, as appropriate, the Interconnected Transmission Owner. Transmission Provider shall maintain oversight over such schedules to ensure that all sources of reactive power in the PJM Region, as applicable, are treated in an equitable and not unduly discriminatory manner. Interconnection Customer agrees that Transmission Provider and the Interconnected Transmission Owner, acting on behalf or at the direction of Transmission Provider, may make changes to the schedules that they respectively establish as necessary to maintain the reliability of the Transmission System.

4.7.1.3 Deviations from Schedules:

In the event that operation of the Customer Facility of an Interconnection Customer causes the Transmission System or the Interconnected Transmission Owner's facilities to deviate from appropriate voltage schedules and/or reactive power schedules as specified by Transmission Provider or the Interconnected Transmission Owner's operations control center (acting on behalf or at the direction of Transmission Provider), or that otherwise is inconsistent with Good Utility Practice and results in an unreasonable deterioration of the quality of electric service to other customers of Transmission Provider or the Interconnected Transmission Owner, the

Interconnection Customer shall, upon discovery of the problem or upon notice from Transmission Provider or the Interconnected Transmission Owner, acting on behalf or at the direction of Transmission Provider, take whatever steps are reasonably necessary to alleviate the situation at its expense, in accord with Good Utility Practice and within the reactive capability of the Customer Facility. In the event that the Interconnection Customer does not alleviate the situation within a reasonable period of time following Transmission Provider's or the Interconnected Transmission Owner's notice thereof, the Interconnected Transmission Owner, with Transmission Provider's approval, upon notice to the Interconnection Customer and at the Interconnection Customer's expense, may take appropriate action, including installation on the Transmission System of power factor correction or other equipment, as is reasonably required, consistent with Good Utility Practice, to remedy the situation cited in Transmission Provider's or the Interconnected Transmission Owner's notice to the Interconnection Customer under this section.

4.7.1.4 Payment for Reactive Power:

Any payments to the Interconnection Customer for reactive power shall be in accordance with Schedule 2 of the Tariff.

4.7.2 Primary Frequency Response:

Section 4.7.2 of this ISA and its subsections apply to New Service Requests received on or after October 1, 2018.

Generation Interconnection Customer shall ensure the primary frequency response capability of its Customer Facility by installing, maintaining, and operating a functioning governor or equivalent controls. The term "functioning governor or equivalent controls" as used herein shall mean the required hardware and/or software that provides frequency responsive real power control with the ability to sense changes in system frequency and autonomously adjust the Customer Facility's real power output in accordance with the droop and deadband parameters and in the direction needed to correct frequency deviations. Generation Interconnection Customer is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent droop and ± 0.036 Hz deadband; or (2) in accordance with the relevant droop, deadband, and timely and sustained response settings from an approved NERC Reliability Standard providing for equivalent or more stringent parameters. The droop characteristic shall be: (1) based on the nameplate capacity of the Customer Facility, and shall be linear in the range of frequencies between 59 to 61 Hz that are outside of the deadband parameter; or (2) based on an approved NERC Reliability Standard providing for an equivalent or more stringent parameter. The deadband parameter shall be: the range of frequencies above and below nominal (60 Hz) in which the governor or equivalent controls is not expected to adjust the Customer Facility's real power output in response to frequency deviations. The deadband shall be implemented: (1) without a step to the droop curve, that is, once the frequency deviation exceeds the deadband parameter, the expected change in the Customer Facility's real power output in response to frequency deviations shall start from zero and then increase (for under-frequency deviations) or decrease (for over-frequency deviations) linearly in proportion to the magnitude of the frequency deviation; or (2) in accordance with an approved NERC Reliability Standard providing for an equivalent or more stringent parameter. Generation Interconnection Customer shall notify Transmission Provider that the primary frequency response capability of

the Customer Facility has been tested and confirmed during commissioning. Once Generation Interconnection Customer has synchronized the Customer Facility with the Transmission System, Generation Interconnection Customer shall operate the Customer Facility consistent with the provisions specified in sections 4.7.2.1 and 4.7.2.2 of this agreement. The primary frequency response requirements contained herein shall apply to both synchronous and non-synchronous Customer Facilities.

4.7.2.1 Governor or Equivalent Controls:

Whenever the Customer Facility is operated in parallel with the Transmission System, Generation Interconnection Customer shall operate the Customer Facility with its governor or equivalent controls in service and responsive to frequency. Generation Interconnection Customer shall: (1) in coordination with Transmission Provider and/or the relevant balancing authority, set the deadband parameter to: (1) a maximum of ± 0.036 Hz and set the droop parameter to a maximum of 5 percent; or (2) implement the relevant droop and deadband settings from an approved NERC Reliability Standard that provides for equivalent or more stringent parameters. Generation Interconnection Customer shall be required to provide the status and settings of the governor or equivalent controls to Transmission Provider and/or the relevant balancing authority upon request. If Generation Interconnection Customer needs to operate the Customer Facility with its governor or equivalent controls not in service, Generation Interconnection Customer shall immediately notify Transmission Provider and the relevant balancing authority, and provide both with the following information: (1) the operating status of the governor or equivalent controls (i.e., whether it is currently out of service or when it will be taken out of service); (2) the reasons for removing the governor or equivalent controls from service; and (3) a reasonable estimate of when the governor or equivalent controls will be returned to service. Generation Interconnection Customer shall make Reasonable Efforts to return its governor or equivalent controls into service as soon as practicable. Generation Interconnection Customer shall make Reasonable Efforts to keep outages of the Customer Facility's governor or equivalent controls to a minimum whenever the Customer Facility is operated in parallel with the Transmission System.

4.7.2.2 Timely and Sustained Response:

Generation Interconnection Customer shall ensure that the Customer Facility's real power response to sustained frequency deviations outside of the deadband setting is automatically provided and shall begin immediately after frequency deviates outside of the deadband, and to the extent the Customer Facility has operating capability in the direction needed to correct the frequency deviation. Generation Interconnection Customer shall not block or otherwise inhibit the ability of the governor or equivalent controls to respond and shall ensure that the response is not inhibited, except under certain operational constraints including, but not limited to, ambient temperature limitations, physical energy limitations, outages of mechanical equipment, or regulatory requirements. The Customer Facility shall sustain the real power response at least until system frequency returns to a value within the deadband setting of the governor or equivalent controls. A Commission-approved Reliability Standard with equivalent or more stringent requirements shall supersede the above requirements.

4.7.2.3 Exemptions:

Customer Facilities that are regulated by the United States Nuclear Regulatory Commission shall be exempt from sections 4.7.2, 4.7.2.1, and 4.7.2.2 of this agreement. Customer Facilities that are behind the meter generation that is sized-to-load (i.e., the thermal load and the generation are near-balanced in real-time operation and the generation is primarily controlled to maintain the unique thermal, chemical, or mechanical output necessary for the operating requirements of its host facility) shall be required to install primary frequency response capability in accordance with the droop and deadband capability requirements specified in section 4.7.2, but shall be otherwise exempt from the operating requirements in sections 4.7.2, 4.7.2.1, 4.7.2.2, and 4.7.2.4 of this agreement.

4.7.2.4 Energy Storage Resources:

Generation Interconnection Customer interconnecting an Energy Storage Resource shall establish an operating range in Schedule I of this ISA that specifies a minimum state of charge and a maximum state of charge between which the Energy Storage Resource will be required to provide primary frequency response consistent with the conditions set forth in sections 4.7.2, 4.7.2.1, 4.7.2.2, and 4.7.2.3 of this agreement. Schedule I shall specify whether the operating range is static or dynamic, and shall consider (1) the expected magnitude of frequency deviations in the interconnection; (2) the expected duration that system frequency will remain outside of the deadband parameter in the interconnection; (3) the expected incidence of frequency deviations outside of the deadband parameter in the interconnection; (4) the physical capabilities of the Energy Storage Resource; (5) operational limitations of the Energy Storage Resource due to manufacturer specifications; and (6) any other relevant factors agreed to by Transmission Provider and Generation Interconnection Customer, and in consultation with the relevant transmission owner or balancing authority as appropriate. If the operating range is dynamic, then Schedule I must establish how frequently the operating range will be reevaluated and the factors that may be considered during its reevaluation.

Generation Interconnection Customer's Energy Storage Resource is required to provide timely and sustained primary frequency response consistent with section 4.7.2.2 of this agreement when it is online and dispatched to inject electricity to the Transmission System and/or receive electricity from the Transmission System. This excludes circumstances when the Energy Storage Resource is not dispatched to inject electricity to the Transmission System and/or dispatched to receive electricity from the Transmission System. If Generation Interconnection Customer's Energy Storage Resource is charging at the time of a frequency deviation outside of its deadband parameter, it is to increase (for over-frequency deviations) or decrease (for under-frequency deviations) the rate at which it is charging in accordance with its droop parameter. Generation Interconnection Customer's Energy Storage Resource is not required to change from charging to discharging, or vice versa, unless the response necessitated by the droop and deadband settings requires it to do so and it is technically capable of making such a transition.

{Include the following Schedule I in the ISAs for New Service Requests received on or after October 1, 2018.}

SCHEDULE I

INTERCONNECTION SPECIFICATIONS FOR AN ENERGY STORAGE RESOURCE

{Include the appropriate language from the alternatives below.}

{Include the following language if the Customer Facility is not an Energy Storage Resource:}

Not Required

{Include the following language if the Customer Facility is an Energy Storage Resource:}

This Schedule I specifies information for Energy Storage Resource will be required to provide primary frequency response consistent with the conditions set forth in Tariff, Attachment O, Appendix 2, sections 4.7.2, 4.7.2.1, 4.7.2.2, 4.7.2.3, and 4.7.2.4 of this ISA.

1.0 Minimum State of Charge and Maximum State of Charge

Primary frequency response operating range for Energy Storage Resources:

Minimum State of Charge: _____; and

Maximum State of Charge: _____.

2.0 Static or Dynamic Operating Range

{Specify whether the operating range is static or dynamic. If the operating range is dynamic, then this Schedule I must establish how frequently the operating range will be reevaluated and the factors that may be considered during its reevaluation.}

Attachment Y

Form of Screens Process Interconnection Request (For Generation Facilities of 2 MW or less synchronous 5 MW or less inverter-based)

1.0 Instructions

Interconnection Customer must submit the Screens Process Interconnection Request to Transmission Provider by hand delivery, mail, e-mail, or fax.

2.0 Processing Fee or Deposit:

Interconnection Customer is required to provide the Transmission Provider the applicable deposit. A portion of the deposit is non-refundable pursuant to Section 112A.

The base and initial per MW deposit received will be credited toward the amount of the Generation Interconnection Customer's cost responsibility pursuant to Section 112A.

3.0 Interconnection Customer Information

Legal Name of the Interconnection Customer (or, if an individual, individual's name)

Name: _____

Contact Person: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Facility Location (if different from above): _____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

Alternative Contact Information (if different from the Interconnection Customer)

Contact Name: _____

Title: _____

Address: _____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

4.0 Energy Resource Information

Will the Energy Resource be used for any of the following?

Net Metering? Yes ___ No ___

To Supply Power to the Interconnection Customer? Yes ___ No ___

To Supply Power to Others? Yes ___ No ___

For installations at locations with existing electric service to which the proposed Energy Resource will interconnect, provide:

(Local Electric Service Provider)

Contact Name: _____

Title: _____

Address: _____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

Requested Point of Interconnection: _____

Interconnection Customer's Requested In-Service Date: _____

Energy Source: ___ Solar ___ Wind ___ Hydro ___ Hydro Type (e.g. Run-of-River): _____
Diesel ___ Natural Gas ___ Fuel Oil ___ Other (state type) _____

Prime Mover: ___ Fuel Cell ___ Recip Engine ___ Gas Turb ___ Steam Turb
___ Microturbine ___ PV ___ Other

Type of Generator: ___ Synchronous ___ Induction ___ Inverter

Generator Nameplate Rating: _____ kW (Typical) Generator Nameplate kVAR: _____

Interconnection Customer or Customer-Site Load: _____ kW (if none, so state)

Typical Reactive Load (if known): _____

Maximum Physical Export Capability Requested: _____ kW

List components of the Small Energy Resource equipment package that are currently certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

Is the prime mover compatible with the certified protective relay package? ___Yes ___No

Generator (or solar collector)

Manufacturer, Model Name & Number: _____

Version Number: _____

Nameplate Output Power Rating in kW: (Summer) _____ (Winter) _____

Nameplate Output Power Rating in kVA: (Summer) _____ (Winter) _____

Individual Generator Power Factor

Rated Power Factor: Leading: _____ Lagging: _____

Total Number of Generators in wind farm to be interconnected pursuant to this

Interconnection Request: _____ Elevation: _____ ___Single phase ___Three phase

Inverter Manufacturer, Model Name & Number (if used): _____

List of adjustable set points for the protective equipment or software: _____

Note: A completed Power Systems Load Flow data sheet must be supplied with the Interconnection Request.

5.0 Energy Resource Characteristic Data (for inverter-based machines)

Max design fault contribution current: _____ Instantaneous ___ or RMS? ___

Harmonics Characteristics: _____

Start-up requirements: _____

6.0 Energy Resource Characteristic Data (for rotating machines)

RPM Frequency: _____

(*) Neutral Grounding Resistor (If Applicable): _____

Synchronous Generators:

Direct Axis Synchronous Reactance, X_d : _____ P.U.

Direct Axis Transient Reactance, X'_d : _____ P.U.

Direct Axis Subtransient Reactance, X''_d : _____ P.U.

Negative Sequence Reactance, X_2 : _____ P.U.

Zero Sequence Reactance, X_0 : _____ P.U.

KVA Base: _____

Field Volts: _____

Field Amperes: _____

Induction Generators:

Motoring Power (kW): _____

I²t or K (Heating Time Constant): _____

Rotor Resistance, R_r : _____

Stator Resistance, R_s : _____

Stator Reactance, X_s : _____

Rotor Reactance, X_r : _____

Magnetizing Reactance, X_m : _____

Short Circuit Reactance, X_d'' : _____

Exciting Current: _____

Temperature Rise: _____

Frame Size: _____

Design Letter: _____

Reactive Power Required In Vars (No Load): _____

Reactive Power Required In Vars (Full Load): _____

Total Rotating Inertia, H: _____ Per Unit on kVA Base

Note: Please contact the Transmission Provider prior to submitting the Interconnection Request to determine if the specified information above is required.

Excitation and Governor System Data for Synchronous Generators Only

Provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the appropriate regional reliability council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted.

7.0 Interconnection Facilities Information

Will a transformer be used between the generator and the point of common coupling? _Yes _No

Will the transformer be provided by the Interconnection Customer? ____Yes ____No

Transformer Data (If Applicable, for Interconnection Customer-Owned Transformer):

Is the transformer: ____single phase ____three phase? Size: _____kVA

Transformer Impedance: _____% on _____kVA Base

If Three Phase:

Transformer Primary: ____Volts ____Delta ____Wye ____Wye Grounded

Transformer Secondary: ____Volts ____Delta ____Wye ____Wye Grounded

Transformer Tertiary: ____Volts ____Delta ____Wye ____Wye Grounded

Transformer Fuse Data (If Applicable, for Interconnection Customer-Owned Fuse):

(Attach copy of fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)

Manufacturer: _____ Type: _____ Size: _____ Speed: _____

Interconnecting Circuit Breaker (if applicable):

Manufacturer: _____ Type: _____

Load Rating (Amps):_____ Interrupting Rating (Amps):_____ Trip Speed (Cycles):_____

Interconnection Protective Relays (If Applicable):

If Microprocessor-Controlled:

List of Functions and Adjustable Setpoints for the protective equipment or software:

Setpoint Function			
		Minimum	Maximum
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

If Discrete Components:

(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____

Current Transformer Data (If Applicable):

(Enclose Copy of Manufacturer's Excitation and Ratio Correction Curves)

Manufacturer: _____
Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

Manufacturer: _____
Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

Potential Transformer Data (If Applicable):

Manufacturer: _____
Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

Manufacturer: _____
Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

8.0 Diagrams and Site Control Documentation

Enclose copy of site electrical one-line diagram showing the configuration of all Energy Resource equipment, current and potential circuits, and protection and control schemes. This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Energy Resource is larger than 50 kW. Is one-line diagram enclosed? ____Yes ____No

Enclose copy of any site documentation that indicates the precise physical location of the proposed Energy Resource (e.g., USGS topographic map or other diagram or documentation).

Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer's address) _____

Enclose copy of any site documentation that describes and details the operation of the protection and control schemes. Is available documentation enclosed? ____Yes ____No

Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).
Are schematic drawings enclosed? ____Yes ____No

Provide demonstration of site control through an exclusive option to purchase the property on which the generation project is to be developed, a property deed, or a range of tax or corporate documents that identify property ownership. Site control must either be in the name of the party submitting the generation interconnection request or documentation must be provided establishing the business relationship between the project developer and the party having site control.

Interconnection Customer hereby certifies that, to the best of my knowledge, all the information provided in this Screens Process Interconnection Request is true and correct.

9.0 Primary Frequency Response Information for Energy Storage Resources

Primary Frequency Response Information for Energy Storage Resources:

Minimum State of Charge: _____; and

Maximum State of Charge: _____.

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

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

By: _____
Name Title Date

Printed name of signer: _____

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

By: _____
Name Title Date

Printed name of signer: _____