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30 Attachment X – Standard Large Facility Interconnection Procedures (Applicable to Generating Facilities that exceed 20 MWs and to Merchant Transmission Facilities)

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30.14 Appendices

APPENDIX 1 TO LFIP - INTERCONNECTION REQUEST

1. The undersigned Developer submits this request to interconnect its Large Generating Facility or Class Year Transmission Project with the New York State Transmission System or Distribution System pursuant to the Standard Large Facility Interconnection Procedures in the ISO OATT (“LFIP”).

2. This Interconnection Request is for [insert project name]: _____
_____, which
is (check one of the following):

_____ A proposed new Large Generating Facility

_____ A proposed new BTM:NG Resource

_____ A proposed new Class Year Transmission Project

_____ A material modification to a proposed or existing facility (*e.g.*, an increase in the capacity of an existing facility beyond the permissible *de minimis* increases permitted under Section 30.3.1 of Attachment X to the ISO OATT)

3. Address or location of the proposed new Large Facility site (to the extent known) or, in the case of an existing Generating Facility or Class Year Transmission Project, the name and specific location of that existing facility: _____

4. Approximate location, and, if available, address, coordinates, of the proposed Point(s) of Interconnection: _____

5. MW nameplate rating: _____

6. MW of requested ERIS: _____
 - Maximum summer net (net MW = gross MW minus auxiliary loads total MW) which can be achieved at 90 degrees F: _____
Maximum winter net (net MW = gross MW minus auxiliary loads total MW) which can be achieved at 10 degrees F : _____
 - MW of requested increase in ERIS of an existing facility, as calculated from the baseline ERIS (as defined in Section 30.3.1 of this Attachment X – for

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temperature-sensitive machines, provide the summer and winter MW vs. temperature curves for both gross MW and net MW corresponding to the requested net MW values provided above):_____

7. If a Class Year Transmission Project, which of the following forms of Capacity Resource Interconnection Service does the Developer intend to request:

_____Unforced Capacity Deliverability Rights
_____External-to-Rest of State Deliverability Rights

8. General description of the proposed project (e.g.: describe type/size/number/general configuration of the proposed generator units, transmission, transformers, feeders, lines leading to the proposed point of interconnection(s), breakers, etc): _____

9. Attach a conceptual breaker one-line diagram and a project location geo map.;

10. Proposed In-Service Date (Month/Year): _____

Proposed Initial Synchronization Date (Month/Year): _____

Proposed Commercial Operation Date (Month/Year): _____

11. Developer's contact person:

Name (type or print): _____

Title: _____

Company: _____

Address: _____

Email: _____

12. Project power flow, short circuit, transient stability modeling data and supporting documentation (as set forth in Attachment A) (optional). Modeling data will be required during the scoping and applicable study agreement process, as coordinated by the ISO.

13. \$10,000 non-refundable application fee must be submitted with this Interconnection Request form.

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14. Evidence of Site Control as specified in the LFIP (check one):

_____ Is attached to this Interconnection Request and provides site control for the following number of acres: _____; or

_____ Will be provided at a later date in accordance with the LFIP, in which case a non-refundable \$10,000 deposit in lieu of site control must be provided with this Interconnection Request form

15. This Interconnection Request shall be submitted to the ISO at the following email address: NewProject@nyiso.com

16. This Interconnection Request is submitted by:

Signature: _____

Name (type or print): _____

Title: _____

Company: _____

Date: _____

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LARGE GENERATING FACILITY PRELIMINARY DATA
(Additional data will be required at subsequent stages of the interconnection study process)

UNIT RATINGS

MVA _____ °F _____ Voltage (kV) _____

Maximum Reactive Power at Rated Power Leading (MVAR):

_____ Lagging (MVAR): _____

Connection (e.g. Wye, Delta or Wye-grounded) _____

Reactance data per unit, Subtransient – unsaturated (X''_{di}): _____

Unit manufacturer/make: _____

NOTE: If requested information is not applicable, indicate by marking “N / A.”

GENERATOR STEP-UP TRANSFORMER DATA

RATINGS

Capacity _____ Self-cooled/Maximum Nameplate
_____ / _____ MVA

Voltage Ratio (Generator Side/System Side/Tertiary)
_____ / _____ / _____ kV

Winding Connections (Generator Side/System Side/Tertiary (Delta or Wye))
_____ / _____ / _____

Fixed Taps Available _____

Present Tap Setting _____

IMPEDANCE

Positive Z1 (on self-cooled MVA rating) _____ % _____ X/R

Zero Z0 (on self-cooled MVA rating) _____ % _____ X/R

ADDITIONAL INFORMATION REQUESTED FOR WIND GENERATORS

Number of generators to be interconnected pursuant to this Interconnection Request: _____

Generator Height: _____ _____ Single Phase _____

Three Phase

Inverter manufacturer, model name, number, and version:

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet or other compatible formats, such as IEEE and PTI power flow models, must be supplied at a later stage of the interconnection study process.

ADDITIONAL INFORMATION REQUESTED FOR SOLAR GENERATORS

Number of solar panels to be interconnected pursuant to this Interconnection Request: _____

Type of solar arrays (*i.e.*, fixed, 1-axis, 2-axis, 2-axis flat panel, 2-axis CPV, CSP, etc.):

Inverter manufacturer, model name, number, and version:

ADDITIONAL INFORMATION REQUESTED FOR CLASS YEAR TRANSMISSION PROJECTS

Description of proposed project:

a. General description of the equipment configuration and kV level:

b. Transmission technology and manufacturer (*e.g.*, HVDC VSC): _____

ADDITIONAL INFORMATION REQUESTED FOR BTM:NG RESOURCES

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)

Existing load? Yes ____ No ____

If existing load with metered load data, provide coincident Summer peak load: _____

If new load or existing load without metered load data, provide estimated coincident Summer peak load, together with supporting documentation for such estimated value:

ADDITIONAL INFORMATION REQUESTED FOR ENERGY STORAGE RESOURCES-RESOURCES WITH ENERGY DURATION LIMITATIONS

Energy storage capability (MWh): _____

Minimum Duration for full discharge (*i.e.*, injection) (Hours): _____

Minimum Duration for full charge (*i.e.*, withdrawal) (Hours): _____

Maximum withdrawal from the system (*i.e.*, when charging) (MW): _____

Inverter manufacturer, model name, number, and version: _____

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Primary frequency response operating range for electric storage resource:

Minimum State of Charge: _____(%)____ Maximum State of Charge:_____ (%)

ATTACHMENT A TO APPENDIX 1 – LFIP INTERCONNECTION REQUEST
Terms and Conditions of Interconnection Study(ies)

These terms and conditions for the study of a Large Generating Facility or Class Year Transmission Project, or a material modification to an existing Large Generating Facility or Class Year Transmission Project proposed in the Interconnection Request dated _____ (“the Project”) and submitted by _____, a _____ organized and existing under the laws of the State of _____ (“Developer”) sets forth the respective obligations between Developer and the New York Independent System Operator, Inc., a not-for-profit corporation organized and existing under the laws of the State of New York (“NYISO”) (hereinafter the “Terms and Conditions”). By signing below, Developer confirms its understanding and acceptance of the Terms and Conditions.

RECITALS

WHEREAS, Developer is proposing to develop the Project; and

WHEREAS, the Project is already interconnected to the New York State Transmission System (or Distribution System, as applicable) or desires to interconnect the Large Facility with the New York State Transmission System (or Distribution System, as applicable); and

WHEREAS, Developer has requested NYISO to perform one or more of the following studies: Optional Interconnection Feasibility Study, Interconnection System Reliability Impact Study, or Optional Interconnection System Reliability Impact Study to assess the impact of the Project on the New York State Transmission System (or Distribution System, as applicable).and any Affected Systems.

Now, THEREFORE, in consideration of and subject to the terms and conditions contained herein, Developer and NYISO agree as follows:

- 1.0 When used in these Terms and Conditions, with initial capitalization, the terms specified shall have the meanings indicated in the NYISO’s Commission-approved Standard Large Facility Interconnection Procedures (“LFIP”).
- 2.0 Developer shall elect and NYISO shall cause to be performed, in accordance with the NYISO Open Access Transmission Tariff (“OATT”), one or more of the following: an Optional Interconnection Feasibility Study consistent with Section 30.6 of the LFIP, an Interconnection System Reliability Impact Study consistent with Section 30.7 of the LFIP, and an Optional Interconnection System Reliability Impact Study consistent with Section 30.10 of the LFIP, collectively referred to as the “Studies.” The terms of Sections 30.6, 30.7, 30.10, 30.13.1, and 30.13.3 of the LFIP, as applicable, are incorporated by reference herein.
- 3.0 The scopes for the Studies that Developer elects or is required to perform under its Interconnection Request and these Terms and Conditions shall be subject to the

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assumptions developed by Developer, NYISO, and the Connecting Transmission Owner(s) at the respective scoping meetings for each Study and approved by NYISO Operating Committee.

- 4.0 The Studies shall be based on the technical information provided by Developer in the Interconnection Request, as may be modified as the result of the Scoping Meeting and completed study results, if performed and available. NYISO reserves the right to request additional information from Developer as may reasonably become necessary consistent with Good Utility Practice during the course of the Studies (including dynamic modeling data) and as designated in accordance with Section 30.3.3.4 of the LFIP and such additional information shall be provided in a prompt manner. If, after the designation of the Point of Interconnection pursuant to Section 30.3.3.4 of the LFIP, Developer modifies its Interconnection Request pursuant to Section 30.4.4, the time to complete the Studies may be extended.
- 5.0 Optional Interconnection Feasibility Study. If Developer elects to perform an Optional Interconnection Feasibility Study, the study report shall provide the following:
- If Developer elects to perform an Optional Interconnection Feasibility Study with a limited analysis (*i.e.*, \$10,000 study deposit), the study report shall provide, to the extent selected by Developer:
 - o development of a conceptual breaker-level one-line diagram of existing NYS Transmission System or Distribution System where the Large Facility proposes to interconnect; and/or
 - o a review of the feasibility/constructability of a conceptual breaker-level one-line diagram of the proposed interconnection (*e.g.*, space for additional breaker bay in existing substation or identification of cable routing concerns inside existing substation).
 - If Developer elects to perform an Optional Interconnection Feasibility Study with detailed analyses (*i.e.*, \$60,000 study deposit), the study report shall provide, to the extent selected by Developer:
 - o development of conceptual breaker-level one-line diagram of existing NYS Transmission System or Distribution System where the Large Facility proposes to interconnect (*i.e.*, how to integrate the Large Facility into the existing system);
 - o a review of the feasibility/constructability of a conceptual breaker-level one-line diagram of the proposed interconnection (*e.g.*, space for additional breaker bay in existing substation or identification of cable routing concerns inside existing substation);

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- preliminary review of local protection, communication, and grounding issues associated with the proposed interconnection;
- power flow, short circuit, and/or bus flow analyses; and/or
- preliminary identification of Connecting Transmission Owner Attachment Facilities and Local System Upgrade Facilities with a non-binding good faith cost estimate of Developer's cost responsibility and a non-binding good faith estimated time to construct.

6.0 Interconnection System Reliability Impact Study. The Interconnection System Reliability Impact Study report shall provide the following information:

- Identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
- identification of any thermal overload or voltage limit violations resulting from the interconnection;
- identification of any instability or inadequately damped response to system disturbances resulting from the interconnection;
- description and non-binding, good faith estimated cost of facilities required to interconnect the Large Facility to the New York State Transmission System (or Distribution System, as applicable) and to address the identified short circuit, instability, and power flow issues; and
- if Developer opts to skip the Optional Interconnection Feasibility Study or if Developer elects to include a preliminary non-binding evaluation under the Deliverability Interconnection Standard, NYISO will supplement the information set forth above.

7.0 Optional Interconnection System Reliability Impact Study. If Developer elects to perform an Optional Interconnection System Reliability Impact Study, the study report shall provide a sensitivity analysis based on the assumptions specified by Developer in the scope for the Optional Interconnection System Reliability Impact Study developed in accordance with Section 3.0 of these Terms and Conditions. The Optional Interconnection System Reliability Impact Study will identify the Connecting Transmission Owner's Attachment Facilities, Distribution Upgrades, and System Upgrade Facilities, and the estimated cost thereof, that may be required to provide Energy Resource Interconnection Service based upon the assumptions specified by Developer in the scope for the Optional Interconnection System Reliability Impact Study developed in accordance with Section 3.0 of these Terms and Conditions.

8.0 Developer shall provide a deposit in accordance with the LFIP for the performance of each study that Developer elected to be performed in connection with its Interconnection

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Request and under these Terms and Conditions. NYISO shall provide a good faith estimate for the time of completion for each of the studies elected or required to be performed in accordance with the LFIP.

- 8.1 Upon Developer's receipt of the final report for each study performed, NYISO shall charge and Developer shall pay to NYISO the actual costs of each respective study incurred by NYISO, as computed on a time and materials basis in accordance with the rates provided to the Developer at the time that NYISO provides the good faith estimate of the cost for each study elected or required to be performed in connection with the Interconnection Request and under these Terms and Conditions.
 - 8.2 Any difference between the deposit for and the actual cost of any study performed under these Terms and Conditions shall be paid by or refunded to Developer, as appropriate.
- 9.0 Miscellaneous.
- 9.1 Accuracy of Information. Except as Developer may otherwise specify in writing when it provides information to NYISO under these Terms and Conditions, Developer represents and warrants that the information it provides to NYISO shall be accurate and complete as of the date the information is provided. Developer shall promptly provide NYISO with any additional information needed to update information previously provided.
 - 9.2 Disclaimer of Warranty. In preparing the Studies, NYISO and any subcontractor consultants hired by it shall have to rely on information provided by Developer, and possibly by third parties, and may not have control over the accuracy of such information. Accordingly, neither NYISO nor any subcontractor consultant hired by NYISO 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 Studies performed under these Terms and Conditions. Developer 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.
 - 9.3 Limitation of Liability. In no event shall NYISO or its subcontractor consultants be liable for indirect, special, incidental, punitive, or consequential damages of any kind including loss of profits, arising under or in connection with these Terms and Conditions or the Studies performed or any reliance on the Studies by Developer or third parties, even if NYISO or its subcontractor consultants have been advised of the possibility of such damages. Nor shall any NYISO or its subcontractor consultants be liable for any delay in delivery or for the non-

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performance or delay in performance of its obligations under these Terms and Conditions.

- 9.4 **Third-Party Beneficiaries.** Without limitation of Sections 8.2 and 8.3 under these Terms and Conditions, Developer further agrees that subcontractor consultants hired by NYISO to conduct or review, or to assist in the conducting or reviewing, one or more of the Studies requested under the Interconnection Request shall be deemed third-party beneficiaries of these Sections 8.2 and 8.3 under these Terms and Conditions.
- 9.5 **Term and Termination.** The obligations to conduct the Studies and under these Terms and Conditions shall be effective from the date hereof and, unless earlier terminated under these Terms and Conditions, shall continue in effect until the Studies are completed (*i.e.*, approved by the NYISO Operating Committee, as applicable). Developer or NYISO may terminate their obligations under these Terms and Conditions upon the withdrawal of Developer's Interconnection Request under Section 30.3.6 of the LFIP.
- 9.6 **Governing Law.** These Terms and Conditions and any study performed thereunder shall be governed by and construed in accordance with the laws of the State of New York, without regard to any choice of laws provisions.
- 9.7 **Severability.** In the event that any part of these Terms and Conditions are deemed as a matter of law to be unenforceable or null and void, such unenforceable or void part shall be deemed severable from these Terms and Conditions and the obligations under these Terms and Conditions shall continue in full force and effect as if each part was not contained herein.
- 9.8 **Amendment.** No amendment, modification, or waiver of any term or condition hereof shall be effective unless set forth in writing and signed by Developer and NYISO hereto.
- 9.9 **Survival.** All warranties, limitations of liability, and confidentiality provisions provided herein shall survive the expiration or termination hereof.
- 9.10 **Independent Contractor.** Developer agrees that NYISO shall at all times be deemed to be an independent contractor and none of its employees or the employees of its subcontractors shall be considered to be employees of Developer as a result of performing any work under these Terms and Conditions.
- 9.11 **No Implied Waivers.** The failure of Developer or NYISO to insist upon or enforce strict performance of any of the provisions of these Terms and Conditions shall not be construed as a waiver or relinquishment to any extent of such party's right to insist or rely on any such provision, rights, and remedies in that or any other instances; rather, the same shall be and remain in full force and effect.

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9.12 Successors and Assigns. The obligations under these Terms and Conditions, and each and every term and condition hereof, shall be binding upon and inure to the benefit of Developer and NYISO and their respective successors and assigns.

IN WITNESS THEREOF, Developer has agreed to accept and be bound by the Terms and Conditions by its duly authorized officers or agents execution on the day and year first below written.

[Insert name of Developer]

By: _____

Title: _____

Date: _____