### 30.3.2 Types of Interconnection Service

#### 30.3.2.1 Two Types of Service

The ISO offers Energy Resource Interconnection Service under the Large Facility Interconnection Procedures for interconnection in compliance with the NYISO Minimum Interconnection Standard. The ISO also offers Capacity Resource Interconnection Service under the Large Facility Interconnection Procedures for interconnection in compliance with the NYISO Deliverability Interconnection Standard.

#### 30.3.2.2 Service Elections, Generally

All Large Facilities must interconnect in compliance with the NYISO Minimum Interconnection Standard. In addition, Large Facilities must also comply with the NYISO Deliverability Interconnection Standard before Large Generating Facilities can become qualified Installed Capacity Suppliers and before Class Year Transmission Projects can receive Unforced Capacity Deliverability Rights. A Developer initially states its election to be evaluated in its Interconnection Studies for ERIS alone, or for both ERIS and CRIS, as a part of its Interconnection Request. An existing Large Generating Facility requesting only CRIS must request CRIS in an Open Class Year Study unless it is requesting CRIS pursuant to Section 30.3.2.6 of this Attachment X. The ISO evaluates an Interconnection Request for compliance with the Minimum Interconnection Standard throughout the Interconnection Study process. The ISO evaluates an Interconnection Request for compliance with the Deliverability Interconnection Standard formally during the Class Year Deliverability Study. At other times during the Interconnection Study process, during the Optional Interconnection Feasibility Study and the Interconnection System Reliability Study, the ISO will assist any Developer considering Capacity Resource Interconnection Service to assess potential system deliverability issues by

providing the Developer, upon its request, with the Annual Transmission Reliability Assessment case from the most recently completed Class Year Deliverability Study. The Developer may modify its interconnection service evaluation election when it executes the Class Year Interconnection Facilities Study Agreement for its project in accordance with Section 30.8.1 of these Large Facility Interconnection Procedures. At that time, the Developer may reduce the number of MW it initially requested to be evaluated for CRIS, and such a reduction shall not constitute a Material Modification. Any increase in the MW initially requested to be evaluated for CRIS shall constitute a Material Modification.

#### 30.3.2.3 ERIS Elections

A Large Facility that elects ERIS, and not CRIS, will not be able to become an eligible Installed Capacity Supplier or to receive Unforced Capacity Deliverability Rights. Such a Large Facility will be eligible to participate only in the energy and applicable ancillary service markets. When a Developer elects ERIS,it may request When a Developer elects ERIS and interconnects under ERIS, the Developer may at a later date ask the ISO to reevaluate the Large Facility for CRIS by including the Large Facility in the Open Class Year to identify the System Deliverability Upgrades, if any, needed for the Large Facility to be declared deliverable.

#### 30.3.2.4 CRIS Elections

The amount of CRIS requested by a Developer shall be stated in MW of Installed Capacity ("ICAP"), and cannot exceed the nameplate capacity of the Developer's Large Facility; provided however, (i) if the Large Facility is a BTM:NG Resource, its requested CRIS cannot exceed its Net ICAP; (ii) if the Class Year Project is an Energy Storage Resource, the requested MW level of CRIS cannot exceed the minimum of the following: (a) its maximum sustained four-hour injection ~~storage capability~~ in MW hours; (b) the nameplate capacity of the facility (*i.e.*,

injection capability of the facility expressed in MW); or (c) the sum of the facility's requested and existing ERIS, as applicable; and (iii) if the Class Year Project is a request for External-to-ROS Deliverability Rights, it can request a MW level of CRIS, not to exceed the increase in transfer capability created by its associated Class Year Transmission Project, as demonstrated in the project's System Reliability Impact Study. When a Developer elects CRIS, the ISO will evaluate the deliverability of the Large Facility by applying the test methodology described in Section 25.7 of Attachment S to the ISO OATT. The ISO will apply this test methodology to identify the System Deliverability Upgrades, if any, needed to make the Large Facility deliverable and will also identify the MW of Installed Capacity, if any, that are deliverable from the Large Facility with no System Deliverability Upgrades. A Large Facility electing CRIS will be able to become a qualified Installed Capacity Supplier or receive Unforced Capacity Deliverability Rights to the extent of its deliverable capacity, once it has funded or committed to fund any required System Deliverability Upgrades in accordance with the relevant provisions of Attachment S to the ISO OATT. A Developer qualifying for CRIS will have two CRIS values: one for the summer capability period and one for the winter capability period. The CRIS value, in MW of Installed Capacity, for the summer capability period will be set using the deliverability test methodology and procedures described in Section 25.7 of Attachment S to the ISO OATT. The CRIS value for the winter capability period, also in MW of Installed Capacity, will be set in accordance with Section 25.7.6 of Attachment S to the ISO OATT.

#### 30.3.2.5 Partial CRIS Service

A Developer may elect partial CRIS, measured in whole MW of Installed Capacity, for its Large Facility.

**30.3.2.6 Increases In Established CRIS Values**

Any facility with an established CRIS value may at a later date, without submitting a new Interconnection Request, ask the ISO to reevaluate the Large Facility for a higher level of MW of Installed Capacity, not to exceed the ~~nameplate rating of the Large Facility,~~ levels permitted by Section 30.3.2.4 of this Attachment X, by including the Large Facility in the Open Class Year to identify the System Deliverability Upgrades, if any, needed for the Large Facility to be declared deliverable at the higher level of MW. Any facility with an established CRIS value may, without such evaluation and without submitting a new Interconnection Request, increase that CRIS value by a total of no more than 2 MW of Installed Capacity during the operating life of the facility, to the extent such increase in CRIS does not exceed the levels permitted by Section 30.3.2.4 of this Attachment X. For purposes of this Section 30.3.2.6, an "established CRIS value" for facilities subject to a CRIS set and reset period pursuant to Section 25.9.3.3, Section 25.9.3.1.4.1, Section 25.9.3.1.4.2, or Section 25.9.3.5 of Attachment S to the ISO OATT is the final CRIS value established after the termination of the CRIS set and reset period.

**30.3.2.7 The Interconnection Studies**

The Interconnection Studies conducted under the Large Facility Interconnection Procedures consist of short circuit/fault duty, steady state (thermal and voltage) and stability analyses designed to identify the Attachment Facilities, Distribution Upgrades and System Upgrade Facilities required for the reliable interconnection of Large Facilities to the New York State Transmission System or to the Distribution System in compliance with the NYISO Minimum Interconnection Standard, as well as the deliverability analysis described in Attachment S of the OATT designed to identify the System Deliverability Upgrades required for

reliable interconnection in compliance with the NYISO Deliverability Interconnection Standard, where applicable.

**APPENDIX 2 to LFIP - INTERCONNECTION FACILITIES STUDY AGREEMENT**

**THIS AGREEMENT** is made and entered into this ____ day of _____, 20__ by and among _____, a _____ organized and existing under the laws of the State of _____ ("Developer"), 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"), and _____ a _____ organized and existing under the laws of the State of New York ("Connecting Transmission Owner"). Developer, NYISO and Connecting Transmission Owner each may be referred to as a "Party," or collectively as the "Parties."

**RECITALS**

**WHEREAS,** Developer is [proposing to develop a Large Generating Facility or Class Year Transmission Project/proposing a capacity addition to an existing Generating Facility or Class Year Transmission Project consistent with the Interconnection Request submitted by the Developer dated _____, including any project modifications reviewed and approved by the NYISO /owns an existing or proposed facility requesting only Capacity Resource Interconnection Service ("CRIS") or requesting an increase in CRIS]; and

**WHEREAS,** the NYISO has confirmed that the Developer has satisfied the eligibility requirements for entering a Class Year Interconnection Facilities Study ("Class Year Study"); and

**WHEREAS,** Developer has elected to enter an Interconnection Facilities Study in order to obtain [Energy Resource Interconnection Service ("ERIS")/ERIS and CRIS/CRIS only/an increase in CRIS] pursuant to Attachments S, X and Z to the NYISO's Open Access Transmission Tariff ("OATT"), as applicable.

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in Section 30.1 of Attachment X to the NYISO's OATT or Section 25.1.2 of Attachment S to the NYISO's OATT.

2.0 Developer elects to be evaluated for [ERIS/ERIS and CRIS/CRIS only/an increase in CRIS] and NYISO shall cause to be performed an Interconnection Facilities Study consistent with Attachments S and X to the ISO OATT. The terms of the above-referenced OATT Attachments, as applicable, are hereby incorporated by reference herein.

3.0 The scope of the Interconnection Facilities Study shall be subject to the assumptions set

forth in Attachment A and the data provided in Attachment B to this Agreement.

4.0 For Developers seeking ERIS, the Interconnection Facilities Study report (i) shall provide a description, estimated cost of (consistent with Attachment A), schedule for required facilities to interconnect the facility to the New York State Transmission System (or Distribution System, as applicable) and (ii) shall address the short circuit, instability, and power flow issues identified in the Interconnection System Reliability Impact Study. For Developers seeking CRIS, the Interconnection Facilities Study report (i) shall identify whether System Deliverability Upgrades are required for the facility to be fully deliverable at its requested level of Capacity Resource Interconnection Service; and (ii) shall provide a description and estimated cost of any required System Deliverability Upgrades, to the extent required, based on the Developer's election under Section 25.7.7.1 of Attachment S to the ISO OATT. For Developers seeking both ERIS and CRIS, the Interconnection Facilities Study report shall provide all of the information described in this Section 4.0.

5.0 The Developer shall provide a deposit of [$100,000 if requesting evaluation for ERIS or ERIS and CRIS/$50,000 if requesting only CRIS] for the performance of the Interconnection Facilities Study. The time for completion of the Interconnection Facilities Study is specified in Attachment A.

NYISO shall invoice Developer on a monthly basis for the expenses incurred by NYISO and the Connecting Transmission Owner on the Interconnection Facilities Study each month, as computed on a time and materials basis in accordance with the rates attached hereto. Developer shall pay invoiced amounts to NYISO within thirty (30) Calendar Days of receipt of invoice. NYISO shall continue to hold the amounts on deposit until settlement of the final invoice.

6.0 Miscellaneous.

6.1 Accuracy of Information. Except as Developer or Connecting Transmission Owner may otherwise specify in writing when they provide information to NYISO under this Agreement, Developer and Connecting Transmission Owner each represent and warrant that the information it provides to NYISO shall be accurate and complete as of the date the information is provided. Developer and Connecting Transmission Owner shall each promptly provide NYISO with any additional information needed to update information previously provided.

6.2 Disclaimer of Warranty. In preparing the Interconnection Facilities Study, the Party preparing such study and any subcontractor consultants employed by it shall have to rely on information provided by the other Parties, and possibly by third parties, and may not have control over the accuracy of such information. Accordingly, neither the Party preparing the Interconnection Facilities Study nor any subcontractor consultant employed by that Party 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 Interconnection Facilities Study. 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.

6.3 Limitation of Liability. In no event shall any Party 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 this Agreement or the Interconnection Facilities Study or any reliance on the Interconnection Facilities Study by any Party or third parties, even if one or more of the Parties or its subcontractor consultants have been advised of the possibility of such damages. Nor shall any Party or its subcontractor consultants be liable for any delay in delivery or for the non-performance or delay in performance of its obligations under this Agreement.

6.4 Third-Party Beneficiaries. Without limitation of Sections 6.2 and 6.3 of this Agreement, Developer and Connecting Transmission Owner further agree that subcontractor consultants employed by NYISO to conduct or review, or to assist in the conducting or reviewing, an Interconnection Facilities Study shall be deemed third party beneficiaries of these Sections 6.2 and 6.3.

6.5 Term and Termination. This Agreement shall be effective from the date hereof and unless earlier terminated in accordance with this Section 30.6.5, shall continue in effect until the Interconnection Facilities Study for Developer's facility is completed and approved by the NYISO Operating Committee. Developer or NYISO may terminate this Agreement upon the withdrawal of the Developer's project from the Interconnection Facilities Study pursuant to Section 25.7.7.1 of Attachment S.

6.6 Governing Law. This Agreement 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.

6.7 Severability. In the event that any part of this Agreement is deemed as a matter of law to be unenforceable or null and void, such unenforceable or void part shall be deemed severable from this Agreement and the Agreement shall continue in full force and effect as if each part was not contained herein.

6.8 Counterparts. This Agreement may be executed in counterparts, and each

counterpart shall have the same force and effect as the original instrument.

6.9 Amendment. No amendment, modification or waiver of any term hereof shall be effective unless set forth in writing signed by the Parties hereto.

6.10 Survival. All warranties, limitations of liability and confidentiality provisions provided herein shall survive the expiration or termination hereof.

6.11 Independent Contractor. 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 or Connecting Transmission Owner as a result of this Agreement.

6.12 No Implied Waivers. The failure of a Party to insist upon or enforce strict performance of any of the provisions of this Agreement 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.

6.13 Successors and Assigns. This Agreement, and each and every term and condition hereof, shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and assigns.

**IN WITNESS WHEREOF,** the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**New York Independent System Operator, Inc.**

By: _____

Title: _____

Date: _____

**[Insert name of Connecting Transmission Owner]**

By: _____

Title: _____

Date: _____

**[Insert name of Developer]**

By: _____

Title: _____

Date: _____

**Attachment A To Appendix 2 - Interconnection Facilities Study Agreement**

## SCHEDULE FOR CONDUCTING THE INTERCONNECTION FACILITIES STUDY

The NYISO and Connecting Transmission Owner shall use Reasonable Efforts to complete the study and issue an Interconnection Facilities Study report to the Developer within the following number of days after of receipt of an executed copy of this Interconnection Facilities Study Agreement:

- estimated completion date (*i.e.*, Operating Committee approval of the Class Interconnection Facilities Study) for Class Year 20__ Interconnection Facility Study for the Annual Transmission Reliability Assessment required by Attachment S to the ISO OATT: ____/____/_____, if no additional System Deliverability Upgrade studies are required.

- Study work (other than data provision and study review) that may be requested of the Transmission Owner by the NYISO is currently not specified, but will be specified in a Study Work Agreement to be developer between the NYISO and Transmission Owner.

- Pursuant to Article 5.0 of this Agreement, the rates for the study work are attached as Exhibit 1.

**Attachment B To Appendix 2 - Interconnection Facilities Study Agreement**

**DATA FORM TO BE PROVIDED BY DEVELOPER**

**WITH THE INTERCONNECTION FACILITIES STUDY AGREEMENT**

1. Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

2. Finalize and specify your Interconnection Service evaluation election for the Class Year Interconnection Facilities Study. Developer should specify either Energy Resource Interconnection Service ("ERIS") alone, both ERIS and some MW level of Capacity Resource Interconnection Service ("CRIS") ~~not to exceed the nameplate capacity of your facility,~~ or CRIS only (*e.g.*, if your facility is already interconnected taking only ERIS, you may elect to be evaluated for CRIS only); provided however, that CRIS requests are subject to the limits specified in Section 30.3.2.4 of Attachment X ~~at a MW level you specify, not to exceed the nameplate capacity of your facility or, if your facility is already interconnected taking ERIS and CRIS, you may elect an increase of CRIS, not to exceed the nameplate capacity of your facility)~~. Evaluation election:

   ERIS: _____

   CRIS: _____

3. Proposed Schedule:

| | |
|---|---|
| Begin Construction | Date: _____ |
| In-Service | Date: _____ |
| Initial Synchronization | Date: _____ |
| Generation Testing | Date: _____ |
| Commercial Operation | Date: _____ |

4. Additional Information Required as Part of this Data Form:

   All facilities, including BTM:NG Resources, Energy Storage Resources, and Class Year Transmission Projects, must also complete Section A, below.

**A. Additional Information:**

Nameplate MW: _____

Nameplate MVA: _____

Auxiliary Load: _____

For temperature sensitive units, provide MW vs. temp curves and indicate maximum summer and winter net capability below:

- 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 : _____

1. One set of metering is required for each generation connection to the new ring bus or existing Connecting Transmission Owner station. Number of generation connections: ___ _____
2. On the one-line indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)
3. On the one-line indicate the location of auxiliary power. (Minimum load on CT/PT) Amps
4. Will an alternate source of auxiliary power be available during CT/PT maintenance? _____ Yes _____ No
5. Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? _____ Yes _____ No

   (If yes, indicate on one-line diagram).

6 ~~8~~. What type of control system or PLC will be located at the Developer's facility?

_____

~~9~~7. What protocol does the control system or PLC use?

_____

~~10~~8. Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line.

_____

~~11~~9. Physical dimensions of the proposed interconnection station:

_____

~~12~~10. Bus length from generation to interconnection station:

_____

~~13~~11. Line length from interconnection station to Connecting Transmission Owner's transmission line.

_____

~~14~~12. Tower number observed in the field. (Painted on tower leg):

_____

~~15~~13. Number of third-party easements required for transmission lines, if known:

_____

**BTM:NG Resources**

~~16~~14. In addition to the above information, as applicable, for BTM:NG Resources, please also provide the following information:

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: _____

Is the ~~facility~~ new load or existing load in the Transmission Owner's service area?

_____ Yes _____No Local provider: _____

**Energy Storage Resources**

15. In addition to the above information, as applicable, for Energy Storage Resources, please also provide the following information:

Energy storage capability (MWh): _____

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

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: _____

_____

Primary frequency response operating range for electric storage resource:

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