

APPENDIX 2 TO ATTACHMENT HH – CRIS-Only Request

Commented [A1]: NYISO Comment: Form based on Interconnection Request form and External CRIS Request form.

1. The undersigned Interconnection Customer who submits this request is proposing to develop or own a proposed or an existing Facility requesting Capacity Resource Interconnection Service (“CRIS”).

2. Legal Name of the Interconnection Customer (or, if an individual, individual’s name) (must be a single individual or entity):

Name of Interconnection Customer :

Contact Person:

Title:

Address:

Email:

Telephone:

3. Type of CRIS-Only Request:

- a. CRIS or increased CRIS for an existing facility
- b. CRIS or increased CRIS for a facility that is not existing but has ERIS
- c. Different location CRIS Transfer (skip to question 13)
- d. External CRIS Rights Request (skip to question 14)

4. Queue Position/PTID No./TO or NYSIR queue no. (if applicable):

5. Project/facility name:

6. Is this Project mutually exclusive with another project proposed by the Interconnection Customer or its Affiliate in the current ongoing Expedited Deliverability Study, Class Year Study, or Cluster Study?

Yes No

Indicate the Queue Position/PTID No./TO or NYSIR queue no. (if applicable):

If yes, is the Interconnection Customer submitting the Project as a Contingent Project in accordance with Section 40.5.4.1? Yes No

7. Address or location of the proposed new Facility site (to the extent known) or, in the case of an existing Facility, the name and specific location of that existing facility:

6. MW nameplate rating: at degrees F (if temperature sensitive)

MW of requested CRIS at the POI:

- If requesting CRIS for a multi-unit facility, specify the requested CRIS for each Generator:
- For a Resource with Energy Duration Limitations that is requesting CRIS, indicate the maximum injection capability over the selected duration (e.g., 10 MWh over 4 hours)

8. If a Cluster Study Transmission Project, which of the following forms of CRIS does the Interconnection Customer intend to request:

 Unforced Capacity Deliverability Rights

 External-to-Rest of State Deliverability Rights

9. 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):

10. Attach a conceptual breaker one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

The conceptual breaker one-line diagram is a representation of electrical components that are connecting into the NYSTS or Distribution System as applicable. This conceptual breaker one-line diagram should include, at a minimum:

- The Project name, and the Interconnection Customer name on the diagram;
- The facility address (specific location of the Facility);
- The number of inverters or generator units (type, nameplate rating MW and MVA), and configuration of the Facility;
- The Facility's electrical components (i.e., generation, transformers (GSU, PSU, current transformer, and potential transformers), breakers, switches, cables/lines/feeders, compensation, FACTs, auxiliary load, buses, etc.) as described in NYISO Reliability Analysis Data Manual;
- The capability and voltage levels of the electrical components, their connection to each other and to the New York State Transmission System or Distribution System;
- The Point of Interconnection (name of the substation name (specify the bus) or transmission/distribution line name and number); and
- References to other diagram sheets if there is more than one diagram sheet (i.e., use references to indicate how the diagrams are interconnected).

Acronyms used in the conceptual breaker one-line diagram should follow ANSI Standard Device Numbers & Common Acronyms.

11. A workable Project power flow, short circuit, transient stability modeling data and supporting documentation (as set forth in Attachment A) must be provided with this Interconnection Request form.

12. Proposed Initial Feedback Date (Month/Year):

Proposed Synchronization Date (Month/Year):

Proposed Commercial Operation Date (Month/Year): _____

13. If requesting a CRIS transfer, indicate the following:

• Submitting Entity (Transferor)'s Contact Information

○ Organization name: _____

○ Address: _____

○ Phone Number: _____

○ Email: _____

• Receiving Entity (Transferee)'s Contact Information

○ Organization name: _____

○ Address: _____

○ Phone Number: _____

○ Email: _____

○ Queue No., if applicable: _____

• Type of Transfer (Check One)

○ Partial CRIS Transfer (CRIS MW to be Transferred: _____)

○ Full CRIS Transfer (CRIS MW to be Transferred: _____)

• Transferor Facility's New CRIS MW post-transfer: _____

• Receiving Entity/Transferee Facility's New CRIS MW post-transfer: _____

• Anticipate date of Transfer, if approved: _____

• Transferor Facility Information (for a multi-unit Generating Facility, the specific Generator from which the transfer is proposed)

○ Transferor facility

PTID(s): _____

IITF February 16, 2024 Working Draft

- Transferor facility's electrical location (i.e., Point of Interconnection): _____
- Transferor facility's Current CRIS MW: _____
- Transferee Facility Information (for a multi-unit Generating Facility, the specific Generator to which the transfer is proposed)
 - Transferee facility's PTID(s): _____
 - Transferee facility's electrical location : _____
 - MW nameplate rating: _____ at _____ degrees F (if temperature sensitive)
 - Transferee facility's current CRIS MW: _____

14. If requesting External CRIS, indicate the following:

- _____ Years - The term of the requested Award Period (minimum five (5) years).
- _____ MW of External CRIS requested for each month of Summer Capability Period. The same number of MW must be supplied for all months of each Summer Capability Period throughout the Award Period.
- _____ MW of External CRIS requested each month of Winter Capability Period (cannot exceed MW committed for Summer Capability Period). None required, but if Requestor does commit MW to any month of Winter Capability Period, Requestor must specify months requested below.
 - ___ November
 - ___ December
 - ___ January
 - ___ February
 - ___ March
 - ___ April
- The External Interface(s) to be used for the External ICAP:
- A Requestor may request external CRIS rights by making either a contract commitment or a non-contract commitment for the award period. A requestor must

IITF February 16, 2024 Working Draft

indicate the type of its commitment, as follows:

- Contract commitment; or
- Non-contract commitment.

15. Detailed generating facility data specified in Attachment A must be submitted with this CRIS-Only Request form.

16. \$5,000 non-refundable Application Fee must be submitted with this CRIS-Only Request form in accordance with Section [40.5.5.1.3] of Attachment HH.

17. A \$50,000 Study Deposit must be submitted with this CRIS-Only Request form pursuant to Section [40.5.5.1.4] of Attachment HH.

18. Attach the Interconnection Customer signed Cluster Study Agreement _____

19. This CRIS-Only Request shall be submitted to the ISO through the interconnection portal on the NYISO website.

20. This CRIS-Only Request is submitted by:

Signature: _____

Name (type or print): _____

Title: _____

Company: _____

Date: _____

ATTACHMENT A
DETAILED GENERATING FACILITY DATA
(Not Applicable for CRIS Transfer and External CRIS Rights Requests)
(Additional data maybe required at subsequent stages of the Cluster Study Process)

1. Describe the composition of assets (including MW level) within the Generating Facility, including load reduction assets (e.g., 50 MW wind facility, 20 MW Energy Storage Resource and a load reduction resource with a maximum of 1 MW of load reduction):

2. Maximum Injection Capability of entire Generating Facility over 1 hour:

3. If the facility includes a Resource with Energy Duration Limitations, indicate the maximum injection capability for the entire Generating Facility over the selected duration (e.g., 100 MW over 4 hours):

4. Provide the following information for each unit within the Generating Facility:
Resource/Fuel type: _____ (Select from the dropped box in the portal system)

Generator Nameplate Rating: _____ MW (Typical)

MVA _____ °F _____ Voltage (kV) _____

Maximum Reactive Power at Rated Power Leading (MVAR): _____

Minimum Reactive Power at Rated Power Lagging (MVAR): _____

Customer-Site Load: _____ MW

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:

Typical Reactive Load: _____ MVAR

Generator manufacturer, model name & number: _____

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

IITF February 16, 2024 Working Draft

Nameplate Output Power Rating in MW1: (Summer) _____ (Winter) _____

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

If solar, total number of solar panels in solar farm to be interconnected pursuant to this

Interconnection Request: _____

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

If wind, total number of generators in wind farm to be interconnected pursuant to this

Interconnection Request: _____

Generator Height: Single phase _____ Three Phase _____

Wind Model Type: Type 1 _____ Type 2 _____ Type 3 _____ Type 4 _____

If an Energy Storage Resource or a Resource with Energy Duration Limitations:

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

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): _____

Maximum sustained hour injection in MW hours (calculated at the Minimum Duration for full discharge): _____

Primary frequency response operating range for electric storage resource: _____

Minimum State of Charge: _____ (%)

Maximum State of Charge: _____ (%)

5. Attach modeling data files²:

- Power Flow model _____

¹ The Nameplate Output Power Rating is at the inverter terminal for IBRs

² PSSE files require in *.raw* or *.sav* and *.dvr* format. ASPEN files are required as *.olr* format.

- Short circuit model
- Dynamic models

**ADDITIONAL INFORMATION REQUESTED FOR CLUSTER STUDY
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):

Appendix 8 to Attachment HH~~APPENDIX 2 TO ATTACHMENT S~~— Expedited

Deliverability 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 _____ (“Interconnection Customer 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”). Interconnection Customer Developer, NYISO and Connecting Transmission Owner each may be referred to as a “Party,” or collectively as the “Parties.”

RECITALS

WHEREAS, Interconnection Customer Developer is proposing to develop or owns an existing or facility requesting Capacity Resource Interconnection Service (“CRIS”); and

WHEREAS, the NYISO has confirmed that the Interconnection Customer Developer has satisfied the eligibility requirements for entering an Expedited Deliverability Study; and

WHEREAS, Interconnection Customer Developer has elected to enter an Expedited Deliverability Study in order to obtain or increase CRIS pursuant to Attachment ~~HHs 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 ~~40.1 of Attachment HH~~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 Interconnection Customer Developer elects to be evaluated for CRIS and NYISO shall cause to be performed an Expedited Deliverability Study consistent with Attachment ~~HHs S and X~~ to the ISO OATT. The terms of Attachment HH of the OATT~~the above-referenced OATT Attachments, as applicable~~, are hereby incorporated by reference herein.
- 3.0 The scope of the Expedited Deliverability Study shall be subject to the assumptions set forth in Attachment A and the data provided in Attachment B to this Agreement.
- 4.0 The Expedited Deliverability Study report (i) shall identify whether the facility is fully deliverable at its requested level of CRIS; and (ii) if not fully deliverable, shall determine the facility’s deliverable MW.

- 5.0 The Interconnection Customer~~Developer~~ shall provide a deposit of \$30,000 for the performance of the Expedited Deliverability Study. The time for completion of the Expedited Deliverability Study is specified in Attachment A.

Interconnection Customer shall be responsible for the actual cost ~~NYISO shall invoice Developer on a monthly basis for the expenses~~ incurred by NYISO and the Connecting Transmission Owner on the Expedited Deliverability Study ~~each month~~, as computed on a time and materials basis in accordance with the rates attached hereto. The ISO shall invoice the Interconnection Customer, and Interconnection Customer shall pay the invoiced amounts, in accordance with the requirements in Section [40.24.3] of Attachment HH to the ISO OATT. ~~Interconnection Customer 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 in accordance with the requirements in Section [40.23.4].

- 6.0 Miscellaneous.

6.1 Accuracy of Information. Except as Interconnection Customer~~Developer~~ or Connecting Transmission Owner may otherwise specify in writing when they provide information to NYISO under this Agreement, Interconnection Customer~~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. Interconnection Customer~~Developer~~ and Connecting Transmission Owner shall each promptly provide NYISO with any additional information needed to update information previously provided to the extent permitted by Attachment HH to the NYISO OATT.

6.2 Disclaimer of Warranty. In preparing the Expedited Deliverability 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 Expedited Deliverability 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 Expedited Deliverability Study. Interconnection Customer~~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 Expedited Deliverability Study or any reliance on the Expedited Deliverability 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, Interconnection Customer~~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 Expedited Deliverability 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 6.5, shall continue in effect until the Expedited Deliverability Study is completed and approved by the NYISO Operating Committee. Interconnection Customer~~Developer~~ or NYISO may terminate this Agreement upon the later of (i) the withdrawal of the Interconnection Customer~~Developer~~'s Interconnection Request~~project~~ from the NYISO ~~interconnection~~ Queue, as applicable, or upon the Interconnection Customer's withdrawal of its request to be evaluated in the Expedited Deliverability Study, and (ii) the final reconciliation of any payments and deposits concerning the Expedited Deliverability Study in accordance with the requirements in Attachment HH to the NYISO's OATT.
- 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 [Interconnection Customer](#)~~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 [Interconnection Customer](#)~~Developer~~]

By: _____

Title: _____

Date: _____

Attachment A To Appendix [*]2 - Expedited Deliverability Study Agreement

**SCHEDULE FOR CONDUCTING THE
EXPEDITED DELIVERABILITY STUDY**

The NYISO and Connecting Transmission Owner shall use Reasonable Efforts to complete the study and issue an Expedited Deliverability Study report to the [Interconnection Customer Developer](#) within the four months after of receipt of an executed copy of this Expedited Deliverability Study Agreement:

- 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 developed 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 - Expedited Deliverability Study Agreement

DATA FORM TO BE PROVIDED BY INTERCONNECTION
CUSTOMER~~DEVELOPER~~

WITH THE EXPEDITED DELIVERABILITY 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. Specify the MW level of Capacity Resource Interconnection Service (“CRIS”) requested; provided however, that CRIS requests are subject to the limits specified in Section [40.5.6.5]~~25.8.1~~ of Attachment HHS to the ISO OATT.

Evaluation election (MW of requested CRIS): _____

If the Project will consist of multiple units, specify the requested allocation of the above MW level of requested CRIS:

3. Proposed Schedule:

Begin Construction Date: _____

Initial Feedback Date~~Service~~ Date: _____

~~Initial~~Synchronization Date Date: _____

Generation Testing Date: _____

Commercial Operation Date Date: _____

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

All facilities, including BTM:NG Resources, and Cluster Study~~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. What type of control system or PLC will be located at the Interconnection Customer's/Developer's facility?~~

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

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

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

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

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

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

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

14. Describe any injection-limiting equipment if the facility's ~~existing or is requested~~ing ERIS ~~is~~ below its full output:

15. 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 *new or existing load* in the Transmission Owner's service area?

_____ Yes _____ No Local provider: _____

Appendix 9~~PPENDIX 1 to TO~~ **Attachment HH**~~ATTACHMENT S~~ – Allocation of Overage Cost

An Example of the Allocation of Overage Cost Among Interconnection Customers for Cluster Study Projects~~Class Year Developers~~, in Accordance with Section [40.12.2]~~25.6.2~~ of Attachment HHS:

There are five Interconnection Customers~~Developer~~ projects in a Cluster Study~~Class Year 20XX~~.

The Cluster Project~~Annual Transmission Reliability~~ Assessment (“ATRCPA”) determines that 10 System Upgrade Facilities (“SUFs”) are needed to reliably interconnect the Cluster Study~~Class Year 20XX~~ pProjects, at a total cost of \$30 million.

The Annual TransmissionCluster Baseline Assessment (“ATCBA”) determines that 7 SUFs would be needed to meet reliability standards without the Class Year Study~~20XX~~ pProjects, at a total cost of \$20 million. (Note: The ATCBA may have included some generic “projects” identical to or similar to some of the Cluster Study~~Class Year 20XX~~ pProjects, but not necessarily. Also, some of the SUFs identified by the ATCBA may be the same as those identified in the ATRCPA, but not necessarily.)

- (1) The total cost of ATRCPA SUFs allocated to the Transmission Owners (“TOs”) is equal to the total cost of the ATCBA SUFs (\$20 million).
- (2) The total cost of ATRCPA SUFs allocated to the Interconnection Customer Developers, the Overage Cost, is the net of the total cost of the ATRCPA vs. ATCBA SUFs (\$30 million - \$20 million = \$10 million).
- (3) The ratio of the Overage Cost to the total cost of ATRCPA SUFs, the Overage Cost Percentage, is used to compute the Interconnection Customers’ Developers’ cost allocations for each ATRCPA SUF. In this example, the Overage Cost Percentage, the ratio, = \$10 million/\$30 million = 1/3 (The Interconnection Customers’ Developers pay 1/3 the cost of each ATRCPA SUF). Assume the cost of one of the ATRCPA SUFs (SUF#1) is \$3 million. The Interconnection Customers’ Developers’ share of the cost of that SUF = 1/3 x \$3 million = \$1

million.

- (4) The Interconnection Customers'~~Developers~~' share of the cost of each ATRCPA SUF is allocated among all the Interconnection Customers~~Developers~~ that have at least a *de minimus* impact causing the need for that SUF.

In this example, the ATRCPA determines that 3 of the 5 Cluster Study~~Class Year~~ ~~200X~~ pProjects have at least a *de minimus* impact causing the need for SUF#1.

- (5) The Interconnection Customers'~~Developers~~' cost of an ATRCPA SUF is allocated to each Interconnection Customer~~Developer~~ that has at least a *de minimus* impact in accordance with the Contribution Percentage, or ratio of that Interconnection Customer's~~Developer's~~ measured impact, its electrical contribution, to the sum of the measured impact of all the Interconnection Customers~~Developers~~ that have at least a *de minimus* impact.

In this example, the measured impacts of the three projects are 200, 300, and 500 amps, respectively. Thus the pro rata shares of the projects' cost of SUF#1 are \$200K, \$300K, and \$500K, respectively.

Appendix 10 to Attachment HH ~~Date: _____~~ **Appendix 3 -
Certification Codes and Standards**

IEEE1547 Standard for Interconnecting Distributed Resources with Electric Power Systems (including use of IEEE 1547.1 testing protocols to establish conformity)

UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems

IEEE Std 929-2000 IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems

NFPA 70 (2002), National Electrical Code

IEEE Std C37.90.1-1989 (R1994), IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems

IEEE Std C37.90.2 (1995), IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

IEEE Std C37.108-1989 (R2002), IEEE Guide for the Protection of Network Transformers

IEEE Std C57.12.44-2000, IEEE Standard Requirements for Secondary Network Protectors

IEEE Std C62.41.2-2002, IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits

IEEE Std C62.45-1992 (R2002), IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits

ANSI C84.1-1995 Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)

IEEE Std 100-2000, IEEE Standard Dictionary of Electrical and Electronic Terms
NEMA MG 1-1998, Motors and Small Resources, Revision 3

IEEE Std 519-1992, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems

NEMA MG 1-2003 (Rev 2004), Motors and Generators, Revision 1

Appendix 11 to Attachment HH4 - Certification of ~~Small-Generator~~ Equipment Packages for Generating Facilities 20 MW or Less

- 1.0 ~~Small~~-Generating Facility equipment proposed for use separately or packaged with other equipment in an interconnection system shall be considered certified for interconnected operation if: (1) it has been tested in accordance with industry standards for continuous utility interactive operation in compliance with the appropriate codes and standards referenced below by any Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration to test and certify interconnection equipment pursuant to the relevant codes and standards listed in ~~SGIP~~-Appendix [10] to this Attachment HH3, (2) it has been labeled and is publicly listed by such NRTL at the time of the interconnection application, and (3) such NRTL makes readily available for verification all test standards and procedures it utilized in performing such equipment certification, and, with consumer approval, the test data itself. The NRTL may make such information available on its website and by encouraging such information to be included in the manufacturer's literature accompanying the equipment.
- 2.0 The Interconnection Customer must verify that the intended use of the equipment falls within the use or uses for which the equipment was tested, labeled, and listed by the NRTL.
- 3.0 Certified equipment shall not require further type-test review, testing, or additional equipment to meet the requirements of this interconnection procedure; however, nothing herein shall preclude the need for an on-site commissioning test by the parties to the interconnection nor follow-up production testing by the NRTL.
- 4.0 If the certified equipment package includes only interface components (switchgear, inverters, or other interface devices), then an Interconnection Customer must show that the generator or other electric source being utilized with the equipment package is compatible with the equipment package and is consistent with the testing and listing specified for this type of interconnection equipment.
- 5.0 Provided the generator or electric source, when combined with the equipment package, is within the range of capabilities for which it was tested by the NRTL, and does not violate the interface components' labeling and listing performed by the NRTL, no further design review, testing or additional equipment on the customer side of the point of common coupling shall be required to meet the requirements of this interconnection procedure.
- 6.0 An equipment package does not include equipment provided by the utility.
- 7.0 Any equipment package approved and listed in a state by that state's regulatory body for interconnected operation in that state prior to the effective date of these

small generator interconnection procedures shall be considered certified under these procedures for use in that state.

Appendix 12 to Attachment HH5 - Application, Procedures, and Terms and Conditions for Interconnecting a Certified Inverter-Based ~~Small~~ Generating Facility No Larger than 10 kW (“10 kW Inverter Process”)

- 1.0 The Interconnection Customer (“Customer”) completes the Interconnection Request (“Application”) and submits it to the ISO. The ISO will send a copy to the Connecting Transmission Owner.
- 2.0 The ISO acknowledges to the Customer receipt of the Application within three Business Days of receipt.
- 3.0 The ISO, in consultation with the Connecting Transmission Owner, evaluates the Application for completeness and notifies the Customer within ten Business Days of receipt that the Application is or is not complete and, if not, advises what material is missing.
- 4.0 The ISO, in consultation with the Connecting Transmission Owner, verifies that the ~~Small~~ Generating Facility can be interconnected safely and reliably using the screens contained in the Fast Track Process in the SGIP. The ISO has 15 Business Days to complete this process. Unless the ISO, in consultation with the Connecting Transmission Owner, determines and demonstrates that the ~~Small~~ Generating Facility cannot be interconnected safely and reliably, the ISO approves the Application and returns it to the Customer, with a copy to the Connecting Transmission Owner. Note to Customer: Please check with the ISO before submitting the Application if disconnection equipment is required.
- 5.0 After installation, the Customer returns the Certificate of Completion to the ISO, and sends a copy to the Connecting Transmission Owner. Prior to parallel operation, the ISO, in consultation with the Connecting Transmission Owner, may inspect the ~~Small~~ Generating Facility for compliance with standards which may include a Connecting Transmission Owner witness test, and may schedule appropriate metering replacement, if necessary. The Customer shall cooperate with the ISO and the Connecting Transmission Owner to assure that the required inspection, witness test and/or metering replacement are completed within the timeframes outlined below.
- 6.0 The ISO notifies the Customer in writing that interconnection of the ~~Small~~ Generating Facility is authorized. If the witness test is not satisfactory, the Connecting Transmission Owner has the right to disconnect the ~~Small~~ Generating Facility. The Customer has no right to operate in parallel until a witness test has been performed, or previously waived on the Application. The Connecting Transmission Owner is obligated to complete this witness test within ten Business Days of the receipt of the Certificate of Completion, unless the Connecting Transmission Owner and Customer agree otherwise. If the Connecting Transmission Owner does not inspect within ten Business Days or by mutual agreement of the Parties, the witness test is deemed waived.

- 7.0 Contact Information – The Customer must provide the contact information for the legal applicant (i.e., the Customer). If another entity is responsible for interfacing with the ISO and Connecting Transmission Owner, that contact information must be provided on the Application.
- 8.0 Ownership Information – Enter the legal names of the owner(s) of the ~~Small~~ Generating Facility. Include the percentage ownership (if any) by any utility or public utility holding company, or by any entity owned by either.
- 9.0 UL1741 Listed – This standard (“Inverters, Converters, and Controllers for Use in Independent Power Systems”) addresses the electrical interconnection design of various forms of generating equipment. Many manufacturers submit their equipment to a Nationally Recognized Testing Laboratory (NRTL) that verifies compliance with UL1741. This “listing” is then marked on the equipment and supporting documentation.
- 10.0 The ISO is available to help resolve any disputes that may arise out of the proposed interconnection, in accordance with the procedures set forth in Section [\[40.24.5\]](#) ~~32.4.2 of the SGIP in~~ Attachment ~~HHZ to~~ of the ISO OATT.

**Application for Interconnecting a Certified Inverter-Based ~~Small~~ Generating Facility
No Larger than 10kW**

This Application is considered complete when it provides all applicable and correct information required below. Per ~~SGIP-s~~Section ~~[40.5.5.1.5*]~~~~32.1.5~~ of Attachment HH, documentation of ~~the-s~~Site eControl must be submitted with the Interconnection Request. Additional information to evaluate the Application may be required.

Processing Fee

A non-refundable processing fee of \$100 must accompany this Application.

Interconnection Customer

Name of Interconnection Customer: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____

E-Mail Address: _____

Point of Contact

Name: _____

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____

E-Mail Address: _____

Owner of the facility (include % ownership by any electric utility): _____

~~Small~~ Generating Facility Information

Location (if different from above): _____

Electric Service Company: _____

Account Number: _____

Inverter Manufacturer: _____ Model _____

Nameplate Rating: _____ (kW) _____ (kVA) _____ (AC Volts)

Single Phase _____ Three Phase _____

System Design Capacity: _____ (kW) _____ (kVA)

Customer-Site Load: _____ MW (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: _____

Prime Mover: Photovoltaic Reciprocating Engine Fuel Cell

Turbine Other _____

Energy Source: Solar Wind Hydro Diesel Natural Gas

Fuel Oil Other (describe) _____

Is the equipment UL1741 Listed? Yes ___ No ___

If Yes, attach manufacturer’s cut-sheet showing UL1741 listing

Estimated Installation Date: _____ Estimated ~~Initial Feedback-Service~~ Date: _____

The 10kW Inverter Process is available only for inverter-based ~~Small~~ Generating Facilities no larger than 10kW that meet the codes, standards, and certification requirements of Appendices [10]3 and [11]4 of [Attachment H to the ISO OATT](#)~~the SGIP~~, or the ISO, in consultation with the Connecting Transmission Owner, has reviewed the design or tested the proposed ~~Small~~ Generating Facility and is satisfied that it is safe to operate. If the review or testing raises safety issues, the ~~Small~~ Generating Facility will not be allowed to commence parallel operation until the issues are resolved.

List components of the ~~Small~~ Generating Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____

- 3. _____
- 4. _____
- 5. _____

Interconnection Customer Signature

I hereby certify that, to the best of my knowledge, the information provided in this Application is true. I agree to abide by the Terms and Conditions for Interconnecting an Inverter-Based ~~Small~~ Generating Facility No Larger than 10kW and return the Certificate of Completion when the ~~Small~~ Generating Facility has been installed.

Signed: _____

Title: _____ Date: _____

Contingent Approval to Interconnect the ~~Small~~ Generating Facility

(For ISO and Connecting Transmission Owner use only)

Interconnection of the ~~Small~~ Generating Facility is approved contingent upon the Terms and Conditions for Interconnecting an Inverter-Based ~~Small~~ Generating Facility No Larger than 10kW and return of the Certificate of Completion.

Connecting Transmission Owner Signature:

Title: _____ Date: _____

Connecting Transmission Owner waives inspection/witness test Yes ___ No ___

ISO Signature: _____

Title: _____ Date: _____

~~Small~~ Generating Facility Certificate of Completion

Is the ~~Small~~ Generating Facility owner-installed? Yes ___ No ___

Interconnection Customer: _____

Contact Person: _____

Address: _____

Location of the ~~Small~~ Generating Facility (if different from above):

City: _____ State: _____ Zip Code: _____

Telephone: _____

E-Mail Address: _____

Electrician:

Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Telephone: _____

E-Mail Address: _____

License number: _____

Date Approval to Install Facility granted by the Connecting Transmission Owner:

Inspection:

The ~~Small~~ Generating Facility has been installed and inspected in compliance with the local building/electrical code of _____

Signed (Local electrical wiring inspector, or attach signed electrical inspection):

Print Name: _____

Date: _____

As a condition of interconnection, you are required to send a copy of this form along with a copy of the signed electrical permit to the ISO and the Connecting Transmission Owner (insert contact information below):

Name: _____

NYISO: _____

Address: _____

City, State ZIP: _____

E-mail: _____

Name: _____

Connecting Transmission Owner: _____

Address: _____

City, State ZIP: _____

E-mail: _____

Approval to Energize the ~~Small~~-Generating Facility (For ISO and Connecting Transmission Owner use only)

Energizing the ~~Small~~-Generating Facility is approved contingent upon the Terms and Conditions for Interconnecting an Inverter-Based ~~Small~~-Generating Facility No Larger than 10kW

ISO Signature: _____

Title: _____ Date: _____

Connecting Transmission Owner Signature: _____

Title: _____ Date: _____

Terms and Conditions for Interconnecting an Inverter-Based ~~Small~~ Generating Facility No Larger than 10kW (“Terms and Conditions”)

1.0 Construction of the Facility

The Interconnection Customer (the “Customer”) may proceed to construct (including operational testing not to exceed two hours) the ~~Small~~ Generating Facility when the ISO approves the Interconnection Request (the “Application”) and returns it to the Customer.

2.0 Interconnection and Operation

The Customer may operate ~~Small~~ Generating Facility and interconnect with the Connecting Transmission Owner’s Distribution System once all of the following have occurred:

2.1 Upon completing construction, the Customer will cause the ~~Small~~ Generating Facility to be inspected or otherwise certified by the appropriate local electrical wiring inspector with jurisdiction, and

2.2 The Customer returns the Certificate of Completion to the ISO and the Connecting Transmission Owner, and

2.3 The Connecting Transmission Owner has either:

2.3.1 Completed its inspection of the ~~Small~~ Generating Facility to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes. All inspections must be conducted by the Connecting Transmission Owner, at its own expense, within ten Business Days (unless the Parties agree otherwise) after receipt of the Certificate of Completion and shall take place at a time agreeable to the Parties. The Connecting Transmission Owner shall provide a written statement that the ~~Small~~ Generating Facility has passed inspection or shall notify the Customer of what steps it must take to pass inspection as soon as practicable after the inspection takes place; or

2.3.2 If the Connecting Transmission Owner does not schedule an inspection of the ~~Small~~ Generating Facility within ten business days after receiving the Certificate of Completion, the witness test is deemed waived (unless the Parties agree otherwise), unless the Interconnection Customer has not provided a reasonable opportunity for such inspection; or

2.3.3 The Connecting Transmission Owner waives the right to inspect the ~~Small~~ Generating Facility.

2.4 The Connecting Transmission Owner has the right to disconnect the ~~Small~~ Generating Facility in the event of improper installation or failure to return the Certificate of Completion.

2.5 Revenue quality metering equipment must be installed and tested in accordance with applicable ANSI standards.

3.0 Safe Operations and Maintenance

The Customer shall be fully responsible to operate, maintain, and repair the ~~Small~~ Generating Facility as required to ensure that it complies at all times with the interconnection standards to which it has been certified.

4.0 Access

The Connecting Transmission Owner shall have access to the disconnect switch (if the disconnect switch is required) and metering equipment of the ~~Small~~ Generating Facility at all times. The Connecting Transmission Owner shall provide reasonable notice to the Customer when possible prior to using its right of access.

5.0 Disconnection

The Connecting Transmission Owner may temporarily disconnect the ~~Small~~ Generating Facility upon the following conditions, until the conditions no longer exist:

5.1 For scheduled outages upon reasonable notice.

5.2 For unscheduled outages or emergency conditions.

5.3 If the ~~Small~~ Generating Facility does not operate in the manner consistent with these Terms and Conditions, the ISO OATT and Applicable Reliability ~~Standards~~ [Requirements](#).

5.4 The Connecting Transmission Owner shall inform the Customer in advance of any scheduled disconnection, or as is reasonable after an unscheduled disconnection.

6.0 Indemnification

The Parties shall at all times indemnify, defend, and save the other Parties harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the indemnified Party's action or inactions of its obligations under this agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

7.0 Insurance

The Interconnection Customer and Connecting Transmission Owner shall each follow all applicable insurance requirements imposed by New York State. All insurance policies must be maintained with insurers authorized to do business in New York State, and all policies must be in place ten Business Days prior to the operation of the Inverter-Based ~~Small~~ Generating Facility. The Interconnection

Customer and Connecting Transmission Owner shall notify each other whenever an accident or incident recurs that is covered by such insurance, whether or not such coverage is sought. The Interconnection Customer's insurance requirements shall be specified in an attachment to these Terms and Conditions.

8.0 Limitation of Liability

Each Party's liability to the other Parties for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall any Party be liable to any other Parties for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever, except as allowed under paragraph 6.0.

9.0 Termination

The agreement to operate in parallel shall become effective when executed by the Parties and shall continue in effect until _____. The agreement may be terminated earlier under the following conditions:

9.1 By the Customer

By providing written notice to the NYISO and the Connecting Transmission Owner.

9.2 By the ISO and the Connecting Transmission Owner

If the ~~Small~~-Generating Facility fails to operate for any consecutive 12 month period or the Customer fails to remedy a violation of these Terms and Conditions.

9.3 Permanent Disconnection

In the event this Agreement is terminated, the Connecting Transmission Owner shall have the right to disconnect its facilities or direct the Customer to disconnect its ~~Small~~-Generating Facility.

9.4 Survival Rights

This Agreement shall continue in effect after termination to the extent necessary to allow or require any Party to fulfill rights or obligations that arose under the Agreement.

10.0 Assignment/Transfer of Ownership of the Generating Facility

This Agreement shall survive the transfer of ownership of the ~~Small~~-Generating Facility to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and so notifies the NYISO and the Connecting Transmission Owner.

Interconnection Customer:

Connecting Transmission Owner:

By: _____

By: _____

Name: _____

Name: _____

Date: _____

Date: _____

New York Independent System Operator, Inc.

By: _____

Name: _____

Date: _____