

## **32.1 Application**

### **32.1.1 Applicability**

32.1.1.1 These Small Generator Interconnection Procedures (“SGIP”) apply to interconnections of Small Generating Facilities to the New York State Transmission System, and interconnections to the Distribution System subject to Federal Energy Regulatory Commission jurisdiction. These procedures do not apply to interconnections made simply to receive power from the New York State Transmission System and/or the Distribution System, nor to interconnections made solely for the purpose of generation with no wholesale sale for resale nor to net metering. These procedures do not apply to interconnections to LIPA’s distribution facilities. LIPA will continue to administer the interconnection process for generators connecting to its distribution facilities and perform all required studies on its distribution system under its own tariffs and procedures. Under these procedures, a request to interconnect a certified Small Generating Facility (See Appendices 3 and 4 for description of certification criteria) to the Connecting Transmission Owner’s Distribution System shall be evaluated under the Section 32.2 Fast Track Process if the eligibility requirements of Section 32.2.1 are met. A request to interconnect a certified inverter-based Small Generating Facility no larger than 10 kilowatts (kW) shall be evaluated under the Appendix 5 10 kW Inverter Process. A request to interconnect a Small Generating Facility no larger than 20 megawatts (MW) that does not meet the eligibility requirements of Section 32.2.1, or does not pass the Fast Track Process

or the 10 kW Inverter Process, shall be evaluated under the Section 32.3 Study Process.

32.1.1.2 Capitalized terms used herein shall have the meanings specified in the Glossary of Terms in Appendix I or the body of these procedures. Capitalized terms used herein that are not defined in the Glossary of Terms in Appendix I or in the body of these procedures shall have the meanings specified in Section 32.1 or Attachment S or Attachment X of the ISO OATT.

32.1.1.3 Neither these procedures nor the requirements included hereunder apply to Small Generating Facilities interconnected or approved for interconnection prior to [insert date] (60 Business Days after the effective date of these procedures accepted by the Federal Energy Regulatory Commission in compliance with Order No. 2006), provided, however, that requests to interconnect Small Generating Facilities submitted after that effective date must be made pursuant to these procedures, as amended. These procedures shall apply to any existing interconnected Small Generating Facility to the extent that there is a material modification to the facility or the Interconnection Facility, if that facility as modified remains a Small Generating Facility.

32.1.1.4 Prior to submitting its Interconnection Request (Appendix 2), the Interconnection Customer may ask the ISO's interconnection contact employee or office whether the proposed interconnection is subject to these procedures. The ISO, after consultation with the appropriate Transmission Owner, shall respond within 15 Business Days. Upon request from the ISO, a Transmission Owner shall provide requested information to the ISO necessary to make this

determination (*e.g.*, whether the proposed interconnection point is on a distribution or transmission facility and if distribution, whether there is already one or more generators connecting to that facility making wholesale sales).

32.1.1.5        Infrastructure security of electric system equipment and operations and control hardware and software is essential to ensure day-to-day reliability and operational security. The Federal Energy Regulatory Commission expects all ISOs and RTOs, Connecting Transmission Owners, Market Participants, and Interconnection Customers interconnected with electric systems to comply with the recommendations offered by the President’s Critical Infrastructure Protection Board and best practice recommendations from the electric reliability authority. All public utilities are expected to meet basic standards for electric system infrastructure and operational security, including physical, operational, and cyber-security practices.

32.1.1.6        References in these procedures to an interconnection agreement are to the Small Generator Interconnection Agreement (SGIA).

32.1.1.7        A new Small Generating Facility wishing to sell Energy and Ancillary Services must first elect Energy Resource Interconnection Service and satisfy the NYISO Minimum Interconnection Standard, which does not impose any deliverability requirement. All new Small Generating Facilities must satisfy the NYISO Minimum Interconnection Standard.

A new Small Generating Facility larger than 2 MW wishing to become a qualified Installed Capacity Supplier in accordance with the ISO Services Tariff and related ISO Procedures must first elect Capacity Resource Interconnection Service and satisfy the NYISO

Deliverability Interconnection Standard in addition to the NYISO Minimum Interconnection Standard. A Small Generating Facility larger than 2 MW electing Capacity Resource Interconnection Service must execute a Class Year Interconnection Facilities Study Agreement in the form of Appendix 2 to Attachment X of the ISO OATT. At that time, the Interconnection Customer must specify the MW of Capacity Resource Interconnection Service that it is requesting; provided, however, the Small Generating Facility's requested Capacity Resource Interconnection Service cannot exceed the limits specified in Section 25.8.1 of Attachment S to the ISO OATT. The ISO will then place the Small Generating Facility in the then Open Class Year and evaluate the Small Generating Facility for deliverability, as a Class Year Project, following the same rules and procedures in Attachment S to the ISO OATT applicable to other Class Year Projects being evaluated for deliverability. Inclusion in the Class Year will only be for the determination of System Deliverability Upgrade costs and Deliverable MW unless the Small Generating Facility is being included in the Class Year for the determination of System Upgrade Facility cost responsibility pursuant to Section 32.3.5.3.2 of the SGIP. For Small Generating Facilities interconnected or completely studied for interconnection before the projects in Class Year 2007, the Capacity Resource Interconnection Service capacity level for those Small Generating Facilities will be set at the highest DMNC recorded during five Summer Capability periods measured in accordance with the rules set forth in Section 25.9.3.1 of Attachment S to the ISO OATT. Prior to the establishment of a Small Generating Facility's first DMNC value for a Summer Capability Period, the Capacity Resource Interconnection Service capacity level will be set at the Small Generating Facility's nameplate MW. A Small Generating Facility 2 MW or smaller may elect Capacity Resource Interconnection Service without being evaluated for deliverability under Attachment S to the ISO OATT. In all cases, the new Small

Generating Facility will interconnect using the SGIA contained in this Attachment Z. Once it is established for them, Small Generating Facilities may retain their Capacity Resource Interconnection Service in accordance with the rules set forth in Section 25.9.3 of Attachment S to the ISO OATT.

### **32.1.2 Pre-Application**

32.1.2.1 The ISO shall designate an employee or office from which information on the application process and on an Affected System can be obtained through informal requests from the Interconnection Customer presenting a proposed project for a specific site. The name, telephone number, and e-mail address of such contact employee or office shall be made available on the ISO's Internet web site. Electric system information provided to the Interconnection Customer should include relevant system studies, Interconnection Studies, Base Case Data and other materials useful to an understanding of an interconnection at a particular point on the New York State Transmission System or Distribution System, to the extent such provision does not violate confidentiality provisions of prior agreements or critical infrastructure requirements. The ISO, with the required information about distribution facilities from the appropriate Connecting Transmission Owner, shall comply with reasonable requests for such information pursuant to this Section 32.1.2.

32.1.2.2 In addition to the information described in Section 32.1.2.1, which may be provided in response to an informal request, an Interconnection Customer may submit a formal written request form along with a non-refundable fee of \$1000 for a pre-application report on a proposed project at a specific site. The pre-

application fee shall be divided between the ISO and the Connecting Transmission Owner as follows: one-third to the ISO and two-thirds to the Connecting Transmission Owner. Within two (2) Business Days of receiving the pre-application report request form, the ISO shall provide a copy of the pre-application request form to the appropriate Connecting Transmission Owner. The Connecting Transmission Owner shall return the pre-application report, completed to the extent required under this section 32.1.2.2 within fifteen (15) Business Days of receipt of the pre-application request form from the ISO. The ISO, with the required information about distribution facilities from the appropriate Connecting Transmission Owner, shall provide the pre-application data described in Section 32.1.2.3 to the Interconnection Customer within 20 Business Days of receipt of the completed request form and payment of the \$1000 fee. The pre-application report produced by the ISO, in consultation with the appropriate Connecting Transmission Owner, is non-binding, does not confer any rights, and the Interconnection Customer must still successfully apply to interconnect to the Connecting Transmission Owner's system. The written pre-application report request form shall include the information in Sections 32.1.2.2.1 through 32.1.2.2.9 below to clearly and sufficiently identify the location of the proposed Point of Interconnection.

32.1.2.2.1 Project contact information, including name, address, phone number, and email address.

32.1.2.2.2 Project location (street address with nearby cross streets, town, and county).

- 32.1.2.2.3 Meter number, pole number, or other equivalent information identifying proposed Point of Interconnection, if available ~~(e.g.,~~.
- 32.1.2.2.4 Generator type ~~(s)~~ (e.g., solar, wind, combined heat and power, etc.) ~~(for~~  
~~Small Generating Facilities comprised of multiple technologies, identify all~~  
~~technology types~~ within the facility (i.e., the assets behind the single facility meter  
that comprise the facility)).
- 32.1.2.2.5 Total Size of the facility, and if comprised of multiple assetunits, size of  
each individual assetunit behind the single facility meter (alternating current  
kW).
- 32.1.2.2.6 Single or three phase generator configuration.
- 32.1.2.2.7 Stand-alone generator (no outside load, not including station service – Yes  
or No?).
- 32.1.2.2.8 Is new service requested? Yes or No? If there is existing service, include  
the customer account number, site minimum and maximum current or proposed  
electric loads in kW (if available) and specify if the load is expected to change.
- 32.1.2.2.9 Indication as to whether the requestor intends to use the facility to engage  
in wholesale sales over the New York State Transmission System or Distribution  
System.
- 32.1.2.3 Using the information provided in the pre-application report request form  
in Section 32.1.2.2, the ISO, in consultation with the appropriate Connecting  
Transmission Owner, will identify the substation/area bus, bank or circuit likely  
to serve the proposed Point of Interconnection. This selection by the ISO, in  
consultation with the appropriate Connecting Transmission Owner, does not

necessarily indicate, after application of the screens and/or study, that this would be the circuit the project ultimately connects to. The Interconnection Customer must request additional pre-application reports if information about multiple Points of Interconnection is requested. The ISO, in consultation with the Connecting Transmission Owner, shall determine whether the proposed interconnection is subject to the interconnection procedures set forth in this Attachment Z of the ISO OATT. If the pre-application report request form seeks information about a Point of Interconnection that is not subject to the interconnection procedures set forth in this Attachment Z of the ISO OATT, the Connecting Transmission Owner Customer shall follow the applicable state tariff, rules or procedures regarding generator interconnections. Subject to Section 32.1.2.4, the pre-application report will include the following information:

- 32.1.2.3.1 Total capacity (in MW) of substation/area bus, bank or circuit based on normal or operating ratings likely to serve the proposed Point of Interconnection.
- 32.1.2.3.2 Existing aggregate generation capacity (in MW) interconnected to a substation/area bus, bank or circuit (*i.e.*, amount of generation online) likely to serve the proposed Point of Interconnection.
- 32.1.2.3.3 Aggregate queued generation capacity (in MW) for a substation/area bus, bank or circuit (*i.e.*, amount of generation in the queue) likely to serve the proposed Point of Interconnection.
- 32.1.2.3.4 Available capacity (in MW) of substation/area bus or bank and circuit likely to serve the proposed Point of Interconnection (*i.e.*, total capacity less the



sum of existing aggregate generation capacity and aggregate queued generation capacity).

32.1.2.3.5 Substation nominal distribution voltage and/or transmission line nominal voltage if applicable.

32.1.2.3.6 Nominal distribution circuit voltage at the proposed Point of Interconnection.

32.1.2.3.7 Approximate circuit distance between the proposed Point of Interconnection and the substation.

32.1.2.3.8 Relevant line section(s)/station(s) actual or estimated peak load and minimum load data, including daytime minimum load as described in Section 32.2.4.4.1.1 below and absolute minimum load, when available.

32.1.2.3.9 Number and rating of protective devices and number and type (standard, bi-directional) of voltage regulating devices between the proposed Point of Interconnection and the substation/area. Identify whether the substation has a load tap changer.

32.1.2.3.10 Number of phases available at the proposed Point of Interconnection. If a single phase, distance from the three-phase circuit.

32.1.2.3.11 Limiting conductor ratings from the proposed Point of Interconnection to the distribution substation.

32.1.2.3.12 Whether the Point of Interconnection is located on a spot network, grid network, or radial supply.

32.1.2.3.13 Based on the proposed Point of Interconnection, existing or known constraints such as, but not limited to, electrical dependencies at that location,

short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks.

32.1.2.4 The pre-application report need only include existing data. A pre-application report request does not obligate the ISO or the Connecting Transmission Owner to conduct a study or other analysis of the proposed generator in the event the data is not readily available. If the ISO, in consultation with the Connecting Transmission Owner, cannot complete all or some of a pre-application report due to lack of available data, the ISO shall provide the Interconnection Customer with a pre-application report that includes the data that is available. The provision of information on “available capacity” pursuant to Section 32.1.2.3.4 does not imply that an interconnection up to this level may be completed without impacts since there are many variables studied as part of the interconnection review process, and data provided in the pre-application report may become outdated at the time of the submission of the complete Interconnection Request. Notwithstanding any of the provisions of this section, the ISO, in consultation with the Connecting Transmission Owner, shall, in good faith, include data in the pre-application report that represents the best available information at the time of reporting.

### **32.1.3 Interconnection Request**

An Interconnection Customer proposing to interconnect a new Small Generating Facility to the New York State Transmission System or to the Distribution System, or proposing a modification to ~~to materially increase the capacity of, or make a material modification to the operating characteristics of,~~ an existing Small Generating Facility ~~that is interconnected to the~~

~~New York State Transmission System or to the Distribution System that is a material~~  
~~modification pursuant to Section 32.1.4 of this Attachment Z~~ shall submit its Interconnection Request to the ISO together with a non-refundable \$1,000 application fee. The application fee shall be divided equally between the NYISO and Connecting Transmission Owner(s). An Interconnection Customer seeking to return a Small Generating Facility to service after it is Retired must submit a new Interconnection Request as a new facility. An Interconnection Customer returning a Small Generating Facility to service prior to the expiration or termination of its Mothball Outage or ICAP Ineligible Forced Outage need not submit a new Interconnection Request unless the Small Generating Facility is proposing to materially increase the capacity of, or make a material modification ~~to the operating characteristics of, and~~ to existing Small Generating Facility such as would otherwise trigger a new Interconnection Request pursuant to Section 32.1.4.2 of this Attachment Z.

*[this paragraph was moved to Section 32.1.4.2]*~~An increase in the capacity of an existing Small Generating Facility is a material increase for purposes of this Section 32.1.3 unless the increase (a) is not associated with any equipment changes or is associated with equipment changes determined by the ISO to be non-material; and (b) is an increase in the Small Generating Facility's baseline ERIS level that is equal to or less than two (2) megawatts and which provides for a total output of the Small Generating Facility of no more than twenty (20) megawatts. For purposes of this Section 32.1.3, the baseline ERIS level of an existing Small Generating Facility is (a) the greater of (i) the existing Small Generating Facility's CRIS level determined as a facility pre-dating Class Year 2007 pursuant to Section 25.9.3.1 of Attachment S of the OATT, if applicable; or (ii) the final maximum summer megawatt electrical output studied for ERIS in the ISO's interconnection process for the existing Small Generating Facility; or (b) if neither (a)(i)~~

~~nor (a)(ii) are applicable, the baseline ERS level is the value reflected in the Small Generating Facility's interconnection agreement or other applicable documentation governing the Small Generating Facility's interconnection; however, if the Small Generating Facility has requested a modification to its facility to decrease its size, and such modification has been deemed nonmaterial by the ISO, the decreased MW level will be a cap on its baseline ERS. If the existing Small Generating Facility is a BTM:NG Resource, the increase in existing capacity will be measured based on the increase from the existing gross capability of the generator to the proposed gross capability. Notwithstanding the above, if the existing Small Generating Facility is a temperature sensitive unit, the maximum capacity of which varies based on ambient temperature, the increase in existing capacity will be measured based on the largest increase from the existing capacity to the proposed capacity at the same temperature, i.e., at the same temperature along the maximum megawatt electrical output versus temperature curves.~~

The Interconnection Request shall be date- and time-stamped by the ISO upon receipt and a copy shall be sent by the ISO to the Connecting Transmission Owner. The ISO's date- and time-stamp applied to the Interconnection Request at the time of its original submission shall be accepted as the qualifying date- and time-stamp for the purposes of any timetable in these procedures. The Interconnection Customer shall be notified of receipt by the ISO within three Business Days of receiving the Interconnection Request. The ISO, after consulting with the Connecting Transmission Owner, shall notify the Interconnection Customer within ten Business Days of the receipt of the Interconnection Request as to whether the Interconnection Request is complete or incomplete. If the Interconnection Request is incomplete, the ISO shall provide along with the notice that the Interconnection Request is incomplete, a written list detailing all information that must be provided to complete the Interconnection Request. The Interconnection

Customer will have ten Business Days after receipt of the notice to submit the listed information or to request an extension of time to provide such information. If the Interconnection Customer does not provide the listed information or a request for an extension of time within the deadline, the Interconnection Request will be deemed withdrawn. An Interconnection Request will be deemed complete upon submission of the listed information to the ISO.

32.1.3.1 If the Interconnection Request is to interconnect to a distribution facility, the ISO will consult with the Connecting Transmission Owner to determine whether the SGIPs apply.

32.1.3.2 The expected Commercial Operation Date of the new Small Generating Facility or proposed increase in capacity of the existing Small Generating Facility provided in the Interconnection Request shall be no more than ten (10) years from the date the Interconnection Request is received by the ISO. Extensions of Commercial Operation Dates for Small Generating Facilities are subject to the provisions of Section 30.4.4.5 of Attachment X to the OATT.

#### **32.1.4 Modification of the ~~Interconnection Request~~ Small Generating Facility**

##### **32.1.4.1 Modification of a Proposed Small Generating Facility in the ISO's Interconnection Queue**

Any proposed modification to machine data or equipment configuration or to the interconnection site of the Small Generating Facility under evaluation in the SGIP is a material modification to the Small Generating Facility unless such modification is deemed non-material not agreed to in writing by the ISO, the Connecting Transmission Owner, and the Interconnection Customer. If deemed material, the Interconnection Customer may withdraw the requested modification or the material modification shall be deemed a withdrawal of the Interconnection Request and shall require submission of a new Interconnection Request, unless,

following notification by the ISO that the proposed modification is material, the Interconnection Customer proposes further modifications or mitigation to ameliorate the material impact of the proposed modification ~~cures the problems created by the changes~~ in a reasonable period of time.

#### 32.1.4.2 Modification of an Existing Small Generating Facility

##### 32.1.4.2.1 Material Increase in Capacity of the Small Generating Facility *[moved from Section 32.1.3]*

A modification to materially increase the capacity of an existing Small Generating Facility or a modification to the operating characteristics of an existing Small Generating Facility deemed material by the ISO will be a material modification requiring a new Interconnection Request for the incremental increase and/or modified Small Generating Facility.

An increase in the capacity of an existing Small Generating Facility is a material increase for purposes of this Section 32.1.4.2.1 unless the increase (a) is not associated with any equipment changes or is associated with equipment changes determined by the ISO to be non-material; and (b) is an increase in the Small Generating Facility's baseline ERIS level that is equal to or less than two (2) megawatts and which provides for a total output of the Small Generating Facility of no more than twenty (20) megawatts. The addition of load reduction capability to a Small Generating Facility is not a material modification for purposes of this Section 32.1.4.2.1.

For purposes of this Section 32.1.4.2.1, the baseline ERIS level of an existing Small Generating Facility is (a) the greater of (i) the existing Small Generating Facility's CRIS level determined as a facility pre-dating Class Year 2007 pursuant to Section 25.9.3.1 of Attachment S of the OATT, if applicable; or (ii) the final maximum summer megawatt electrical output studied for ERIS in the ISO's interconnection process for the existing Small Generating Facility; or (b) if neither (a)(i) nor (a)(ii) are applicable, the baseline ERIS level is the value reflected in the Small

Generating Facility's interconnection agreement or other applicable documentation governing the Small Generating Facility's interconnection; however, if the Small Generating Facility has requested a modification to its facility to decrease its size, and such modification has been deemed nonmaterial by the ISO, the decreased MW level will be a cap on its baseline ERIS. If the existing Small Generating Facility is a BTM:NG Resource, the increase in existing capacity will be measured based on the increase from the existing gross capability of the generator to the proposed gross capability. Notwithstanding the above, if the existing Small Generating Facility is a temperature sensitive unit, the maximum capacity of which varies based on ambient temperature, the increase in existing capacity will be measured based on the largest increase from the existing capacity to the proposed capacity at the same temperature, i.e., at the same temperature along the maximum megawatt electrical output versus temperature curves.

#### 32.1.4.2.1.2 — Modifications to Small Generating Facilities that are Distributed Energy Resources

For a Small Generating Facility that is an existing Distributed Energy Resource, the following modifications are not material modifications, but require an amendment to its Small Generator Interconnection Agreement to reflect the modification: (i) elimination, withdrawal or transfer of an asset within the Distributed Energy Resource facility that decreases the total capacity of the Distributed Energy Resource; or (ii) addition of a load reduction asset to the Distributed Energy Resource; and (iii) for a duration limited Distributed Energy Resource, a modification to the selected duration.

For a Small Generating Facility that is an existing Distributed Energy Resource, the following modifications are material modifications: (i) an increase in the size of the Distributed Energy Resource by the addition of a new asset in the Distributed Energy Resource or an increase in the capacity of the Distributed Energy Resource that is a material increase pursuant to

Section 32.4.1.2.1 of this Attachment Z; and (ii) modification to the technology type of an asset within the Distributed Energy Resource.

### **32.1.5 Site Control**

Documentation of site control must be submitted with the Interconnection Request. Site control may be demonstrated through:

- 32.1.5.1 Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing the Small Generating Facility;
- 32.1.5.2 An option to purchase or acquire a leasehold site for such purpose; or
- 32.1.5.3 An exclusivity or other business relationship between the Interconnection Customer and the entity having the right to sell, lease, or grant the Interconnection Customer the right to possess or occupy a site for such purpose.

### **32.1.6 Queue Position**

The ISO shall assign a Queue Position based upon the date- and time-stamp of the Interconnection Request. The Queue Position of each Interconnection Request will be used to determine the order of initiating Interconnection Studies, and the study assumptions to be used in the analyses conducted under Section 32.2 and Section 32.3 of these procedures. Provided, however, Attachment S of the ISO OATT will be used to determine the cost responsibility for any System Upgrade Facilities or System Deliverability Upgrades necessary to accommodate the interconnection, as required by Section 32.3.5.3.2 of these procedures. The ISO shall maintain a single interconnection queue that combines Interconnection Requests evaluated under these procedures and those evaluated under Attachment X to the OATT. Interconnection Requests may be studied serially or in clusters for the purpose of the system impact study or facilities study. The ISO may evaluate Small Generating Facilities moving forward in the same time



frame that contribute to Local System Upgrade Facilities to determine their *pro rata* cost responsibility for such Local System Upgrade Facilities. Small Generating Facilities evaluated in a cluster study that trigger non-Local System Upgrade Facilities must be evaluated in a Class Year Interconnection Facilities Study pursuant to Section 32.3.5.3.2 of this Attachment Z.

**32.1.7 Interconnection Requests Submitted Prior to the Effective Date of the SGIP**

Nothing in this SGIP affects an Interconnection Customer's Queue Position assigned before the effective date of this SGIP. The Parties agree to complete work on any interconnection study agreement executed prior to the effective date of this SGIP in accordance with the terms and conditions of that interconnection study agreement. Any new studies or additional work will be completed pursuant to this SGIP.