

## **32.3 Study Process**

### **32.3.1 General Provisions**

32.3.1.1 Except as otherwise provided in the SGIPs, the Section 32.3 Study Process shall be used by an Interconnection Customer proposing to interconnect its Small Generating Facility with the New York State Transmission System or Distribution System if the Small Generating Facility is no larger than 20 MW and does not meet the eligibility requirements of Section 32.2.1 or did not pass the Fast Track Process or the 10 kW Inverter Process.

32.3.1.2 The Interconnection Studies conducted under these procedures shall consist of analyses designed to identify the Interconnection Facilities and Upgrades required for the reliable interconnection of the Small Generating Facility to the New York State Transmission System or the Distribution System. These Interconnection Studies will be performed in accordance with Applicable Reliability Standards. The ISO will perform, or cause to be performed, the Interconnection Studies with input, as required, from the Connecting Transmission Owner.

32.3.1.3 The Interconnection Studies conducted under these procedures shall use the power flow, short circuit and stability data bases and underlying assumption, or the Base Case, that is being used in the Annual Transmission Baseline Assessment then in progress, or if such data bases are not available, the data bases from the last completed Annual Transmission Reliability Assessment, and updated in accordance with the rules set forth in Section 25.5.5.1 of Attachment S to the OATT to be representative of the system conditions as of the date each

Interconnection Study commences (e.g., date of the notice of commencement from the ISO for the optional feasibility study and the system impact study under these procedures or the date on which the facilities study agreement is fully executed under these procedures).

### **32.3.2 Scoping Meeting**

32.3.2.1 A scoping meeting will be held within ten Business Days after the Interconnection Request is deemed complete, or as otherwise mutually agreed to by the Parties. The ISO, the Connecting Transmission Owner, and the Interconnection Customer will bring to the meeting personnel, including system engineers and other resources as may be reasonably required to accomplish the purpose of the meeting. Before a Connecting Transmission Owner participates in a scoping meeting with its Affiliates, the ISO shall post on its OASIS an advance notice of the Connecting Transmission Owner's intent to do so.

32.3.2.2 The purpose of the scoping meeting is to discuss the Interconnection Request and review existing studies relevant to the Interconnection Request. The Parties shall further discuss whether the ISO should perform an optional feasibility study or proceed directly to a system impact study, or a facilities study, or an interconnection agreement. The Connecting Transmission Owner and Affected Transmission Owner(s), identified pursuant to Section 32.4.10 of this Attachment Z, shall be prepared to provide input regarding proposed Point(s) of Interconnection and configurations. If, within five (5) Business Days after the Scoping Meeting, the Interconnection Customer advises the ISO that it elects to proceed with an optional feasibility study, the ISO shall provide the

Interconnection Customer and the Connecting Transmission Owner, as soon as possible, a non-binding good faith estimate of the cost and timeframe to perform the study. At the Interconnection Customer's option, the ISO, Connecting Transmission Owner or the Interconnection Customer may provide input regarding alternative Point(s) of Interconnection and configurations at the Scoping Meeting to evaluate in the optional feasibility study. On the basis of the meeting, the Interconnection Customer shall designate its Point of Interconnection and one or more alternative Point(s) of Interconnection. An Interconnection Customer electing to evaluate alternative Point(s) of Interconnection must proceed through an optional feasibility study and must select the definitive Point of Interconnection for the proposed Small Generating Facility no later than the commencement of the interconnection study following the optional feasibility study.

32.3.2.3 The scoping meeting may be omitted by mutual agreement. In order to remain in consideration for interconnection, an Interconnection Customer who has requested an optional feasibility study must submit the study deposit pursuant to Section 32.3.3.2 of this Attachment Z and technical data requested by the ISO within fifteen (15) Business Days from the ISO's notice providing a good faith estimate of the cost and timeframe of the study. If the Interconnection Customer does not provide the required study deposit within fifteen (15) Business Days after the ISO's notice to the Interconnection Customer and the Connecting Transmission Owner of the good faith estimate of the cost and timeframe for completing the optional feasibility study, the Interconnection Customer will be

subject to withdrawal. If the Interconnection Customer does not provide all required technical data, the ISO shall notify the Interconnection Customer of the deficiency and the Interconnection Customer shall cure the deficiency within ten (10) Business Days of receipt of the notice, provided, however, such ability to cure technical deficiencies does not apply to failure to submit the required deposit. The ISO shall notify the Interconnection Customer and the Connecting Transmission Owner that the optional feasibility study has commenced following receipt of the required deposit and once the ISO deems the required technical data sufficient.

If the Interconnection Customer opts to forego the optional feasibility study, the Interconnection Customer shall, within five (5) Business Days after the Scoping Meeting advise the ISO that it elects not to proceed with an optional feasibility study, after which the ISO shall, as soon as practicable, provide the Interconnection Customer and the Connecting Transmission Owner, a non-binding good faith estimate of the cost and timeframe to perform the system impact study.

### **32.3.3 Optional Feasibility Study Scope and Procedures**

32.3.3.1 The optional feasibility study shall identify any potential adverse system impacts that would result from the interconnection of the Small Generating Facility.

32.3.3.2 A deposit of \$10,000 or \$30,000, depending upon the scope of analysis requested by the Interconnection Customer pursuant to Section 32.3.3.3 of this Attachment Z, must be submitted to the ISO within fifteen (15) Business Days of

the ISO's notice of the good faith estimate of the cost and timeframe to perform the study.

32.3.3.3 The optional feasibility study may consist of any of the following technical analyses as described in the study scope:

For a \$10,000 optional feasibility study deposit, Interconnection Customer may request the following limited analyses:

- (1) Conceptual breaker-level one-line diagram of existing system where project proposes to interconnect (i.e., how to integrate the Small Generating Facility into the existing system); and/or
- (2) Review of feasibility/constructability of conceptual breaker-level one-line diagram of the proposed interconnection (e.g., space for additional breaker bay in existing substation; identification of cable routing concerns inside existing substation; environmental concerns inside the substation).

For a \$30,000 optional feasibility study deposit, Interconnection Customer may request the following detailed analyses:

- (1) Development of conceptual breaker-level one-line diagram of existing NYS Transmission System or Distribution System where the Small Generating Facility proposes to interconnect (i.e., how to integrate the Small Generating Facility into the existing system);
- (2) Review of feasibility/constructability of a conceptual breaker-level one-line diagram of the proposed interconnection (e.g., space for additional breaker bay in existing substation or identification of cable routing concerns inside existing substation);

- (3) Preliminary review of local protection, communication, grounding issues associated with the proposed interconnection;
- (4) Power flow, short circuit and/or bus flow analyses; and/or
- (5) Identification of Connecting Transmission Owner Interconnection Facilities and Local System Upgrade Facilities with a non-binding good faith estimate of cost responsibility and a non-binding good faith estimated time to construct.

The scope of the optional feasibility study will be provided to the Interconnection Customer and Connecting Transmission Owner for review and comment. After the study scope is finalized, the ISO will provide the final scope to the Connecting Transmission Owner and the Interconnection Customer. The Connecting Transmission Owner shall indicate its agreement to the optional feasibility study scope by signing it and promptly returning it to the ISO, such agreement not to be unreasonably withheld.

32.3.3.4 The ISO may request additional information from the Interconnection Customer and Connecting Transmission Owner as may reasonably become necessary consistent with Good Utility Practice during the course of the optional feasibility study. Upon request from the ISO for additional information required for or related to the optional feasibility study, the Interconnection Customer and Connecting Transmission Owner shall provide such additional information in a prompt manner.

32.3.3.5 Connecting Transmission Owner and any Affecting Transmission Owners, together with the Interconnection Customer, will be provided with drafts of the

optional feasibility study report for review. Review and comments shall be provided to the ISO within fifteen (15) Business Days of receipt.

32.3.3.6 If the optional feasibility study shows no potential for adverse system impacts and the ISO, Connecting Transmission Owner and Interconnection Customer all agree no system impact study is required, the ISO shall notify the Interconnection Customer and the Connecting Transmission Owner within five (5) Business Days of the completion of the optional feasibility study that the system impact study has been waived and shall send the Interconnection Customer and the Connecting Transmission Owner a facilities study agreement, which shall include an outline of the scope of the study and a non-binding good faith estimate of the cost and timeframe to perform the facilities study. If no additional facilities are required, the ISO shall send the Interconnection Customer and Connecting Transmission Owner a draft interconnection agreement within five (5) Business Days.

32.3.3.7 If the optional feasibility study shows the potential for adverse system impacts, the review process shall proceed to the system impact study.

#### **32.3.4 System Impact Study**

32.3.4.1 The Interconnection Customer shall advise the ISO that it elects to proceed with a system impact study within five (5) Business Days after either the delivery of the final optional feasibility study report to the Interconnection Customer or the scoping meeting, if the Interconnection Customer opts to forego the optional feasibility study. As soon as practicable after receipt of such election from the Interconnection Customer, the ISO shall provide to the Interconnection

Customer and Connecting Transmission Owner a good faith estimate of the cost and timeframe for completing the system impact study.

A system impact study shall identify and detail the electric system impacts that would result if the proposed Small Generating Facility were interconnected without project modifications or electric system modifications, focusing on the adverse system impacts identified in the optional feasibility study, or to study potential impacts, including but not limited to those identified in the scoping meeting. A system impact study shall evaluate the impact of the proposed interconnection on the reliability of the electric system.

32.3.4.2 If the ISO, Connecting Transmission Owner and Interconnection

Customer mutually agree that no system impact study is required, , the ISO shall send the Interconnection Customer and the Connecting Transmission Owner a facilities study agreement (in the form of Appendix 6) as soon as practicable after (1) transmittal of the final optional feasibility study report; or (2) confirmation that the ISO, Connecting Transmission Owner and Interconnection Customer mutually agree to waive the system impact study if the Interconnection Customer elects to skip the optional feasibility study. The ISO shall include, with the facilities study agreement tendered to the Interconnection Customer, an outline of the scope of the facilities study and a non-binding good faith estimate of the cost and timeframe to perform the study.

32.3.4.3 In order to remain under consideration for interconnection, unless the system impact study is waived upon mutual agreement of the ISO, Connecting Transmission Owner and Interconnection Customer, the Interconnection



Customer must submit the required system impact study deposit set forth in Section 32.3.4.4 of this Attachment Z and the technical data requested by the ISO to the ISO within fifteen (15) Business Days of the ISO's notice of good faith estimate of the cost and timeframe to perform the system impact study.

32.3.4.4 A deposit of \$50,000 for the system impact study must be submitted by the Interconnection Customer within fifteen (15) Business Days of the ISO's notice of good faith estimate of the cost and timeframe to perform the system impact study to the Interconnection Customer. If the Interconnection Customer does not provide the required study deposit within fifteen (15) Business Days after the ISO's notice to the Interconnection Customer and the Connecting Transmission Owner of the good faith estimate of the cost and timeframe for completing the SIS, the Interconnection Customer will be subject to withdrawal. If the Interconnection Customer does not provide all required technical data, the ISO shall notify the Interconnection Customer of the deficiency and the Interconnection Customer shall cure the deficiency within ten (10) Business Days of receipt of the notice, provided, however, such ability to cure technical deficiencies does not apply to failure to submit the required deposit. The ISO shall notify the Interconnection Customer and the Connecting Transmission Owner that the system impact study has commenced following receipt of the required deposit and once the ISO deems the required technical data sufficient.

32.3.4.5 The scope of and cost responsibilities for a system impact study shall be described in the system impact study scope. The scope of the system impact study will be provided to the Interconnection Customer and Connecting

Transmission Owner for review and comment. After the study scope is finalized, the ISO will provide the final scope to the Connecting Transmission Owner and the Interconnection Customer. The Connecting Transmission Owner shall indicate its agreement to the system impact study scope by signing it and promptly returning it to the ISO, such agreement not to be unreasonably withheld. For an Interconnection Customer proposing an incremental increase in output to an existing Small Generating Facility, the total output of which does not exceed 20 MW, the system impact study scope may be narrowed upon mutual agreement among the ISO, Connecting Transmission Owner and Interconnection Customer.

32.3.4.6 The ISO may request additional information from the Interconnection Customer and Connecting Transmission Owner as may reasonably become necessary consistent with Good Utility Practice during the course of the system impact study. Upon request from the ISO for additional information required for or related to the system impact study, Interconnection Customer and Connecting Transmission Owner shall provide such additional information in a prompt manner.

32.3.4.7 Affected Systems shall participate in the system impact study and provide all information necessary to prepare the study.

32.3.4.8 Connecting Transmission Owner and any Affecting Transmission Owners, together with Interconnection Customer, will be provided drafts of the system impact study report for review. Review and comments shall be provided to the ISO within fifteen (15) Business Days of receipt.

### **32.3.5 Facilities Study**

- 32.3.5.1 If a system impact study(s) is required, once the required system impact study(s) is completed, a system impact study report shall be prepared by the ISO and transmitted to the Interconnection Customer and the Connecting Transmission Owner. As soon as practicable after transmittal of the final system impact study report, the ISO will tender a facilities study agreement to the Interconnection Customer and Connecting Transmission Owner-. If a system impact study(s) is not required, the NYISO shall provide the Interconnection Customer and the Connecting Transmission Owner with a facilities study agreement as soon as practicable after that determination. Each facilities study agreement shall include an outline of the scope of the facilities study and a non-binding good faith estimate of the cost and timeframe to perform the facilities study.
- 32.3.5.2 In order to remain under consideration for interconnection, unless the ISO, Connecting Transmission Owner and Interconnection Customer mutually agree to waive the facilities study, the Interconnection Customer must return the completed facilities study agreement within 30 Calendar Days, together with the required technical data set forth in Appendix 6 and the required deposit equal to the non-binding good faith estimate of the cost and timeframe to perform the facilities study. The Interconnection Customer, ISO and Connecting Transmission Owner shall execute the facilities study agreement no later than ten (10) Business Days after the ISO confirms receipt of the executed facilities study agreement, the study deposit and required technical data from the Interconnection

Customer. The ISO shall provide a copy of the fully executed facilities study agreement to the Interconnection Customer and Connecting Transmission Owner.

32.3.5.3 The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact study(s), as appropriate.

Connecting Transmission Owner and any Affecting Transmission Owners, together with the Interconnection Customer, will be provided with drafts of the facilities study report for review. Review and comments shall be provided to the ISO within fifteen (15) Business Days of receipt.

32.3.5.3.1 The Interconnection Customer shall be responsible for the cost of the Interconnection Facilities and Distribution Upgrades necessary to accommodate its Interconnection Request.

32.3.5.3.2 The Interconnection Customer shall be responsible for the cost of any System Upgrade Facilities determined by an Interconnection Study to be necessary to accommodate the Interconnection Request. Such Interconnection Study shall be of sufficient detail and scope to assure that this determination can be made. If any System Upgrade Facilities other than Local System Upgrade Facilities are determined to be necessary to accommodate the Interconnection Request, the Small Generating Facility shall be evaluated as a member of the next Class Year, and the Interconnection Customer's cost responsibility shall be determined in accordance with Attachment S. All other Small Generating Facilities (i.e., those for which no System Upgrade Facilities or only Local System Upgrade Facilities have been identified as necessary to accommodate the

Interconnection Request) shall complete an individual Facilities Study, if required, under these Small Generator Interconnection Procedures; provided however, a Small Generating Facility that requires no System Upgrade Facilities or only Local System Upgrade Facilities may elect to enter a Class Year Study for evaluation of its requested ERIS and elective System Upgrade Facilities, to the extent permitted by Section 25.6.1.4.1 of Attachment X to the OATT. The standard described above in this Section regarding when a Small Generating Facility must enter a Class Year will apply to Small Generating Facilities being considered for entry into Class Year 2011 and beyond. To the extent appropriate, the ISO will notify any Affected System or transmission owner prior to the determination that System Upgrade Facilities are necessary, to allow for potential input by the Affected System or transmission owner. For purposes of this section, Affected System may include the portions of the New York State Transmission System that may be potentially affected. If the Interconnection Customer elects CRIS, and its Small Generating Facility is larger than 2 MW, it will be evaluated as a member of the next Class Year to determine the Interconnection Customer's responsibility for System Deliverability Upgrades in accordance with Attachment S.

32.3.5.3.3 At any time prior to the Class Year Start Date, as specified in Section 25.5.9 of Attachment S to the OATT, the Interconnection Customer may elect to proceed under this Section 32.3.5.3.3. Pending the outcome of the Class Year cost allocation process, the Interconnection Customer can elect to proceed with the interconnection of its Small Generating Facility if in the SGIA (i) it agrees in

writing to accept the final cost allocation results determined in the Class Year in accordance with Attachment S, (ii) it agrees in writing to pay cash or post Security in accordance with Attachment S in that Class Year; and (iii) it agrees in writing to operate its Small Generating Facility within the limits of the current New York State Transmission System, as determined by the ISO, in consultation with the Connecting Transmission Owner; pursuant to Section 32.3.5.3.4 of the SGIP.

32.3.5.3.4 Upon the request and at the expense of the Interconnection Customer, the ISO, in consultation with the Connecting Transmission Owner, will perform operating studies on a timely basis to determine the extent to which the Interconnection Customer's Small Generating Facility can be operated prior to the installation of any System Upgrade Facilities or System Deliverability Upgrades required for that Small Generating Facility. Such tests shall be consistent with Applicable Reliability Standards and Good Utility Practice. To the extent appropriate, the ISO will notify any Affected System or transmission owner prior to the determination to allow for potential input by the Affected System or transmission owner. For purposes of this section, Affected System may include the portions of the New York State Transmission System that may be potentially affected. The ISO and Connecting Transmission Owner shall promptly notify the Interconnection Customer of the results of these studies and shall permit the Small Generating Facility to operate consistent with the results of such studies.

32.3.5.4 Design for any required Interconnection Facilities and/or Upgrades shall be performed under the facilities study agreement, these procedures and, if

applicable, Attachment S of the ISO OATT. The ISO may contract with consultants to perform activities required under the facilities study agreement. The Parties may agree to allow the Interconnection Customer to separately arrange for the design of some of the Interconnection Facilities. In such cases, facilities design will be reviewed and/or modified prior to acceptance by the Connecting Transmission Owner, under the provisions of the facilities study agreement. If the Parties agree to separately arrange for design and construction, and provided security and confidentiality requirements can be met, the ISO and/or Connecting Transmission Owner shall make sufficient information available to the Interconnection Customer in accordance with confidentiality and critical infrastructure requirements to permit the Interconnection Customer to obtain an independent design and cost estimate for any necessary facilities.

32.3.5.5 A deposit of the good faith estimated costs for the facilities study will be required from the Interconnection Customer.

32.3.5.6 The scope of and cost responsibilities for the facilities study are described in the facilities study agreement in the form of Appendix 6. ISO may request additional information from the Interconnection Customer and Connecting Transmission Owner as may reasonably become necessary consistent with Good Utility Practice during the course of the facilities study. Upon request from the ISO for additional information required for or related to the facilities study, the Interconnection Customer and Connecting Transmission Owner shall provide such additional information in a prompt manner.

32.3.5.7 Acceptance of Cost Allocation and Posting of Security

32.3.5.7.1 Following the issuance of the final facilities study report under these procedures, the Interconnection Customer shall provide notice to the ISO, in writing and via electronic mail, within 30 Calendar Days whether it shall accept its Small Generating Facility cost allocation for the As soon as practicable upon completion of the facilities study, and with the agreement of the Interconnection Customer to pay for Interconnection Facilities and System Upgrade Facilities, if any, identified in the facilities study report, and signify its willingness to pay the Connecting Transmission Owner for the Interconnection Customer's its share of the System Upgrade Facilities. Within five (5) Business Days of the Interconnection Customer's submission of a notice accepting its Small Generating Facility cost allocation for the System Upgrades Facilities in accordance with this Section 32.3.5.7.1, the Interconnection Customer must pay cash or post security in accordance with these rules for the full amount of the Small Generating Facility cost allocation. Failure to accept the Small Generating Facility cost allocation or to pay cash or post security in accordance with these rules shall result in withdrawal of the Small Generator Interconnection Request from the ISO's Interconnection Queue.

32.3.5.7.2 If the Interconnection Customer elects to post security, the Interconnection Customer (i) shall deliver to the Connecting Transmission Owner a signed security agreement, by and between the Interconnection Customer and the Connecting Transmission Owner in its sole discretion, securing the performance of the Interconnection Customer's cost allocation for the System Upgrade Facilities identified in the final facilities study report and (ii) shall



provide the Connecting Transmission Owner with an irrevocable, transferrable standby letter of credit in the form required by the aforementioned agreement in the amount of the cost estimate for the System Upgrade Facilities, as documented in the final facilities study report, in accordance with Section 32.3.5.7.1 of this Attachment Z. The letter of credit must be issued by a financial institution reasonably acceptable to the Connecting Transmission Owner and must specify a reasonable expiration date. Upon successful acceptance by the Connecting Transmission Owner, turnover to the Connecting Transmission Owner shall be reduced on a dollar-for-dollar basis for payments made to the Connecting Transmission Owner for the purpose of performing engineering design, constructing, procuring, and installing of such System Upgrade Facilities.

32.3.5.7.3 Forfeiture of Security. The security that the Interconnection Customer provides the Connecting Transmission Owner in accordance with Section 32.3.5.7 of this Attachment Z shall be irrevocable and shall be subject to forfeiture if the Interconnection Customer subsequently terminates or abandons development of the Small Generating Facility. Any security provided by the Interconnection Customer to the Connecting Transmission Owner shall be subject to forfeiture to the extent necessary to defray the cost of: (1) System Upgrade Facilities required by other Small Generating Facilities for which the Interconnection Customer's Small Generating Facility and System Upgrade Facilities are included in their base cases; (2) System Upgrade Facilities and System Deliverability Upgrade Facilities required for projects for which the Interconnection Customer's Small Generating Facility and System Upgrade

Facilities were included in their Class Year Interconnection Facilities Study and/or Additional SDU Study existing system representations; (3) Network Upgrade Facilities required for other Transmission Developers for which the Transmission Project interconnection studies included the Interconnection Customer's Small Generating Facility and System Upgrade Facilities in their base cases; and (4) Network Upgrades required for other Eligible Customers whose Load interconnection studies included the Interconnection Customer's Small Generating Facility and System Upgrade Facilities in their base cases, as applicable. If Interconnection Customer's security is subject to forfeiture to defray the costs of an affected upgrade pursuant to this Section 32.3.5.7.3 and the security is not in a form that can be readily drawn on by the Connecting Transmission Owner to defray the costs of the affected upgrade, Interconnection Customer shall negotiate in good faith with the Connecting Transmission Owner to replace the security with cash or an alternative form of security that can be readily drawn on by the Connecting Transmission Owner up to the amount required to satisfy Interconnection Customer's security obligations under this Agreement, including defraying the costs of the affected upgrade. Connecting Transmission Owner shall only be responsible for using Interconnection Customer's security to defray the costs of an affected upgrade to the extent the Interconnection Customer has provided cash or security in a form that the Connecting Transmission Owner can readily draw on to defray such costs.

32.3.5.7.4 As soon as practicable after the Interconnection Customer accepts its Small Generating Facility cost allocation for the System Upgrade Facilities

identified in the final facilities study report and posts security in accordance with this Section 32.3.5.7, the ISO shall provide the Interconnection Customer and the Connecting Transmission Owner a draft interconnection agreement in accordance with Section 32.4.8 of Attachment Z.

32.3.5.8 With the completed facilities study agreement, the Interconnection Customer shall submit to the ISO an updated proposed In-Service Date, an updated proposed Initial Synchronization Date and an updated proposed Commercial Operation Date every ninety (90) Calendar Days.