WESTFIELD GAS AND ELECTRIC

Interconnection Standards and Procedures for Distributed Generation

Revision: 6.40

Revised: January 25, 2018

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Interconnection Application Process

1. Introduction

1.1. Applicability

This document ("Interconnection Standard") describes the process and requirements for an Interconnecting Customer to connect a power-generating facility to the Department's Electric Power System ("Department EPS"), including discussion of technical and operating requirements, metering and billing options, and other matters, except as provided under the applicable ISO-NE tariff and/or under the Qualifying Facility regulations in 220 CMR 8.04.

The procedure for momentary paralleling to the Department EPS with back-up generation is described within Section 4 Interconnection Requirements.

If the Facility will always be isolated from the Department's EPS, (i.e., it will never operate in parallel to the Department's EPS), then this Interconnection Standard does not apply.

1.2. Definitions

The following words and terms shall be understood to have the following meanings when used in this Interconnection Standard:

Affected System: Any neighboring EPS not under the control of the Department (i.e., a municipal electric light Department or other regulated utility).

Affiliate: A person or entity controlling, controlled by or under common control with a Party.

Anti-Islanding: Describes the ability of a Facility to avoid unintentional islanding through some form of active control technique.

Application: The notice (which will serve as the Notice of Intent to Interconnect under 220 C.M.R. §§ 8.0 et seq. when required) provided by the Interconnecting Customer to the Department in the form shown in Exhibits A and B, which initiates the interconnection process.

Area EPS: The Department EPS. This term is used in the Institute of Electrical and Electronics Engineers (IEEE) Standard 1547, "IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems" ("IEEE Standard 1547").

Bi-Directional Metering: shall mean a distribution class meter with multiple registers installed. One set of registers will record energy flows from the Department to the Facility during periods when the Facility is receiving energy from the Department (the other register will record no flow during these periods) and a second set of registers will record energy flows from the Facility to the Department during periods when the Facility is providing energy to the Department (the other register will record no flow during these periods). Each set of registers will record total flows as well as flows during hourly intervals.

Class I Metering Facility: shall mean a plant or equipment that is used to produce, manufacture, or otherwise generate electricity and that is not a transmission facility and that has a design capacity of 60 kilowatts or less.

Class II Metering Facility: shall mean an Agricultural Metering Facility, Solar Metering Facility, or Wind Metering Facility with a generating capacity of more than 60 kilowatts but less than or equal to one megawatt; provided, however, that a Class II Metering Facility owned or operated by a Customer which is a municipality or other governmental entity may have a generating capacity of more than 60 kilowatts but less than or equal to one megawatt per unit.

Class III Metering Facility: shall mean an Agricultural Metering Facility, Solar Metering Facility, or Wind Metering Facility with a generating capacity of more than one megawatt but less than or equal to two megawatts; provided, however, that a Class III Metering Facility owned or operated by a Customer which is a municipality or other governmental entity may have a generating capacity of

more than one megawatt but less than or equal to two megawatts per unit.

Department: City of Westfield Gas & Electric Light Department.

Department EPS: The electric power system owned, controlled or operated by the Department used to provide distribution service to its Customers.

Customer: Department's retail customer; host site or premises, may be the same as Interconnecting Customer.

Department: The Massachusetts Department of Public Utilities.

Detailed Study: The final phase of engineering study, if necessary, conducted by the Department to determine substantial System Modifications to its EPS, resulting in project cost estimates for such modifications that will be required to provide the requested interconnection service.

DG: Distributed Generation.

DR: The Facility. This term is used in IEEE Standard 1547.

Expedited Process: As described in Section 3.2, process steps for Listed Facilities from initial application to final written authorization, using a set of technical screens to determine grid impact.

Facility: A source of electricity owned and/or operated by the Interconnecting Customer that is located on the Customer's side of the PCC, and all facilities ancillary and appurtenant thereto, including interconnection equipment, which the Interconnecting Customer requests to interconnect to the Department EPS.

FERC: Federal Energy Regulatory Commission.

Good Utility Practice: Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

Impact Study: The engineering study conducted by the Department under the Standard Process to determine the scope of the required modifications to its EPS and/or the Facility to provide the requested interconnection service.

In-Service Date: The date on which the Facility and System Modifications (if applicable) are complete and ready for service, even if the Facility is not placed in service on or by that date.

Interconnecting Customer: Entity that owns and/or operates the Facility interconnected to the Department EPS, with legal authority to enter into agreements regarding the construction or operation of the Facility.[1]

Interconnection Service Agreement: An agreement for interconnection service, the form of which is provided in Section 6, between the Interconnecting Customer and the Department. The agreement also includes any amendments or supplements thereto entered into by the Interconnecting Customer and the Department.

Islanding: A situation where electrical power remains in a portion of an electrical power system when the Department's transmission or distribution system has ceased providing power for whatever reason (emergency conditions, maintenance, etc.) Islanding may be intentional, such as when certain

[1] *An entity which owns the Facility interconnected to the Department EPS solely as part of a financing arrangement, which could include the acquisition of the tax credits related to the Facility, but is neither the Customer nor the operator of that Facility, shall not be considered the Interconnecting Customer hereunder.*

segregated loads in a Customer's premises are provided power by a Facility after being isolated from the Department EPS after a power failure. Unintentional Islanding, especially past the PCC, is to be strictly avoided.

ISO-New England, Inc. ("ISO-NE"): The Independent System Operator established in accordance with the NEPOOL Agreement and applicable FERC approvals, which is responsible for managing the bulk power generation and transmission systems in New England.

Isolated: The state of operating the Facility when electrically disconnected from the Department EPS on the Interconnecting Customer's side of the PCC.

Local EPS: The customer premises within which are contained the Facility. This term is used in the IEEE Standard 1547.

Listed: A Facility that has successfully passed all pertinent tests to conform with IEEE 1547.1.

Metering Points: For meters that do not use instrument transformers, the points at which the billing meters are connected. For meters that use instrument transformers, the points at which the instrument transformers are connected.

NEPOOL: New England Power Pool.

Network Distribution System (Area or Spot): Electrical service from an EPS consisting of one or more primary circuits from one or more substations or transmission supply points arranged such that they collectively feed secondary circuits serving one (a spot network) or more (an area network) Interconnecting Customers.

Non-Islanding: Describes the ability of a Facility to avoid unintentional islanding through the operation of its interconnection equipment.

NPCC: Northeast Power Coordinating Council. [i]

On-Site Generating Facility: A class of Interconnecting Customer-owned generating Facilities with peak capacity of 60 kW or less, as defined in 220 C.M.R. § 8.00.

Parallel: The state of operating the Facility when electrically connected to the Department EPS (sometimes known as grid-parallel).

Parties: The Department and the Interconnecting Customer.

Point of Common Coupling (PCC): The point where the Interconnecting Customer's local electric power system connects to the Department EPS, such as the electric power revenue meter or premises service transformer. See the Department for the location at a particular Interconnecting Customer site.

Point of Delivery: A point on the Department EPS where the Interconnecting Customer makes capacity and energy available to the Department. The Point of Delivery shall be specified in the Interconnection Service Agreement.

Point of Receipt: A point on the Department EPS where the Department delivers capacity and energy to the Interconnecting Customer. The Point of Receipt shall be specified in the Interconnection Service Agreement.

Production Meter: A second distribution class meter installed to measure the quantity of energy produced by the Customer's energy generating equipment.

Qualifying Facility: A generation Facility that has received certification as a Qualifying Facility from the FERC in accordance with the Federal Power Act, as amended by the Public Utility Regulatory Policies Act of 1978, as defined in 220 C.M.R. § 11.04.

Radial Distribution Circuit: Electrical service from an EPS consisting of one primary circuit extending from a single substation or transmission supply point arranged such that the primary circuit serves Interconnecting Customers in a particular local area.

Screen(s): Criteria by which the Department will determine if a proposed Facility's installation will adversely impact the Department EPS in the Simplified and Expedited Processes as set forth in Section 3.

Simplified Process: As described in Section 3.1, process steps from initial application to final written authorization for certain inverter-based Facilities of limited scale and minimal apparent grid impact.

Standard Process: As described in Section 3.3, process steps from initial application to final written authorization for Facilities that do not qualify for Simplified or Expedited treatment.

Supplemental Analysis: Additional engineering study to evaluate the potential impact of the Facility on the Department EPS so as to determine any requirements for processing the application through the Expedited Process.

System Modification: Modifications or additions to distribution-related Department facilities that are integrated with the Department EPS for the benefit of the Interconnecting Customer.

Unintentional Islanding: A situation where the electrical power from the Facility continues to supply a portion of the Department EPS past the PCC when the Department's transmission or distribution system has ceased providing power for whatever reason (emergency conditions, maintenance, etc.).

Witness Test: The Department's right to witness the commissioning testing. Commissioning testing is defined in IEEE Standard 1547.

1.3. Forms and Agreements.

The following documents for the interconnection process are included as Exhibits:

(a) Interconnection Service Agreement for Expedited and Standard Process (Section 13) referencing Attachments 1 – 6 (Attachments 1 – 5 to be developed and included as appropriate for each specific Interconnection Service Agreement) as follows:

- Attachment 1: Description of Facilities, including demarcation of PCC
- Attachment 2: Description of System Modifications
- Attachment 3: Costs of System Modifications and Payment Terms
- Attachment 4: Special Operating Requirements, if any
- Attachment 5: Section 19 - Reimbursement Policy

(b) Application forms:

i. **Simplified Interconnection** (Facilities meeting the requirements of Section 3.1) application form and service agreement (Section 12)

ii. **Expedited and Standard Interconnection** application form and service agreement (Section 13)

iii. **Supplemental Analysis Agreement** for those projects which have failed one or more screens in the Expedited Process (Section 14)

iv. **Impact Study Agreement** under the Standard Process (Section 15)

v. **Detailed Study Agreement** for the more detailed study under the Standard Process which requires substantial System Modifications (Section16)

2. Basic Understandings

Interconnecting Customer intends to install a Facility on the Interconnecting Customer's side of the PCC that will be connected electrically to the Department EPS and operate in parallel, synchronized with the voltage and frequency maintained by the Department during all operating conditions. It is the responsibility of the Interconnecting Customer to design, procure, install, operate, and maintain all necessary equipment on its property for connection to the Department EPS. The Interconnecting Customer and the Department shall enter into an Interconnection Service Agreement to provide for parallel operation of an Interconnecting Customer's Facility with Department EPS. A form of this agreement is attached as Section 17 to this Interconnection Standard. All energy produced by the Facility must be purchased by the Westfield Gas & Electric Light Department (WG&E). Massachusetts General Laws prohibit a third-party from selling energy within the service territory of a municipal light department, such as WG&E. A third-party cannot maintain ownership or lease distributed generation equipment to a Customer of WG&E, instead WG&E's Customer must own the equipment outright. Any sale of energy to a Customer must be between WG&E and the Customer.

The interconnection of the Facility with the Department EPS must be reviewed for potential impact on the Department EPS under the process described in Section 3 and meet the technical requirements in Section 4, and must be operated as described under Section 6 in order to meet these requirements, an upgrade or other modifications to the Department EPS may be necessary. Subject to the requirements contained in this Interconnection Standard, the Department or its Affiliate shall modify the Department EPS accordingly. Unless otherwise specified, the Department will build and own, as part of the Department EPS, all facilities necessary to interconnect the Department EPS with the Facility up to and including terminations at the PCC. The Interconnecting Customer shall pay all System Modification costs as set forth in Section 5.

The Interconnecting Customer should consult the Department before designing, purchasing and installing any generation equipment, in order to verify the nominal utilization voltages, frequency, and phase characteristics of the service to be supplied, the capacity available, and the suitability of the proposed equipment for operation at the intended location. Attempting to operate a generator at other than its nameplate characteristics may result in unsatisfactory performance or, in certain instances, injury to personnel and/or damage to equipment. The Interconnecting Customer will be responsible for ascertaining from the Department, and the Department will diligently cooperate in providing, the service characteristics of the Department EPS at the proposed PCC. The Department will in no way be responsible for damages sustained as a result of the Interconnecting Customer's failure to ascertain the service characteristics at the proposed PCC.

The Facility should operate in such a manner that does not compromise or conflict with, the safety or reliability of the Department EPS. The Interconnecting Customer should design its equipment in such a manner that faults or other disturbances on the Department EPS do not cause damage to the Interconnecting Customer's equipment.

Authorization to interconnect will be provided once the Interconnecting Customer has met all terms of the interconnection process as outlined below.

This Interconnection Standard does not cover general distribution service needed to serve the Interconnecting Customer. Please refer to the Department's Terms and Conditions for Distribution Service. This Interconnection Standard does not cover the use of the distribution system to export power, or the purchase of excess power unless covered under 220 C.M.R. §§ 8.00 et seq.

3. Process Overview

There are three basic paths for interconnection of the Interconnecting Customer's Facility in Westfield, Massachusetts. They are described below and detailed in Figures 1 and 2 with their accompanying notes. Tables 1 and 2, respectively, describe the timelines and fees for these paths. Unless otherwise noted, all times in the Interconnection Standard reference Department business days under normal work conditions.

Simplified – This is for Listed inverter-based Facilities with a power rating of 10 kW or less single phase or 25 kW or less three-phase depending on the service configuration, and located on radial EPSs under certain conditions. A Listed inverter-based Facility with a power rating of 15 kW or less single phase under certain conditions would also be eligible.

Expedited – This is for Listed Facilities that pass certain pre-specified screens on a radial EPS.

Standard – This is for all facilities not qualifying for either the Simplified or Expedited interconnection processes on radial EPSs, and for all Facilities on area network EPSs.

All proposed new sources of electric power without respect to generator ownership, dispatch control, or prime mover that plan to operate in parallel with the Department EPS must submit a completed application to the Department with which it wishes to interconnect. The application will be acknowledged by the Department, and the Interconnecting Customer will be notified of the application's completeness. Interconnecting Customers who are not likely to qualify for Simplified or Expedited Process may opt to go directly into the Standard Process path. Interconnecting Customers proposing to interconnect on area networks will also go directly to the Standard Process. All other Interconnecting Customers must proceed through a series of screens to determine their ultimate interconnection path. (Interconnecting Customers not sure whether a particular location is on a radial circuit or area network should check with the Department serving the proposed Facility location prior to filing and the Department will verify the circuit type upon filing.)

If the Interconnecting Customer has not yet selected the generation equipment, the Interconnecting Customer may submit an interconnection application to the Department with generator data for up to three different suppliers for review and acceptance for interconnection by the Department. Upon completion of the initial review of such an application, Department may increase the cost to screen each option submitted and, if an increase is warranted, Department will notify the applicant in writing of the Department's additional cost for reviewing all options submitted by the applicant. Interconnecting Customer's application will be on hold until applicant responds with written authorization to either proceed with the original application submittal for the additional quoted cost or to proceed with reviewing only the "worst case" option at no additional cost for which the Department will provide "worst case" interconnection requirements and associated costs that apply to all the generators included in the application. For the multiple generator review, the Department will screen each generator and provide the Interconnecting Customer with the interconnection requirements and associated cost for interconnecting each generator included in the application. Prior to the Department preparing a final Interconnection Agreement, the Interconnecting Customer will provide the Department written confirmation of which generator the Interconnecting Customer will install at the Interconnecting Customer's Facility and, if the "worst case" option was not selected by the applicant, the interconnection requirements previously determined for that specific generator will be included in the final Interconnection Agreement.

3.1. Simplified Process

Interconnecting Customers using Listed single-phase inverter-based Facilities with power ratings of 10 kW or less at locations receiving single-phase service from a single-phase transformer, or using Listed three-phase inverter-based Facilities with power ratings of 25 kW or less at locations receiving three-phase service from a three-phase transformer configuration, and requesting an interconnection on radial EPSs where the aggregate Facility capacity on the circuit is less than 7.5% of circuit annual average load qualify for Simplified interconnection. This is the fastest and least costly interconnection path. There is also a Simplified interconnection path for Listed single-phase inverter-based Facilities

with power ratings of 15 kW or less requesting an interconnection on networks when the aggregate Facility capacity is less than one-fifteenth of the Customer's minimum load.

The Simplified Process is as follows:

(a) Application process:

i. Interconnecting Customer submits a Simplified Interconnection application filled out properly and completely (Section 12).

ii. Department acknowledges to the Interconnecting Customer receipt of the application within five (5) business days of receipt.

iii. Department evaluates the application for completeness and notifies the Interconnecting Customer within ten (10) business days of receipt that the application is or is not complete and, if not, advises what is missing.

(b) Department verifies Facility equipment passes screens 1, 2, and 3 in Figure 1 if a radial EPS, or the screens in Figure 2 if a network EPS.

(c) If approved, the Department signs the application approval line and sends to the Interconnecting Customer. In certain rare circumstances, the Department may require the Interconnecting Customer to pay for minor System Modifications. If so, a description of work and an estimate will be sent back to the Interconnecting Customer for approval. The Interconnecting Customer would then approve via a signature and payment for the minor System Modifications. If the Interconnecting Customer approves, the Department performs the System Modifications. Then, the Department signs the application approval line and sends to the Interconnecting Customer.

(d) Upon receipt of signed application, the Interconnecting Customer installs the Facility. Then the Interconnecting Customer arranges for inspection of the completed installation by the local electrical wiring inspector, or other authority having jurisdiction, and this person signs the Certificate of Completion. If the Facility was installed by an electrical contractor, this person also fills out the Certificate of Completion.

(e) The Interconnecting Customer returns Certificate of Completion to the Department.

(f) Following receipt of the Certificate of Completion, the Department may inspect the Facility for compliance with standards by arranging for a Witness Test. The Interconnecting Customer has no right to operate in parallel until a Witness Test has been performed or has been previously waived on the Application Form. The Department is obligated to complete this Witness Test with receipt of the Certificate of Completion.

(g) Assuming the wiring inspection and/or Witness Test is satisfactory, the Department notifies the Interconnecting Customer in writing that interconnection is authorized. If the Witness Test is not satisfactory, the Department has the right to disconnect the Facility, and will provide information to the Interconnecting Customer describing clearly what is required for approval.

If the Interconnecting Customer does not substantially complete construction within 12 months after receiving approval from the Department, the Department will require the Interconnecting Customer to reapply for interconnection.

3.2. Expedited Process

Other Interconnecting Customers not qualifying for the Simplified Process or not in the Standard Process must pass a series of screens before qualifying for Expedited interconnection. Depending on whether one or more screens are passed, additional steps may be required.

The Expedited Process is as follows:

(a) Application process:

i. Interconnecting Customer submits an Expedited/Standard application filled out properly and completely (Section 13).

ii. Department acknowledges to the Interconnecting Customer receipt of the application within five (5) business days of receipt.

iii. Department evaluates the application for completeness and notifies the Interconnecting Customer within ten (10) business days of receipt that the application is or is not complete and, if not, advises what is missing.

(b) Department then conducts an initial review which includes applying the screening methodology (Screens 1 through 8 in Figure 1).

(c) The Department reserves the right to conduct internal studies if deemed necessary, such as but not limited to: protection review, aggregate harmonics analysis review, aggregate power factor review and voltage regulation review. Likewise, when the proposed interconnection may result in reversed load flow through the Department's load tap changing transformer(s), line voltage regulator(s), control modifications necessary to mitigate the effects may be made to these devices by the Department at the Interconnecting Customer's expense or the Facility may be required to limit its output so reverse load flow cannot occur or to provide reverse power relaying that trips the Facility.

As part of the Expedited Process, the Department will assess whether any System Modifications are required for interconnection, even if the project passes all of the applicable Screens. If the needed modifications are minor, that is, the requirement can be determined within the time allotted through the application fee and any internal studies, then the modification requirements, reasoning, and costs for these minor modifications will be identified and included in the executable Interconnection Service Agreement. If the requirements cannot be determined within the time and cost allotted in the initial review and any internal studies, the Department may require that the project undergo additional review to determine those requirements.

If after this review, the Department still cannot determine the requirements, the Department will document the reasons why and will meet with the Interconnecting Customer to determine how to move the process forward to the Parties' mutual satisfaction. In all cases, the Interconnecting Customer will pay for the cost of modifications as discussed in Section 5.

(d) Assuming all applicable Screens are passed, Department sends the Interconnecting Customer an executable Interconnection Service Agreement and a quote for any required System Modifications or reasonable Witness Test costs.

(e) If one or more Screens are not passed, the Department will provide a Supplemental Analysis Agreement. If the Interconnecting Customer executes the agreement, the Department will conduct the review. If the Supplemental Analysis determines the requirements for processing the application through the Expedited Process including any System Modifications, then the modification requirements, reasoning, and costs for these modifications as defined in Section 5 will be identified and included in an executable Interconnection Service Agreement sent to the Interconnecting Customer for execution. If the Supplemental Analysis does not determine the requirements, it will include a proposed Impact Study Agreement as part of the Standard Process which will include an estimate of the cost of the study. Even if a proposed project initially fails a particular Screen in the Expedited Process, if Supplemental Analysis shows that it can return to the Expedited Process then it will do so.

(f) Interconnecting Customer returns the signed Interconnection Service Agreement which is then executed by the Department.

(g) Interconnecting Customer completes installation and, upon receipt of payment, the Department completes System Modifications, if required.

(h) Department inspects completed installation for compliance with standards and attends Witness Test, if required.

(i) Interconnecting Customer sends Certificate of Completion to Department.

(j) Assuming inspection is satisfactory, Department notifies Interconnecting Customer in writing that interconnection is authorized.

3.3. Standard Process

The Standard Process has the longest maximum time period and highest potential costs. There are three ways to enter the Standard Process:

(a) Interconnecting Customers may choose to proceed immediately to the Standard Process. Application process:

i. Interconnecting Customer submits an Expedited/Standard Application filled out properly and completely (Section 13).

ii. Department acknowledges to the Interconnecting Customer receipt of the application within five (5) business days.

iii. Department evaluates the application for completeness and notifies the Interconnecting Customer within ten (10) business days of receipt that the application is or is not complete and, if not, advises what is missing.

(b) Based upon the results of the initial and Supplemental Analysis, Interconnecting Customers may be required to enter the Standard Process.

(c) Based on the results of the Screens in Figure 2 for networks, Interconnecting Customers may be required to enter the Standard Process.

The Standard Process is as follows:

(a) The Department will conduct an initial review that includes a scoping meeting/discussion with the Interconnecting Customer (if necessary) to review the application. At the scoping meeting the Department will provide pertinent information such as:

- The available fault current at the proposed location;
- The existing peak loading on the lines in the general vicinity of the Facility;
- The configuration of the distribution lines.

(b) Department provides an Impact Study Agreement, including a cost estimate for the study. Where there are other potentially Affected Systems, and no single Party is in a position to prepare an Impact Study covering all potentially Affected Systems, the Department will coordinate but not be responsible for the timing of any studies required to determine the impact of the interconnection request on other potentially Affected Systems. The Interconnecting Customer will be directly responsible to the potentially Affected System operators for all costs of any additional studies required to evaluate the impact of the interconnection on the potentially Affected Systems. The timelines in Table 1 will be affected if ISO-NE determines that a system impact study is required. This will occur if the Interconnecting Customer's Facility is greater than 5 MW and may occur if the Interconnecting Customer's Facility is greater than 1 MW.

(c) Once the Interconnecting Customer executes the Impact Study Agreement and pays pursuant to the terms thereof, the Department will conduct the Impact Study.

(d) If the Department determines, in accordance with Good Utility Practice, that the System Modifications to the Department EPS are not substantial, the Impact Study will determine

the scope and cost of the modifications as defined in Section 5. If the Department determines, in accordance with Good Utility Practice, that the System Modifications to the Department EPS are substantial, the Impact Study will produce an estimate for the modification costs and a Detailed Study Agreement and cost for Interconnecting Customer's approval.

(e) Once the Interconnecting Customer executes the Detailed Study Agreement and pays pursuant to the terms thereof, the Department will conduct the Detailed Study.

(f) Upon completion of any necessary studies, the Department shall send the Interconnecting Customer an executable Interconnection Service Agreement including a quote for any required System Modifications and reasonable Witness Test costs.

(g) Interconnecting Customer returns signed Interconnection Service Agreement.

(h) Interconnecting Customer completes installation and Department completes System Modifications, if required.

(i) Department inspects completed installation for compliance with requirements and attends Witness Test, if required.

(j) Interconnecting Customer sends Certificate of Completion to Department.

(k) Assuming inspection is satisfactory, Department notifies Interconnecting Customer in writing that interconnection is authorized.

3.4. Time Frames

Unless otherwise noted, all days in the Interconnection Standard reference Department business days under normal work conditions.

Table 1 lays out the maximum timeframes allowed under the Simplified, Expedited, and Standard Review processes. The maximum time allowed for the Department to execute the entire Simplified Process is 15 days. The maximum time allowed for the Department to execute the entire Expedited Process on a radial system is 45 days where no Supplemental Analysis is needed and 85 days where it is needed. The maximum time allowed for the Department to execute the entire Standard Process is 130 days for the Standard Review Process if the Customer goes directly to Standard Review and 165 days if the Customer goes from the Expedited Process into Standard Review. For Customers qualifying for the Simplified Process on a spot network, the maximum time is 40 days if load data is available and 100 days if it is not.

The Department clock is stopped when awaiting information from Customers. Any delays caused by Customer will interrupt the applicable clock. Moreover, if an Interconnecting Customer fails to act expeditiously to continue the interconnection process or delays the process by failing to provide necessary information within the longer of 15 days or half the time allotted to the Department to perform a given step, or as extended by mutual agreement, then the Department may terminate the application and the Interconnecting Customer must re-apply. However, the Department will be required to retain the work previously performed in order to reduce the initial and Supplemental Analysis costs incurred for a period of no less than 1 year.

If the Interconnecting Customer does not initiate construction within twelve (12) months of signing the Interconnection Agreement, the Department may require the customer to provide evidence that the project is moving toward construction. In the event that the Customer cannot provide such evidence, the Department reserves the right to require additional study or require the Customer to reapply for interconnection. Situations that could trigger enforcement of this time limit are: (1) material changes on the distribution circuits (e.g. load changes, circuit reconfiguration) or (2) a second application for interconnection received by the Department on a circuit from the same substation. The same rights of the Department to require the customer to reapply for interconnection pertains if the interconnecting customer, after initiating construction, does not complete construction within twenty-four months. Notwithstanding these maximum time frames, the Department shall endeavor to meet

the Customer's needs.

3.5. Fee Schedules

Table 2 lays out the fees required for Interconnecting Customers to apply for interconnection. There are no application fees; however, the interconnecting Customer will pay for any and all costs associated with processing the application, conducting the Impact and Facility Studies, plus the actual cost as defined in Section 5 of any required System Modifications.

Figure 1 – Schematic of DG Interconnection Process

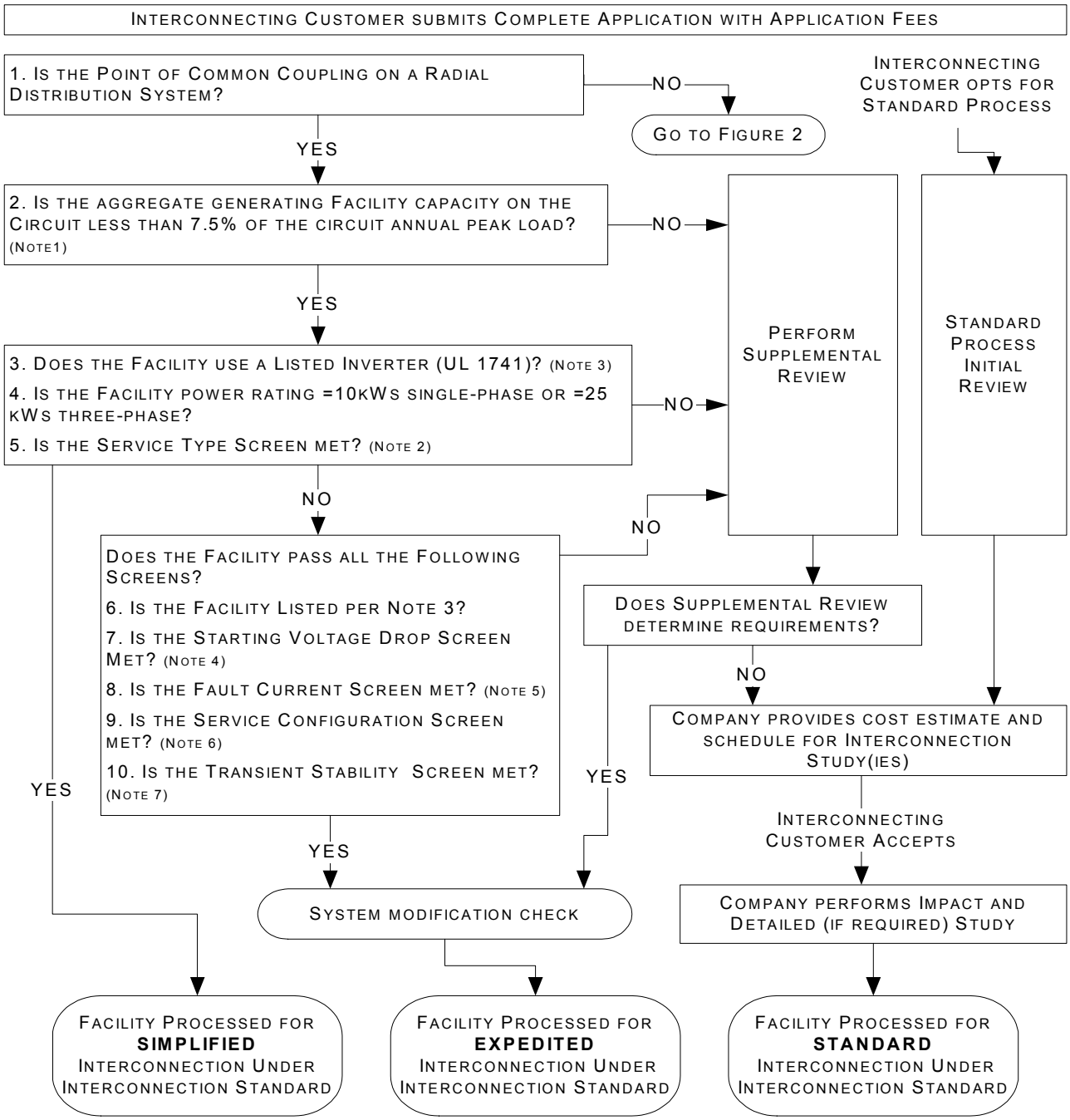
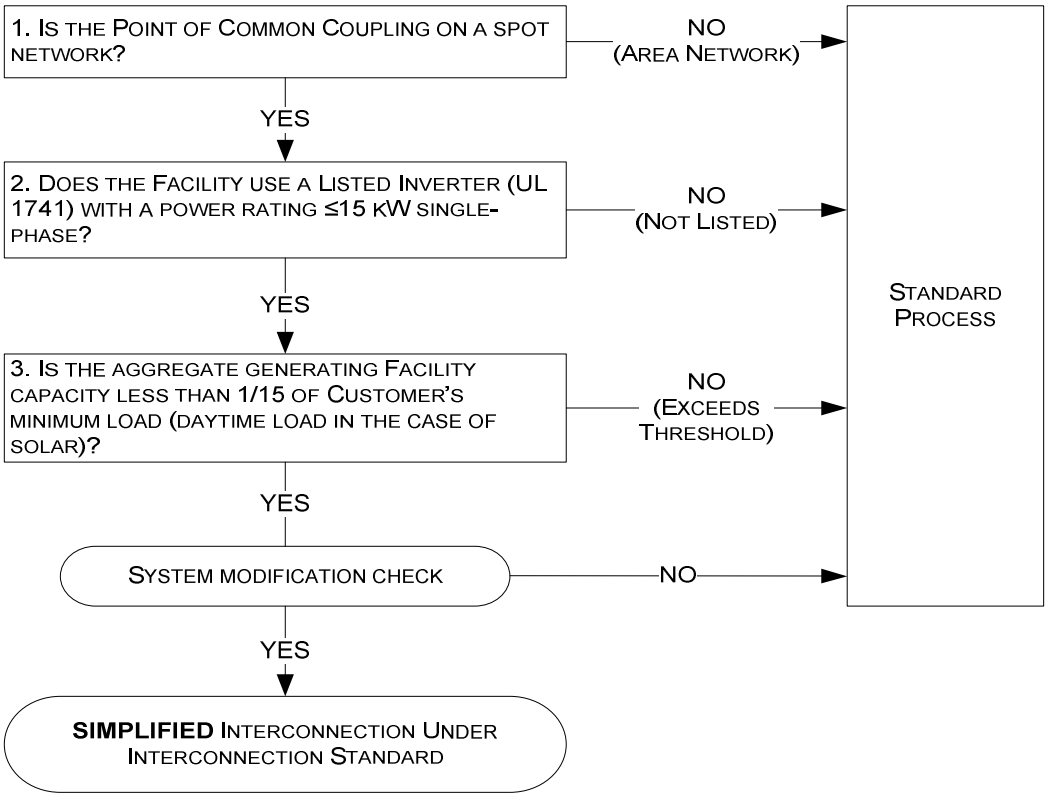


Figure 2 – Simplified Interconnection to Networks



Explanatory Notes to Accompany Figure 1

Note 1. On a typical radial distribution EPS circuit ("feeder") the average annual load is measured at the substation circuit breaker, which corresponds to the supply point of the circuit. A circuit may also be supplied from a tap on a higher-voltage line, sometimes called a subtransmission line. On more complex radial EPSs, where bidirectional power flow is possible due to alternative circuit supply options ("loop service"), the normal supply point is the loop tap.

Note 2. This screen includes a review of the type of electrical service provided to the Interconnection Customer, including the service transformer configuration and service type to limit the potential for creating unacceptable voltage imbalance, over-voltage or under-voltage conditions, or service equipment overloads on the Department EPS due to a mismatch between the size and phasing of the energy source, the service loads fed from the service transformer(s), and the service equipment ratings.

To be eligible for the Simplified Process, a Listed inverter-based Facility must be either (1) a single-phase unit on a customer's local EPS receiving single-phase secondary service at the PCC from a single-phase service transformer, or (2) a three-phase unit on a customer's local EPS receiving three-phase secondary service at the PCC from a three-phase transformer configuration.

Note 3. A Listed Facility has successfully passed all pertinent tests to conform with IEEE Standard 1547. IEEE Standard 1547 includes design specifications, operational requirements, and a list of tests that are required for Facilities. IEEE Standard 1547.1 describes how to conduct tests to show compliance with provisions of IEEE Standard 1547. To meet Screen 3 or 4, Interconnecting Customers must provide information or documentation that demonstrates how the Facility is in compliance with the IEEE Standard 1547.1 A Facility will be deemed to be in compliance with the

IEEE Standard 1547.1 if the Department previously determined it was in compliance. Applicants who can demonstrate Facility compliance with IEEE Standard 1547.1, with the testing done by a nationally recognized testing laboratory, will be eligible for the Expedited Process, and may be eligible for the Simplified process upon review by the utility.

Massachusetts has adopted UL1741 (Inverters, Converters and Charge Controllers for Use in Independent Power Systems) and UL2200 (Stationary Engine Generator Assemblies) as the standard for power systems to comply with IEEE Std 1547 and 1547.1. Equipment listed to UL1741 or UL2200 by a nationally recognized testing laboratory will be considered in compliance with IEEE Std 1547 and 1547.1. An Interconnecting Customer should contact the Facility supplier(s) to determine if it has been listed to either of these standards.

In addition, California and New York have adopted rules for expediting application review and approval of Facility interconnections onto electric distribution systems. Facilities in these states must meet the applicable commission approved tests and/or criteria for expedited procedures in these states. The Department will accept a Facility as eligible for "Listed" and a candidate for the Simplified or Expedited Process if it has been approved for such expedited procedures, or approved for interconnection, in California or New York.

It is the Interconnecting Customer's responsibility to determine if, and submit verification that, the proposed Facility has been so approved in California or New York.

Note 4. This Screen only applies to Facilities that start by motoring the generating unit(s) or the act of connecting synchronous generators. The voltage drops should be less than the criteria below. There are two options in determining whether Starting Voltage Drop could be a problem. The option to be used is at the Department's discretion:

> **Option 1:** The Department may determine that the Facility's starting inrush current is equal to or less than the continuous ampere rating of the Facility's service equipment.
>
> **Option 2:** The Department may determine the impedances of the service distribution transformer (if present) and the secondary conductors to the Facility's service equipment and perform a voltage drop calculation. Alternatively, the Department may use tables or nomographs to determine the voltage drop. Voltage drops caused by starting a generating unit as a motor must be less than 2.5% for primary interconnections and 5% for secondary interconnections.

Note 5. The purpose of this Screen is to ensure that fault (short-circuit) current contributions from all Facilities will have no significant impact on the Department's protective devices and EPS. All of the following criteria must be met when applicable:

(a) The proposed Facility, in aggregation with other generation on the distribution circuit, will not contribute more than 10% to the distribution circuit's maximum fault current under normal operating conditions at the point on the high voltage (primary) level nearest the proposed PCC.

(b) The proposed Facility, in aggregate with other generation on the distribution circuit, will not cause any distribution protective devices and equipment (including but not limited to substation breakers, fuse cutouts, and line reclosers), or Interconnecting Customer equipment on the EPS to exceed 85% of the short-circuit interrupting capability. In addition, the proposed Facility will not be installed on a circuit that already exceeds 85% of the short-circuit interrupting capability.

(c) When measured at the secondary side (low side) of a shared distribution transformer, the short-circuit contribution of the proposed Facility must be less than or equal to 2.5% of

the interrupting rating of the Department's service equipment.

(d) Coordination of fault-current protection devices and systems will be examined as part of this Screen.

Note 6. This Screen includes a review of the type of electrical service provided to the Interconnecting Customer, including line configuration and the transformer connection to limit the potential for creating over voltages on the Department EPS due to a loss of ground during the operating time of any anti-islanding function.

Primary Distribution Line Type	Type of Interconnection to Primary Distribution Line	Result/Criteria
Three-phase, three wire	3-phase or single phase, phase-to-phase	Pass Screen
Three-phase, four wire	Effectively-grounded 3-phase or single-phase, line-to-neutral	Pass Screen

If the proposed generator is to be interconnected on a single-phase transformer shared secondary, the aggregate generation capacity on the shared secondary, including the proposed generator, will not exceed 20 kilovolt-ampere ("kVA").

If the proposed generator is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition will not create an imbalance between the two sides of the 240 volt service of more than 20% of nameplate rating of the service transformer.

Note 7. The proposed Facility, in aggregate with other Facilities interconnected to the distribution low voltage side of the substation transformer feeding the distribution circuit where the Facility proposes to interconnect, will not exceed 10 MW in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity (e.g., 3 or 4 transmission voltage level buses from the PCC).

Table 1 – Time Frames (Note 1)

REVIEW PROCESS	SIMPLIFIED	EXPEDITED	STANDARD	SIMPLIFIED SPOT NETWORK
Eligible Facilities	Listed Small Inverter	Listed DG	Any DG	Listed Inverter ≤15 kW single-phase
Acknowledge recipt of Application	(5 Days)	(5 Days)	(5 Days)	(5 Days)
Review of Application for Completeness	10 Days	10 Days	10 Days	10 Days
Complete Review of All Screens	10 Days	30 Days		Site Review 30/60 Days (Note 2)
Complete Supplemental Review (as needed)		25 Days		
Complete Standard Process Initial Review			20 Days	
Send Follow-on Studies Cost/Agreement			8 Days	
Complete Impact Study (as needed)			65 Days	
Complete Detailed Study (as needed)			35 Days	
Send Executable Agreement (Note 3)	Done	10 Days	15 Days	Done (Comparable to Simplified for Radial)
Total Maximum Days (Note 4)	15 Days	45 / 85 Days (Note 5)	130 / 165 Days (Note 6)	40 / 100 Days
Notice/Witness Test	<1 Day with 10 Day Notice or By Mutual Agreement	1-5 Days with 10 Day notice or By Mutual Agreement	By Mutual Agreement	1 Day with 10 - Day Notice or By Mutual Agreement

Table 2 – Fee Schedules

	SIMPLIFIED	EXPEDITED	STANDARD	SIMPLIFIED SPOT NETWORK
	Listed Small Inverter	**Listed DG**	**Any DG**	**Listed Inverter ≤15 kW single-phase**
Application Fee (covers Screen)	0 (Note 1)	$3/kW, minimum$300, maximum $2,500	$3/kW, minimum$300, maximum $2,500	$3/kW, minimum$100, maximum $300
Supplemental Review or Additional Review (if applicable)	N/A	Actual Cost	N/A	N/A
Standard Interconnection Intial Review	N/A	N/A	Actual Cost	N/A
Impact and Detailed Study (if required)	N/A	N/A	Actual Cost	N/A

Explanatory Notes to Accompany Tables 1 and 2

Table 1 – Time Frames

Note 1. All days listed apply to Department business days under normal work conditions. All numbers in this table assume a reasonable number of applicants under review. All timelines may be extended by mutual agreement. Any delays caused by Interconnecting Customer will interrupt the applicable clock. Moreover, if an Interconnecting Customer fails to act expeditiously to continue the interconnection process or delays the process by failing to provide necessary information within the longer of 15 days or half the time allotted to the Department to perform a given step, or as extended by mutual agreement, then the Department may terminate the application and the Interconnecting Customer must reapply. However, the Department will be required to retain the work previously performed in order to reduce the initial and Supplemental Analysis costs incurred for a period of no less than 1 year. The timelines in Table 1 will be affected if ISO-NE determines that a system impact study is required. This will occur if the Interconnecting Customer's Facility is greater than 5 MW and may occur if the Interconnecting Customer's Facility is greater than 1 MW.

Note 2. 30 days if load is known or can be reasonably determined, 90 days if it has to be metered.

Note 3. Department delivers an executable agreement form. Once the Interconnection Service Agreement is delivered by the Department, any further modification and timetable will be established by mutual agreement.

Note 4. Actual totals laid out in columns exceed the maximum target. The Parties further agree that average days (fewer than maximum days) is a performance metric that will be tracked.

Note 5. Shorter time applies to Expedited Process without Supplemental Analysis, longer time applies to Expedited Process with Supplemental Analysis.

Note 6. 125 day maximum applies to an Interconnecting Customer opting to begin directly in Standard Process, and 150 days is for an Interconnecting Customer who goes through initial Expedited Process first. In both cases this assumes that both the Impact and Facilities Studies are needed. If the Detailed Study is not needed, the timelines will be shorter.

Table 2 – Fee Schedules

Note 1. If the Department determines that the Facility does not qualify for the Simplified Process, it will let the Interconnecting Customer know what the appropriate fee is.

Note 2. Supplemental Analysis and additional review are defined in Section 3.2.

Note 3. This is the actual cost only attributable to the applicant. Any costs not expended from the application fee previously collected will go toward the costs of these studies.

Note 4. Not applicable except in certain rare cases where a System Modification would be needed. If so, the modifications are the Interconnecting Customer's responsibility.

Note 5. O & M is defined as the Department's operations and maintenance carrying charges on the incremental costs associated with serving the Interconnecting Customer.

Note 6. The fee will be based on actual cost, unless Department representatives are required to do additional work due to extraordinary circumstances or due to problems on the Interconnecting Customer's side of the PCC (e.g., Department representative required to make two trips to the site), in which case Interconnecting Customer will cover the additional cost.

4. Interconnection Requirements

4.1. General Design Considerations

Interconnecting Customer shall design and construct the Facility in accordance with the applicable manufacturer's recommended maintenance schedule, in compliance with all aspects of the Department's Interconnection Standard. Interconnecting Customer agrees to cause its Facility to be constructed in accordance with applicable specifications that meet or exceed those provided under this Section of the Interconnection Standard.

4.1.1. Transient Voltage Conditions

Because of unusual events in the Department's EPS, there will be transient voltage fluctuations, which will result in voltages exceeding the limits of the stated ranges. These transient voltage fluctuations, which generally last only a few milliseconds, arise due to EPS disturbances including, but not limited to, lightning strikes, clearing of faults, and other switching operations. The magnitude of transient voltage fluctuations varies with EPS configuration, grounding methods utilized, local short circuit availability, and other parameters, which vary from point-to-point and from time-to-time on the distribution EPS.

The fluctuations may result in voltages exceeding the limits of the stated ranges and occur because of EPS disturbance, clearing of faults and other switching operations. These unavoidable transients are generally of too short duration and insufficient magnitude to have any adverse effects on general service applications. They may, however, cause malfunctions in equipment highly sensitive to voltage changes, and protective devices may operate to shut down such devices. The magnitude, duration and frequency of transient fluctuations will vary due to EPS configuration and/or circuit arrangement. In addition, disturbances of indeterminate magnitude and duration may occur on infrequent occasions due to short circuits, faults, and other unpredictable conditions.

Transient voltages should be evaluated in the design of the Facility.

4.1.2. Noise and Harmonics

The introduction of abnormal noise/harmonics can cause abnormal neutral current flow, and excessive heating of electrical equipment. Harmonics may also cause distortion in TV pictures, telephone interference, and malfunctions in digital equipment such as computers. The permissible level of harmonics is dependent upon the voltage level and short circuit ratio at a given location. IEEE Standard 1547 provides these levels at the PCC. In requiring adherence to IEEE Standard 1547 the Department is in no way making a recommendation regarding the level of harmonics that a given piece of equipment can tolerate nor is it making a recommendation as to the permissible level in the Interconnecting Customer's Facility.

4.1.3. Frequency

The interconnected electric power system in North America, which is maintained at 60 hertz ("Hz") frequency on its alternating current services, is subject to certain deviations. The usual maximum instantaneous deviation from the standard 60 Hz is ±2/10 cycle (±0.33%), except on infrequent occasions when the deviation may reach ±1/10 cycle (±0.17%). The usual normal deviation is approximately ±1/20 cycle (±0.083%). These conditions are subject to occur at any time of the day or night and should be considered in the design of the Facility. All are measured on a 60 Hz base.

4.1.4. Voltage Level

All electricity flow across the PCC shall be in the form of single-phase or three-phase 60 Hz alternating current at a voltage class determined by mutual agreement of the Parties.

4.1.5. Machine Reactive Capability

Facilities less than 1 megawatt ("MW") will not be required to provide reactive capability, except

as may be provided by the retail rate schedule and Terms and Conditions for Distribution Services under which the Customer takes service.

Facilities greater than or equal to 1 MW interconnected with the Department EPS shall be required to provide reactive capability to regulate and maintain EPS voltage at the PCC as per NEPOOL requirements. The Department and NEPOOL shall establish a scheduled range of voltages to be maintained by the Facility. The reactive capability requirements shall be reviewed as part of the Impact Study and Facilities Study.

4.2. Protection Requirements for New or Modified Facility Interconnections with the EPS

4.2.1. General Requirements

Any Facility desiring to interconnect with the Department EPS or modify an existing interconnection must meet minimum specifications, where applicable, as set forth in the following documents and standards and requirements in this Section.

- IEEE Standard 1547, "IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems."
- UL Standard 1741, "Inverters, Converters and Charge Controllers for Use in Independent Power Systems."
- IEEE Standard 929, "IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems."

The specifications and requirements listed herein are intended to mitigate possible adverse impacts caused by the Facility on the Department's equipment and personnel and on other Interconnecting Customers of the Department. They are not intended to address protection of the Facility itself or its internal load. It is the responsibility of the Facility to comply with the requirements of all appropriate standards, codes, statutes and authorities to protect itself and its loads.

The Department shall not be responsible for the protection of the Facility. The Facility shall be responsible for protection of its system against possible damage resulting from parallel operation with the Department so long as the Department adheres to Good Utility Practice. If requested by the Interconnecting Customer, the Department will provide system protection information for the line terminal(s) directly related to the interconnection. This protection information contained herein is provided exclusively for use by the Interconnecting Customer to evaluate protection of its Facility during parallel operation.

The department requires a utility grade relay system for generation greater than 500 kW designed and set to the standards listed in IEEE 1547. At its sole discretion, the department may consider approving alternatives that satisfy the intent of the requirements contained in this section.

4.2.2. Facility Classification

To determine the protection requirements for a given Facility, the following Groups have been established:

Group	Type of Interconnection
1	Facilities Qualified for Simplified Interconnection
2	All Facilities Not Qualified for Simplified Interconnection

4.2.3. Protection Requirements

All Facilities must meet performance requirements set forth in relevant sections of IEEE Standard 1547. **The following italicized text is excerpted from IEEE Standard 1547 and applies to**

Section 4.2.3 only. The numbering is also from IEEE Standard 1547 and therefore is not in sequence with the Interconnection Standard numbering.

4.1.1 Voltage regulation

Coordination with and approval of, the area EPS and DR operators, shall be required for the DR to actively participate to regulate the voltage by changes of real and reactive power. The DR shall not cause the Area EPS service voltage at other Local EPSs to go outside the requirements of ANSI C84.1-2011, Range A.

4.1.2 Integration with Area EPS grounding

The grounding scheme of the DR interconnection shall not cause overvoltages that exceed the rating of the equipment connected to the Area EPS and shall not disrupt the coordination of the ground fault protection on the Area EPS.

4.1.3 Synchronization

The DR unit shall parallel with the Area EPS without causing a voltage fluctuation at the PCC greater than ± 5% of the prevailing voltage level of the Area EPS at the PCC, and meet the flicker requirements of 4.3.2.

4.1.8.2 Surge withstand performance

The interconnection system shall have the capability to withstand voltage and current surges in accordance with the environments defined in IEEE Std C62.41.2 or IEEE C37.90.1 as applicable.

4.2 Response to Area EPS abnormal condition.[10]

Abnormal conditions can arise on the Area EPS that require a response from the connected DR. This response contributes to the safety of utility maintenance personnel and the general public, as well as the avoidance of damage to connected equipment, including the DR. All voltage and frequency parameters specified in these subclauses shall be met at the PCC, unless otherwise stated.

4.2.1 Area EPS faults

The DR unit shall cease to energize the Area EPS for faults on the Area EPS circuit to which it is connected.

4.2.2 Area EPS reclosing coordination

The DR shall cease to energize the Area EPS circuit to which it is connected prior to reclosure by the Area EPS.

4.2.3 Voltage

The protection functions of the interconnection system shall detect the effective (rms) or fundamental frequency value of each phase-to-phase voltage, except where the transformer connecting the Local EPS to the Area EPS is a grounded wye-wye configuration, or single phase installation, the phase-to-neutral voltage shall be detected. When any voltage is in a range given in Table 1, the DR shall cease to energize the Area EPS within the clearing time as indicated. Under mutual agreement between the EPA and DR operators, other static or dynamic voltage and clearing time trip settings shall be permitted. Clearing time is the time between the start of the abnormal condition and the DR ceasing to energize the Area EPS. For DR less than or equal to 300 W in peak

[10] *The isolation of a portion of the Area EPS, presenting the potential for an unintended DR island, is a special concern and is addressed in 4.4.1. Setting adjustments may only be made as approved by the authority who has jurisdiction over the DR interconnection.*

capacity, the voltage set points and clearing times shall be either fixed or field adjustable. For DR greater than 300 W the voltage set points and clearing times shall be field adjustable.

The voltages shall be detected at either the PCC or the point of DR connection when any of the following conditions exist:

(a) the aggregate capacity of DR systems connected to a single PCC is less than or equal to 300 W,
(b) the interconnection equipment is certified to pass a non-islanding test for the system to which it is to be connected,
(c) the aggregate DR capacity is less than 50% of the total Local EPS minimum annual integrated electrical demand for a 15 minute time period, and export of real or reactive power by the DR to the Area EPS is not permitted.

The under voltage and over voltage settings will be based on IEEE 1547 Standard for Interconnecting Distributed Resources with Electric Power Systems

4.2.4 Frequency

The underfrequency settings are based on Standard PRC-006-NPCC-1 Automatic Underfrequency Load Shedding

4.2.5 Loss of synchronism

Loss of synchronism protection is not required except as necessary to meet 4.3.2.

4.2.6 Reconnection to Area EPS

After an Area EPS disturbance, no DR reconnection shall take place until the Area EPS voltage is within Range B of ANSI C84.1, Table 1, and frequency range of 59.3Hz to 60.5Hz.

The DR interconnection system shall include an adjustable delay (or a fixed delay of five minutes) that may delay reconnection for up to five minutes after the Area EPS steady-state voltage and frequency are restored to the ranges identified above.

After an Area EPS disturbance, no DR reconnection shall take place until the Area EPS voltage is within Range B of ANSI C84.1, Table 1, and frequency range of 59.3Hz to 60.5Hz.

The DR interconnection system shall include an adjustable delay (or a fixed delay of five minutes) that may delay reconnection for up to five minutes after the Area EPS steady-state voltage and frequency are restored to the ranges identified above.

4.3.1 Limitation of dc injection

The DR and its interconnection system shall not inject dc current greater than 0.5% of the full rated output current at the point of DR connection.

4.3.2 Limitation of flicker induced by the DR

The DR shall not create objectionable flicker for other customers on the Area EPS.[11]

4.3.3 Harmonics

When the DR is serving balanced linear loads, harmonic current injection into the Area EPS at the PCC shall not exceed the limits stated below in Table 3. The harmonic current injections shall be exclusive of any harmonic currents due to harmonic voltage distortion present in the Area EPS without the DR connected.

Table 3 – Maximum harmonic current distortion in percent of current (I)[a]						
Individual harmonic order h (odd harmonics)[b]	***h < 11***	***11 ≤ h < 17***	***17 ≤ h < 23***	***23 ≤ h < 35***	***35 ≤ h***	***Total Demand Distortion (TDD)***
Percent (%)	*4*	*2*	*1.5*	*0.6*	*0.3*	*5*

[a] I = the greater of the Local EPS maximum load current integrated demand (15 or 30 minutes) without the DR unit, or the DR unit rated current capacity (transformed to the PCC when a transformer exists between the DR unit and the PCC).

[b] Even harmonics are limited to 25% of the odd harmonic limits above.

4.4.1 Unintentional islanding

For an unintentional island in which the DR energizes a portion of the Area EPS through the PCC, the DR interconnection system shall detect the island and cease to energize the Area EPS within two seconds of the formation of an island.[12]

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[11] *Flicker is considered objectionable when it either causes a modulation of the light level of lamps sufficient to be irritating to humans, or causes equipment misoperation. For guidance, refer to IEEE Std 519™, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems; IEEE P1453™, Draft Recommended Practice for Measurement and Limits of Voltage Flicker on AC Power Systems; International Electrotechnical Commission IEC/TR3 61000-3-7Assessment of Emission Limits for Fluctuating Loads in MV and HV Power Systems, IEC 61000-4-15 Flickermeter - Functional and Design Specifications, IEC 61400-21 IEC 61400-21, Wind Turbine Generator Systems - Part 21: Measurement and assessment of power quality characteristics of grid connected wind turbines.*

[12] *Some examples by which this requirement may be met are:*

(a) The DR aggregate capacity is less than one-third of the minimum load of the Local EPS.

(b) The DR is Listed to pass an applicable non-islanding test.

(c) The DR installation contains reverse or minimum power flow protection, sensed between the Point of DR Connection and the PCC, which will disconnect or isolate the DR if power flow from the Area EPS to the Local EPS reverses or falls below a set threshold.

4.2.3.1. Group 1 Facilities

(a) The inverter-based Facility shall be considered *Listed* if it meets requirements set forth in Section 3.1 "Simplified Process".

(b) **External Disconnect Switch:** For Listed inverters, the Department may require an external disconnect switch (or comparable device by mutual agreement of the Parties) at the PCC with the Department or at another mutually agreeable point that is accessible to Department personnel at all times and that can be opened for isolation if the switch is required. The switch shall be gang operated, have a visible break when open, be rated to interrupt the maximum generator output and be capable of being locked open, tagged and grounded on the Department side by Department personnel. The visible break requirement can be met by opening the enclosure to observe the contact separation. The Department shall have the right to open this disconnect switch in accordance with this Interconnection Standard.

4.2.3.2. Group 2 Facilities

4.2.3.2.1. General Requirements

(a) **Non Export Power:** If the Parties mutually agree that non-export functionality will be part of the interconnection protection equipment then it will include one of the following: (1) a reverse power relay with mutually agreed upon delay intervals, or (2) a minimum power function with mutually agreed upon delay intervals, or (3) other mutually agreeable approaches, for example, a comparison of nameplate rating versus certified minimum Customer premises load.

(b) The ISO-NE is responsible for assuring compliance with NPCC criteria. For the interconnection of some larger units, the NPCC criteria may additionally require:

NPCC Protective Relaying Requirements: The Department may require the Facility to be equipped with two independent, redundant relaying systems in accordance with NPCC criteria, where applicable, for the protection of the bulk power system if the interconnection is to the bulk power system or if it is determined that delayed clearing of faults within the Facility adversely affects the bulk power system.

NPCC Requirements: During system conditions where local area load exceeds system generation, NPCC Emergency Operation Criteria requires a program of phased automatic under frequency load shedding of up to 25% of area load to assist in arresting frequency decay and to minimize the possibility of system collapse. Depending on the point of connection of the Facility to the Department's EPS and in conformance with the NPCC Emergency Operating Criteria, the Facility may be required to remain connected to the EPS during the frequency decline to allow the objectives of the automatic load shedding program to be achieved, or to otherwise provide compensatory load reduction, equivalent to the Facility's generation lost to the system, if the Interconnecting Customer elects to disconnect the Facility at a higher under-frequency set point.

(c) **Disconnect Switch:** The Facility shall provide a disconnect switch (or comparable device mutually agreed upon by the Parties) at the point of Facility interconnection that can be opened for isolation. The switch shall be in a location easily accessible to Department personnel at all times. The switch shall be gang operated, have a visible break when open, be rated to interrupt the maximum

(d) *The DR contains other non-islanding means such as a) forced frequency or voltage shifting, b) transfer trip, or c) governor and excitation controls that maintain constant power and constant power factor.*

generator output and be capable of being locked open, tagged and grounded on the Department side by Department personnel. The visible break requirement can be met by opening the enclosure to observe the contact separation. The Department shall exercise such right in accordance with Section 7 of this Interconnection Standard.

(d) **Transfer Tripping:** A direct transfer tripping system, if one is required by either the Interconnecting Customer or by the Department, shall use equipment generally accepted for use by the Department and shall, at the option of the Department, use dual channels.

4.2.3.2.2. Requirements for Induction and Synchronous Generator Facilities

(a) **Interconnection Interrupting Device:** An interconnection Interrupting Device such as a circuit breaker shall be installed to isolate the Facility from the Department's EPS. If there is more than one Interrupting Device, this requirement applies to each one individually. The Interconnection Interrupting Device must be capable of interrupting the current produced when the Facility is connected out of phase with the Department's EPS, consistent with Section 4.1.8.3 of IEEE Standard 1547 which states, "the interconnection system paralleling-device shall be capable of withstanding 220% of the interconnection system rated voltage."

(b) **Synchronizing Devices:** The Interconnecting Customer shall designate one or more Synchronizing Devices such as motorized breakers, contactor/breaker combinations, or a fused contactor (if mutually agreeable) to be used to connect the Facility's generator to the Department's EPS. This Synchronizing Device could be a device other than the interconnection Interrupting Device. The Synchronizing Device must be capable of interrupting the current produced when the Facility is connected out of phase with the Department's EPS, consistent with Section 4.1.8.3 of IEEE Standard 1547 which states, "the interconnection system paralleling-device shall be capable of withstanding 220% of the interconnection system rated voltage."

(c) **Transformers:** The Department reserves the right to specify the winding connections for the transformer between the Department's voltage and the Facility's voltage ("Step-Up Transformer") as well as whether it is to be grounded or ungrounded at the Department's voltage. In the event that the transformer winding connection is grounded-wye/grounded-wye the Department reserves the right to specify whether the generator stator is to be grounded or not grounded. The Interconnecting Customer shall be responsible for procuring equipment with a level of insulation and fault-withstand capability compatible with the specified grounding method.

(d) **Voltage relays:** Voltage relays shall be frequency compensated to provide a uniform response in the range of 40 to 70 Hz.

(e) **Protective Relaying Redundancy:** For induction generators greater than 1/15 of on-site minimum verifiable load that is not equipped with on-site capacitors or that is greater than 200 kW, and for all synchronous generators, protective relays utilized by the Facility shall be sufficiently redundant and functionally separate so as to provide adequate protection, consistent with Department practices and standards, upon the failure of any one component.

(f) **Protective Relay Hard-Wire Requirement:** Unless authorized otherwise by the Department, protective relays must be hardwired to the device they are

tripping. Further, interposing computer or programmable logic controller or the like is not permitted in the trip chain between the relay and the device being tripped.

(g) **Protective Relay Supply:** Where protective relays are required in this Section, their control circuits shall be DC powered from a battery/charger system or a UPS. Solid-state relays shall be self-powered, or DC powered from a battery/charger system or a UPS. If the Facility uses a Department-acceptable non-latching interconnection contactor, AC powered relaying shall be allowed provided the relay and its method of application are fail safe, meaning that if the relay fails or if the voltage and/or frequency of its AC or DC power source deviate from the relay's design requirements for power, the relay or a separate fail-safe power monitoring relay acceptable to the Department will immediately trip the generator by opening the coil circuit of the interconnection contactor.

(h) **Current Transformers ("CT"):** CT primary and secondary ratios and accuracy classes shall be chosen using standard engineering practices such that secondary current is either a 1 or 5 ampere output with a minimum accuracy of C100 and follow the IEEE standard C57.13.

(i) **Voltage Transformers ("VT")'s and Connections:** The Facility shall be equipped with a direct voltage connection or a VT, connected to the Department side of the Interrupting Device. The voltage from this VT shall be used in an interlock scheme, if required by the Department. For three-phase applications, a VT for each phase is required. All three phases must be sensed either by three individual relays or by one relay that contains three elements. If the voltage on any of the three phases is outside the bounds specified by the Department the unit shall be tripped. If the Facility's Step-Up Transformer is ungrounded at the Department voltage, this VT shall be a single three-phase device or three single-phase devices connected from each phase to ground on the Department's side of the Facility's Step-Up Transformer, rated for phase-to-phase voltage and provided with two secondary windings. One winding shall be connected in open delta, have a loading resistor to prevent ferroresonance, and be used for the relay specified in these requirements.

4.2.3.2.3. Additional Requirements for Induction Generator Facilities

(a) **Self-Excitation:** A Facility using induction generators connected in the vicinity of capacitance sufficient to self-excite the generator(s) shall meet the requirements for synchronous machines. The capacitors that enable self-excitation may actually be external to the Facility. The Department will not restrict its existing or future application of capacitors on its lines nor restrict their use by other Interconnecting Customers of the Department to accommodate a Facility with induction machines. If self-excitation becomes possible due to the installation of or presence of capacitance, the protection requirements of the Facility may need to be reviewed and revised, if applicable.

The Facility may be required to install capacitors to limit the adverse effects of drawing reactive power from the EPS for excitation of the generator. Capacitors for supply of reactive power at or near the induction generator with a kilovolts-ampere reactive ("kVAr") rating greater than 30% of the generator's kW rating may cause the generator to become self-excited. (If self-excitation can occur, the Facility shall be required to provide protection as specified in synchronous machines requirements.)

4.2.3.2.4. Additional Requirements for Synchronous Generator Facilities

(a) **Ungrounded Transformers:** If the Facility's Step-Up Transformer connection is ungrounded, the Facility shall be equipped with a zero sequence over-voltage relay fed from the open delta of the three-phase VT specified in the Voltage Transformers and Connections Section 4.2.3.2.2.i.

(b) **High-Speed Protection:** The Facility may be required to use high-speed protection if time-delayed protection would result in degradation in the existing sensitivity or speed of the protection systems on the Department's EPS.

(c) **Breaker Failure Protection:** The Facility may be required to be equipped to provide local breaker failure protection which may include direct transfer tripping to the Department's line terminal(s) in order to detect and clear faults within the Facility that cannot be detected by the Department's back-up protection.

(d) **Communications Channels:** The Interconnecting Customer is responsible for procuring any communications channels necessary between the Facility and the Department's stations, and for providing protection from transients and over-voltages at all ends of these communication channels. The Interconnecting Customer will also bear the ongoing cost to lease these communication channels. Examples include, but are not limited to, connection to a line using high-speed protection, transfer tripping, generators located in areas with low-fault currents, or back up for generator breaker failure.

4.2.4. Protection System Testing and Maintenance

The Department shall have the right to witness the commissioning testing as defined in IEEE Standard 1547 at the completion of construction and to receive a copy of all test data. The Facility shall be equipped with whatever equipment is required to perform this test.

Testing typically includes, but is not limited to:

- CT and CT circuit polarity, ratio, insulation, excitation, continuity and burden tests,
- VT and VT circuit polarity, ratio, insulation and continuity tests,
- Relay pick-up and time delay tests,
- Functional breaker trip tests from protective relays,
- Relay in-service test to check for proper phase rotation and magnitudes of applied currents and voltages,
- Breaker closing interlock tests, and
- Paralleling and disconnection operation.

Prior to final approval by the Department or anytime thereafter, the Department reserves the right to test the generator relaying and control related to the protection of the Department's EPS.

The Interconnecting Customer has the full responsibility for the proper periodic maintenance of its generating equipment and its associated control, protective equipment and interrupting devices.

The Interconnecting Customer is responsible for the periodic maintenance of those relays, interrupting devices, control schemes, and batteries that involve the protection of the Department's EPS. A periodic maintenance program, mutually agreeable to both the Department

and to the Interconnecting Customer is to be established in each case. The Department shall have the right to monitor the periodic maintenance performed.

For relays installed in accordance with the NPCC Criteria for the Protection of the Bulk Power System, maintenance intervals shall be in accordance with such criteria. The results of these tests shall be summarized by the Interconnecting Customer and reported in writing to the Department.

The Department reserves the right to install special test equipment as may be required to monitor the operation of the Facility and its control or for evaluating the quality of power produced by the Facility at a mutually agreed upon location. The cost of this testing will be borne by the Department unless there is shown to be a problem associated with the Facility or if the test was performed at the request of the Interconnecting Customer.

Each routine check shall include both a calibration check and an actual trip of the circuit breaker or contactor from the device being tested. Visually setting a calibration dial, index or tap is not considered an adequate calibration check.

Inverters with field adjustable settings for their internal protective elements shall be periodically tested if those internal elements are being used by the Facility to satisfy the requirements of this Section.

4.2.5. Protection Requirements – Momentary Paralleling of Standby Generators

Protective relays to isolate the Facility for faults in the Department EPS are not required if the paralleling operation is automatic and takes place for less than one-half of a second. An Interrupting Device with a half-second timer (30 cycles) is required as a fail-safe mechanism.

Parallel operation of the Facility with the Department EPS shall be prevented when the Department's line is dead or out of phase with the Facility.

The control scheme for automatic paralleling must be submitted by the Interconnecting Customer for review and acceptance by the Department prior to the Facility being allowed to interconnect with the Department EPS.

4.2.6. Protection System Changes

The Interconnecting Customer must provide the Department with reasonable advance notice of any proposed changes to be made to the protective relay system, relay settings, operating procedures or equipment that affect the interconnection. The Department will determine if such proposed changes require re-acceptance of the interconnection per the requirements of this Section.

In the future, should the Department implement changes to the EPS to which the Facility is interconnected, the Interconnecting Customer will be responsible at its own expense for identifying and incorporating any necessary changes to its protection equipment. These changes to the Facility’s protection equipment are subject to review and approval by the Department.

5. Responsibility for Costs of Interconnecting a Facility

5.1. Review and Study Costs

The Interconnecting Customer shall be responsible for the reasonably incurred costs of the review by the Department and any interconnection studies conducted as defined by Table 2 ("Fee Schedules") of Section 3 of this Interconnection Standard solely to determine the requirements of interconnecting a Facility with the Department EPS.

5.2. Interconnection Equipment Costs

The Interconnecting Customer shall be responsible for all costs associated with the installation and construction of the Facility and associated interconnection equipment on the Interconnecting Customer's side of the PCC.

5.3. System Modification Costs

The Interconnecting Customer shall also be responsible for all costs reasonably incurred by Department attributable to the proposed interconnection project in designing, constructing, operating and maintaining the System Modifications. To the extent that Department Terms and Conditions and/or tariffs allow, the Department will refund the appropriate portion of System Modification costs to the Interconnecting Customer as required by the applicable tariff.

5.4. Separation of Costs

Should the Department combine the installation of System Modifications with additions to the Department's EPS to serve other customers or interconnecting customers, the Department shall not include the costs of such separate or incremental facilities in the amounts billed to the Interconnecting Customer for the System Modifications required pursuant to this Interconnection Standard.

The Interconnecting Customer shall only pay for that portion of the interconnection costs resulting solely from the System Modifications required to allow for safe, reliable parallel operation of the Facility with the Department EPS.

5.5. Normal Payment Procedure

All application, study fees and System Modification costs (except as noted below) are due in full prior to the execution of the work as outlined in this Interconnection Standard

6. Operating Requirements

6.1. General Operating Requirements

Interconnecting Customer shall operate and maintain the Facility in accordance with the applicable manufacturer's recommended maintenance schedule, in compliance with all aspects of the Department's Interconnection Standard. The Interconnecting Customer will continue to comply with all applicable laws and requirements after interconnection has occurred. In the event the Department has reason to believe that the Interconnecting Customer's installation may be the source of problems on the Department EPS, the Department has the right to install monitoring equipment at a mutually agreed upon location to determine the source of the problems. If the Facility is determined to be the source of the problems, the Department may require disconnection as outlined in Section 7 of this Interconnection Standard. The cost of this testing will be borne by the Department unless the Department demonstrates that the problem or problems are caused by the Facility or if the test was performed at the request of the Interconnecting Customer.

6.2. No Adverse Effects; Non-interference

Department shall notify Interconnecting Customer if there is evidence that the operation of the Facility could cause disruption or deterioration of service to other Customers served from the same Department EPS or if operation of the Facility could cause damage to Department EPS or Affected Systems. The deterioration of service could be, but is not limited to, harmonic injection in excess of IEEE Standard 1547, as well as voltage fluctuations caused by large step changes in loading at the Facility. Each Party will notify the other of any emergency or hazardous condition or occurrence with its equipment or facilities which could affect safe operation of the other Party's equipment or facilities. Each Party shall use reasonable efforts to provide the other Party with advance notice of such conditions.

The Department will operate the EPS in such a manner so as to not unreasonably interfere with the operation of the Facility. The Interconnecting Customer will protect itself from normal disturbances propagating through the Department EPS, and such normal disturbances shall not constitute unreasonable interference unless the Department has deviated from Good Utility Practice. Examples of such disturbances could be, but are not limited to, single-phasing events, voltage sags from remote faults on the Department EPS, and outages on the Department EPS. If the Interconnecting Customer demonstrates that the Department EPS is adversely affecting the operation of the Facility and if the adverse effect is a result of a Department deviation from Good Utility Practice, the Department shall take appropriate action to eliminate the adverse effect.

6.3. Safe Operations and Maintenance

Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for, the facility or facilities that it now or hereafter may own unless otherwise specified in this Agreement. Each Party shall be responsible for the maintenance, repair and condition of its respective lines and appurtenances on their respective side of the PCC. The Department and the Interconnecting Customer shall each provide equipment on its respective side of the PCC that adequately protects the Department's EPS, personnel, and other persons from damage and injury.

6.4. Access

The Department shall have access to the disconnect switch of the Facility at all times.

6.4.1. Department and Interconnecting Customer Representatives

Each Party shall provide and update as necessary the telephone number that can be used at all times to allow either Party to report an emergency.

6.4.2. Department Right to Access Department-Owned Facilities and Equipment

If necessary for the purposes of this Interconnection Standard and in the manner it describes, the Interconnecting Customer shall allow the Department access to the Department's equipment and the Department's facilities located on the Interconnecting Customer's or Customer's premises. To the extent that the Interconnecting Customer does not own all or any part of the property on which the Department is required to locate its equipment or facilities to serve the Interconnecting Customer under this Interconnection Standard, the Interconnecting Customer shall secure and provide in favor of the Department the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

6.4.3. Right to Review Information

The Department shall have the right to review and obtain copies of Interconnecting Customer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Interconnecting Customer's Facility or its interconnection with the Department EPS. This information will be treated as customer-confidential and only used for the purpose of meeting the requirements of Section 4.2.4.

7. Disconnection

7.1. Temporary Disconnection

(a) **Emergency Conditions.** Department shall have the right to immediately and temporarily disconnect the Facility without prior notification in cases where, in the reasonable judgment of Department, continuance of such service to Interconnecting Customer is imminently likely to (i) endanger persons or damage property or (ii) cause a material adverse effect on the integrity or security of, or damage to, Department EPS or to the electric systems of others to which the Department EPS is directly connected. Department shall notify Interconnecting Customer promptly of the emergency condition. Interconnecting Customer shall notify Department promptly when it becomes aware of an emergency condition that affects the Facility that may reasonably be expected to affect the Department EPS. To the extent information is known, the notification shall describe the emergency condition, the extent of the damage or deficiency, or the expected effect on the operation of both Parties' facilities and operations, its anticipated duration and the necessary corrective action.

(b) **Routine Maintenance, Construction and Repair.** Department shall have the right to disconnect the Facility from the Department EPS when necessary for routine maintenance, construction and repairs on the Department EPS. The Department shall provide the Interconnecting Customer with a minimum of seven calendar days planned outage notification consistent with the Department's planned outage notification protocols. If the Interconnecting Customer requests disconnection by the Department at the PCC, the Interconnecting Customer will provide a minimum of seven days notice to the Department. Any additional notification requirements will be specified by mutual agreement in the Interconnection Service Agreement. Department shall make an effort to schedule such curtailment or temporary disconnection with Interconnecting Customer.

(c) **Forced Outages.** During any forced outage, Department shall have the right to suspend interconnection service to effect immediate repairs on the Department EPS; provided, however, Department shall use reasonable efforts to provide the Interconnecting Customer with prior notice. Where circumstances do not permit such prior notice to Interconnecting Customer, Department may interrupt Interconnection Service and disconnect the Facility from the Department EPS without such notice.

(d) **Non-Emergency Adverse Operating Effects.** The Department may disconnect the Facility if the Facility is having an adverse operating effect on the Department EPS or other customers that is not an emergency, and the Interconnecting Customer fails to correct such adverse operating effect after written notice has been provided and a maximum of 45 days to correct such adverse operating effect has elapsed.

(e) **Modification of the Facility.** Department shall notify Interconnecting Customer if there is evidence of a material modification to the Facility and shall have the right to immediately suspend interconnection service in cases where such material modification has been implemented without prior written authorization from the Department.

(f) **Re-connection.** Any curtailment, reduction or disconnection shall continue only for so long as reasonably necessary. The Interconnecting Customer and the Department shall cooperate with each other to restore the Facility and the Department EPS, respectively, to their normal operating state as soon as reasonably practicable following the cessation or remedy of the event that led to the temporary disconnection.

7.2. Permanent Disconnection

The Interconnecting Customer has the right to permanently disconnect at any time with 30 days written notice to the Department.

The Department may permanently disconnect the Facility upon termination of the Interconnection Service Agreement in accordance with the terms thereof.

8. Metering, Monitoring, and Communication

This Section sets forth the rules, procedures and requirements for metering, monitoring and communication between the Facility and the Department EPS where the Facility exports power or is otherwise subject to NEPOOL requirements. Interconnecting Customer will be responsible for reasonable and necessary costs incurred by Department for the purchase, installation, operation, maintenance, testing, repair and replacement of metering and data acquisition equipment specified in the Attachments to the Interconnection Service Agreement. Interconnecting Customer's metering (and data acquisition, as required) equipment shall conform to rules and applicable operating requirements.

8.1. Metering, Related Equipment and Billing Options

The Department shall furnish, read and maintain all revenue metering equipment. The Department will furnish two revenue meters with integrated Automated Meter Reading (AMR) functionality. The Interconnecting Customer will waive the right to "Opt-Out" from the Departments AMR program upon interconnection. The Interconnecting Customer shall furnish and maintain all meter mounting equipment such as or including meter sockets, test switches, conduits, and enclosures. Except as provided below, the Department shall own the meters and the Interconnecting Customer shall pay to the Department a monthly charge to cover taxes, meter maintenance, billing costs, the allowable return on the invoice cost of the meters and the depreciation of the meters. These charges are set forth in the applicable Department tariff(s), as amended from time to time.

The Interconnecting Customer shall provide suitable space within the Facility for installation of the metering, and communication equipment at no cost to the Department.

All metering equipment installed pursuant to this Interconnection Standard and associated with the Facility shall be routinely tested by the Department at Interconnecting Customer's expense, in accordance with applicable Department and/or ISO-NE criteria, rules and standards. If, at any time, any metering equipment is found to be inaccurate by a margin greater than that allowed under applicable criteria, rules and standards, the Department shall cause such metering equipment to be made accurate or replaced. The cost to repair or replace the meter shall be borne by the Department, if the Department owns the meter, or by the Interconnecting Customer if the Interconnecting Customer owns the meter. Meter readings for the period of inaccuracy shall be adjusted so far as the same can be reasonably ascertained; provided, however, no adjustment prior to the beginning of the preceding month shall be made except by agreement of the Parties. Each Party shall comply with any reasonable request of the other concerning the sealing of meters, the presence of a representative of the other Party when the seals are broken and the tests are made, and other matters affecting the accuracy of the measurement of electricity delivered from the Facility. If either Party believes that there has been a meter failure or stoppage, it shall immediately notify the other.

If the Metering Point and the Point of Receipt or Point of Delivery are not at the same location, the metering equipment shall record delivery of electricity in a manner that accounts for losses occurring between the Metering Point and the Point of Receipt or Point of Delivery. Losses between the Metering Point and Point of Receipt will be reflected pursuant to applicable Department, NEPOOL or ISO-NE criteria, rules or standards.

The type of metering equipment to be installed at a Facility is dependent on the size of the Facility and how and if the Facility plans to export power. For those that will export power, the available equipment options and associated requirements are:

- For Facilities up to 350 kW, the Facilities will be equipped with bi-directional, non-interval meter without remote access – in which a distribution class meter with multiple registers is installed.

One set of registers will record energy flows from the Department to the Facility during periods when the Facility is receiving energy from the Department (the other register will record no flow during these periods) and a second set of registers will record energy flows from the Facility to the Department during periods when the Facility is providing energy to the Department(the other register will record no flow during these periods). Each set of registers will record total flows only and will not record flows during specific intervals. A Production Meter will be installed to record the quantity of energy produced by the Customer's energy generating equipment. All metering equipment included in this type of installation, including self-contained meters and instrument transformers and meters, shall meet ANSI C12.1 Metering Accuracy Standards and ANSI C57.13 accuracy requirements for instrument transformers.

- For Facilities larger than 350 kW, the Facilities will be equipped with bi-directional interval meter with remote access – in which a distribution class meter with multiple registers is installed. One set of registers will record energy flows from the Department to the Facility during periods when the Facility is receiving energy from the Department (the other register will record no flow during these periods) and a second set of registers will record energy flows from the Facility to the Department during periods when the Facility is providing energy to the Department (the other register will record no flow during these periods). Each set of registers will record total flows as well as flows during hourly intervals. In addition, the meters will be equipped with remote access capability that may include communication to the extent required by applicable NEPOOL standards. A Production Meter will be installed to record the quantity of energy produced by the Customer's energy generating equipment. All metering equipment included in this type of installation shall meet the requirements contained in NEPOOL Operating Procedure No. 18, "Metering and Telemetering Criteria" and the Department's "Policy and Practices for Metering and Telemetering Requirements for New or Modified Interconnections." Copies of both publications are available from the Department upon request. The Interconnecting Customer shall be responsible for providing all necessary leased telephone lines (for other Department approved communication means) and any necessary protection for leased lines and shall furthermore be responsible for all communication required by ISO-NE, or by ISO-NE's designated satellite. The Interconnecting Customer shall maintain all communication and transducer equipment at the Facility in accordance with ISO-NE criteria, rules and standards. The Department will purchase, own and maintain all communication equipment located on the Interconnecting Customer's Facilities, if the Interconnecting Customer desires, at the Interconnecting Customer's expense. The Interconnecting Customer shall provide, install and own Department-approved or Department-specified test switches in the transducer circuits.

In addition, Facilities which are 5 MW or greater are required by NEPOOL Operating Procedure No. 18 to provide communication equipment and to supply accurate and reliable information to system operators regarding metered values for MW, MVAR, volt, amp, frequency, breaker status and all other information deemed necessary by ISO-NE and the NEPOOL Satellite (REMVEC).

8.2. Additional Monitoring and Communication Requirements

As the amount of distributed generation on the Department EPS grows significantly, additional monitoring and communication may be required by the Department pursuant to a future proceeding.

9. Dispute Resolution Process

The Dispute Resolution Process is a multi-stage process described below, beginning with negotiation, then mediation, followed by non-binding arbitration and then adjudication. All days in this Section are calendar days.

9.1. Good Faith Negotiation

(a) One party submits a request in writing to the other party for initiation of Step 9.1 of the Dispute Resolution Process. The Parties will elevate the dispute to the Superintendent or senior management with sufficient authority to make a decision. Such individual shall be in a position higher than the company representative that is involved in the initial dispute.

(b) If, after 8 days, the dispute is still not resolved, one or both Parties may initiate dispute resolution provided in Section 9.2(a).

9.2. Mediation/Non-binding Arbitration

(a) One party to the dispute requests dispute resolution assistance by submitting a written request to the American Arbitration Association or other dispute resolution company as agreed by the parties (hereinafter referred to as the "Dispute Resolution Agency") for appointment of a mediator. The selection of a mediator will be in accordance with Dispute Resolution Agency's rules.

Once a mediator is chosen, the submitting party will provide a summary of the dispute with a copy to the other party. The other party may also submit a summary with a copy to the other party.

(b) The Parties will meet with the mediator within 14 days to convene the Dispute Resolution Process unless another time is agreed among the mediator and the parties. During that meeting, the mediator will assist the Parties in attempting to resolve outstanding differences.

(c) If the differences are not resolved in Step 9.2(b), the Dispute Resolution Agency will provide a list of qualified neutrals and manage the selection of individual neutrals for the case. The Dispute Resolution Agency will use a list of pre-qualified neutrals maintained by the Dispute Resolution Agency and, the Parties will select a mutually agreeable mediator pursuant to a reverse-strike-out process or another mutually-agreeable method. If either party requests a technical expert, both a mediator and a technical expert will be selected, and the technical expert will be selected using the same strike out process or another mutually-agreeable method as that used for selection of the mediator. A "reverse strike out process" involves each party eliminating the least desirable mediator until one is left standing.

(d) Parties will complete the neutral selection process with the Dispute Resolution Agency within seven days. This timetable will only be possible if the Dispute Resolution Agency has, during the initial 14 days, identified mediators and technical experts who have the time available to assist the Parties in a timely manner.

(e) The Dispute Resolution Agency will arrange for the selected mediator to contact Parties.

(f) The Parties will contract with neutrals for services, splitting the fees 50/50.

(g) The mediator begins by discussing the case with the disputing Parties to assess the scope of issues and understand the Parties' positions and interests. The mediator and Parties will establish a schedule for completion of mediation within 30 days.

(h) Mediation meeting or meetings are held.

(i) If the Parties reach agreement, the Dispute Resolution Process ends here.

(j) If the Parties do not reach a mediated agreement, the neutral(s) will issue a brief recommended solution or decision.

(k) If the Parties accept the neutral's recommendation, the Dispute Resolution Process ends here.

(l) If one or both Parties do not accept the neutral recommendation and there is still no agreement, the dispute proceeds to Step 9.3.

9.3. Adjudicatory Hearing

(a) In the event a party does not accept the recommendation in Step 9.2, it may request, in writing, binding arbitration.

(b) The goal of this Step is a final resolution of the matter by hearing before an arbitrator selected in accordance with the Dispute Resolution Agency's rules, who should not be the mediator selected in Section 9.2 above, with witnesses, evidence, etc. that results in a binding precedential decision.

(c) The Arbitrator holds a pre-hearing conference with the Parties. The Parties, to the extent desirable and feasible, exchange information and establish an expedited schedule during the pre-hearing conference.

(d) The Arbitrator and the Parties engage in pre-hearing discovery, as needed in the specific case, building on the information developed in Step 9.2, including the mediator's recommendation.

(e) The Arbitrator conducts a hearing.

(f) The Parties file briefs, if one or both desire to do so or the Arbitrator requests they do so. The Parties and the Arbitrator will complete Step 9.3(b) through (e) in 90 days.

(g) The Arbitrator issues its decision within 30 days. If the Arbitrator is unable to do so, it will notify the Parties and provide a revised decision date.

(h) Cost of arbitration shall be split 50/50 by the parties.

(i) The arbitrator may not add to or amend the provision of the agreement. The Arbitrator's decision shall final and only appealable to the Courts of the Commonwealth of Massachusetts for errors of law.

Disputes subject to the Dispute Resolution Process on these issues are not meant to be considered as Interconnecting Customer complaints as part of the Companies' service quality plans. This does not preclude the Interconnecting Customer from filing Interconnecting Customer complaints for which they are otherwise eligible

10. Confidentiality Statement

Information including identifying information and specific Facility information may be shared with the DPU. Upon request, a list of all executed DG Interconnection Service Agreements may be submitted to the DPU annually. Interconnecting Customers may elect to petition the DPU to maintain confidentiality with their information, however, the DPU is under no obligation to grant this confidentiality.

In an ongoing effort to improve the interconnection process for Interconnecting Customer-owned Facilities, the information provided by Interconnecting Customers and the results of the application process will be aggregated with the information of other applicants and periodically reviewed by a DG Collaborative authorized by the DPU consisting of industry participants. The aggregation process will not reveal specific details for any one Interconnecting Customer. In addition to this process, Interconnecting Customers may choose to allow non-identifying information specific to their applications to be shared with the Collaborative by answering “Yes” to the Confidentiality Statement question on the first page of the application form.

11. Insurance Requirements

11.1. General Liability.

(a) In connection with Interconnecting Customer's performance of its duties and obligations under the Interconnection Service Agreement, Interconnecting Customer shall maintain, during the term of the Agreement, general liability insurance with a combined single limit of not less than:

i. Five million dollars ($5,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than five (5) MW.

ii. Two million dollars ($2,000,000) for each occurrence and five million dollars ($5,000,000) in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one (1) MW and less than or equal to five (5) MW;

iii. One million dollars ($1,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one hundred (100) kW and less than or equal to one (1) MW;

iv. Five hundred thousand dollars ($500,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than ten (10) kW and less than or equal to one hundred (100) kW, except for as provided below in subsection 11.2.

(b) Pursuant to 220 CMR 18.03(2), no insurance is required for customers with facilities eligible for Class 1 Metering (facilities less than or equal to sixty (60) kW. However, the Department recommends that the Interconnecting Customer obtain adequate insurance to cover potential liabilities.

(c) Any combination of General Liability and Umbrella/Excess Liability policy limits can be used to satisfy the limit requirements stated above.

(d) The general liability insurance required to be purchased in this Section 11 may be purchased for the direct benefit of the Department and shall respond to third party claims asserted against the Department (hereinafter known as "Owners Protective Liability"). Should this option be chosen, the requirement of Section 11.2(a) will not apply but the Owners Protective Liability policy will be purchased for the direct benefit of the Department and the Department will be designated as the primary and "Named Insured" under the policy.

(e) The insurance hereunder is intended to provide coverage for the Department solely with respect to claims made by third parties against the Department.

(f) In the event the Commonwealth of Massachusetts, or any other governmental subdivision thereof subject to the claims limits of the Massachusetts Tort Claims Act, G.L. c. 258 (hereinafter referred to as the "Governmental Entity") is the Interconnecting Customer, any insurance maintained by the Governmental Entity shall contain an endorsement that strictly prohibits the applicable insurance Department from interposing the claims limits of G.L. c. 258 as a defense in either the adjustment of any claim, or in the defense of any lawsuit directly asserted against the insurer by the Department. Nothing herein is intended to constitute a waiver or indication of an intent to waive the protections of G.L. c. 258 by the Governmental Entity.

(g) Notwithstanding the requirements of section 11.1(a) through (f), insurance for certain Governmental Entity facilities may be provided as set forth in section 11.1(g)(i) and (ii) below. Nothing herein changes the provision in subsection 11.1(a)(iv) that exempts Class I Metering facilities (less than or equal to 60 kW) from the requirement to obtain insurance. In addition, nothing shall prevent the Governmental Entity from obtaining

insurance consistent with the provisions of subsection 11.1(a) through (f), if it is able and chooses to do so.

i. For solar photovoltaic (PV) facilities with a Gross Nameplate Rating in excess of 60 kW up to 500 kW, the Governmental Entity is not required to obtain liability insurance. Any liability costs borne by the Department associated with a third-party claim for damages in excess of the claims limit of the Massachusetts Tort Claims Act, M.G.L. c. 258, and market-based premium-related costs, if any, borne by the Department associated with insurance for such third-party claims shall be recovered annually on a reconciling basis in Department rates in a manner that shall be reviewed and approved by the Department.

ii. For (a) PV facilities with a Gross Nameplate Rating in excess of 500 kW up to 5 MW, (b) wind facilities with a Gross Nameplate Rating in excess of 60 kW up to 5 MW, and (c) highly efficient combined heat and power facilities with a Gross Nameplate Rating of in excess of 60 kW up to 5 MW, the Governmental Entity is not required to obtain liability insurance, subject to the requirements of the following paragraph.

The Department shall either self-insure for any risk associated with possible third-party claims for damages in excess of the Massachusetts Tort Claims Act limit, or obtain liability insurance for such third-party claims, and the Department is authorized to charge and collect from the Governmental Entity its pro-rata allocable share of the cost of so doing, plus all reasonable administrative costs. The coverage and cost may vary with the size and type of facility, and may change (increase or decrease) over time, based on insurance market conditions, and such cost shall be added to, and paid for as part of the Governmental Entity's electric bill.

11.2. Insurer Requirements and Endorsements

All required insurance shall be carried by reputable insurers qualified to underwrite insurance in MA having a Best Rating of "A-". In addition, all insurance shall, include Department as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that Department shall not incur liability to the insurance carrier for payment of premium for such insurance; and (c) provide for thirty (30) calendar days' written notice to Department prior to cancellation, termination, or material change of such –insurance; provided that to the extent the Interconnecting Customer is satisfying the requirements of subpart (d) of this paragraph by means of a presently existing insurance policy, the Interconnecting Customer shall only be required to make good faith efforts to satisfy that requirement and will assume the responsibility for notifying the Department as required above.

If the requirement of clause (a) in the paragraph above prevents Interconnecting Customer from obtaining the insurance required without added cost or due to written refusal by the insurance carrier, then upon Interconnecting Customer's written Notice to Department, the requirements of clause (a) shall be waived.

11.3. Evidence of Insurance

Evidence of the insurance required shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by Interconnecting Customer.

The Interconnecting Customer is responsible for providing the Department with evidence of insurance in compliance with the Interconnection Standard on an annual basis.

Prior to the Department commencing work on System Modifications and annually thereafter, the Interconnecting Customer shall have its insurer furnish to the Department certificates of insurance evidencing the insurance coverage required above. The Interconnecting Customer shall notify and send to the Department a certificate of insurance for any policy written on a "claims-made" basis. The Interconnecting Customer will maintain extended reporting coverage for three years on all

policies written on a "claims-made" basis.

In the event that an Owners Protective Liability policy is provided, the original policy shall be provided to the Department.

11.4. Self Insurance

If Interconnecting Customer has a self-insurance program established in accordance with commercially acceptable risk management practices. Interconnecting Customer may comply with the following in lieu of the above requirements as reasonably approved by the Department:

(a) Interconnecting Customer shall provide to Department, at least thirty (30) calendar days prior to the Date of Initial Operation, evidence of such program to self-insure to a level of coverage equivalent to that required.

(b) If Interconnecting Customer ceases to self-insure to the standards required hereunder, or if Interconnecting Customer is unable to provide continuing evidence of Interconnecting Customer's financial ability to self-insure, Interconnecting Customer agrees to promptly obtain the coverage required under Section 11.1.

This section shall not allow any Governmental Entity to self-insure where the existence of a limitation on damages payable by a Government Entity imposed by the Massachusetts Tort Claims Act, G.L. c. 258, or similar law, could effectively limit recovery (by virtue of a cap on recovery) to an amount lower than that required in Section 11.1(a).

[SECTION BREAK INSERTED FOR PRINTING]

12. Simplified Interconnection Application Process

Instructions for Application *(please omit Instruction and terms and condition pages when submitting application)*

General Information: If you, the Interconnecting Customer, wish to submit an application to interconnect your generating Facility using the Simplified Process (reference Section 3.1 of the Interconnection Standard for eligibility) please fill out the attached application form completely (not including this page of instructions), including your signature in the space provided. Interconnections that may be eligible for this Simplified Process include UL 1741-Listed inverter-based Facilities that are either:

1. **connecting to radial electric power systems with power ratings of ≤10 kW single-phase or ≤25 kW three-phase, or**
2. **connecting to network electric power systems with power ratings of ≤15 kW single-phase**.

Please attach any documentation provided by the inverter manufacturer concerning the UL 1741 listing provided by the manufacturer.

Mail all materials to:

Attn: Engineering Manager, Westfield Gas and Electric

100 Elm Street, P.O. Box 990

Westfield, MA 01085

The Simplified Process is as follows:

1. Application process:

- **1.1.** Interconnecting Customer submits a Simplified Application filled out properly and completely.
- **1.2.** The customer will provide a drawing/schematic of the Distributed Generation System. Location of utility disconnect must be noted.
- **1.3.** The electric utility (Department) acknowledges to the Interconnecting Customer receipt of the application within 5 business days of receipt.

2. Department evaluates the application for completeness and notifies the Interconnecting Customer within 10 business days of receipt that the application is or is not complete and, if not, advises what is missing. Department verifies Facility equipment can be interconnected safely and reliably.

3. If approved, the Department signs the application approval line and sends to the Interconnecting Customer. In certain rare circumstances, the Department may require the Interconnecting Customer to pay for minor System Modifications. If so, a description of work and an estimate will be sent back to the Interconnecting Customer for approval. The Interconnecting Customer would then approve via a signature and payment for the minor System Modifications. If the Interconnecting Customer approves, the Department performs the System Modifications. Then, the Department signs the application approval line and sends to the Interconnecting Customer.

4. Upon receipt of the signed application, the Interconnecting Customer installs the Facility. Then the Interconnecting Customer arranges for inspection of the completed installation by the local electrical

wiring inspector, or other authority having jurisdiction, and this person signs the Certificate of Completion. If the Facility was installed by an electrical contractor, this person also fills out the Certificate of Completion.

5. The Interconnecting Customer returns the Certificate of Completion to the Department.
6. Following receipt of the Certificate of Completion, the Department may inspect the Facility for compliance with standards by arranging for a Witness Test. The Interconnecting Customer has no right to operate in parallel (interconnect) until a Witness Test has been performed or has been previously waived on the Application Form. The Department is obligated to complete this Witness Test within 10 business days of the receipt of the Certificate of Completion. If the Department does not inspect in 10 business days or by mutual agreement of the Parties, the Witness Test is deemed waived.
7. Assuming the wiring inspection and/or Witness Test is satisfactory; the Department notifies the Interconnecting Customer in writing that interconnection is authorized. If the Witness Test is not satisfactory, the Department has the right to disconnect the Facility, and will provide information to the Interconnecting Customer describing clearly what is required for approval.

Contact Information: You must provide the contact information for the legal applicant (i.e. the Interconnecting Customer). If other parties are responsible for interfacing with the Department, you should provide their contact information as well.

Ownership Information: Please enter the legal names of the owner or owners of the Facility

Generating Facility Information: Please locate a copy of your monthly bill, this will provide the correct Account Number and Meter Number for this application. If the facility is to be installed in a new location, prior to submittal of this application an account for service must be created. One can do so at our Main Office, visit 100 Elm Street, Westfield, MA, 01085, or contact our Customer Service Line #413-572-0100 for more information, or visit our website www.wgeld.org to submit a request for service.

Confidentiality Statement: In an ongoing effort to improve the interconnection process for Interconnecting Customers, the information you provide and the results of the application process will be aggregated with the information of other applicants and periodically reviewed by a DG Collaborative of industry participants that has been organized by the Massachusetts Department of Public Utilities (DPU). The aggregation process mixes the data together so that specific details for one Interconnecting Customer are not revealed. In addition to this process, you may choose to allow the information specific to your application to be shared with the Collaborative by answering “Yes” to the Confidentiality Statement question on the first page. Please note that even in this case your identification information (contact data) and specific Facility location will not be shared.

UL 1741 Listed: The standard UL 1741, “Inverters, Converters, and Controllers for Use in Independent Power Systems,” addresses the electrical interconnection design of various forms of generating equipment. Many manufacturers choose to submit their equipment to a Nationally Recognized Testing Laboratory (NRTL) that verifies compliance with UL 1741. This term “Listed” is then marked on the equipment and supporting documentation.

Simplified Interconnection **Application and Agreement**

Date Prepared: _____

Contact Information: *(Legal Name and address of Interconnecting Customer or Company Name, where applicable)*

Customer or Company Name (print): _____

Contact Person, if Company: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Alternative Contact Information: *(e.g., system installation contractor or coordinating company, where applicable)*

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Electrical Contractor Contact Information: *(where applicable)*

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Office): _____ (Mobile): _____

Facsimile Number: _____ E-Mail Address: _____

License Number: _____

Ownership Information: The Customer must fully own the Facility. Massachusetts General Laws prohibit a third-party from selling energy within the service territory of a municipal light department, such as WG&E. A third-party cannot maintain ownership or lease distributed generation equipment to a Customer of WG&E, instead WG&E's Customer must own the equipment outright. Any sale of energy to a Customer must be between WG&E and the Customer.

Please attach documentation which confirms customer-owned electric generation equipment such as copies of sales receipt and/or loan agreement.

Facility Information:

Address of Facility: _____

City: _____ State: _____ Zip Code: _____

Account Number: _____ Meter Number: _____

Manufacturer:				**Model Number:**		
Model Name:				**Quantity:**		
Namplate Rating:		**(kW)**		**(kVA)**		
				(Ac Volts)		
	☐	**Single Phase**	☐	**Three Phase**		
System Design Capacity:		**(kW)**		**For Solar PV System, DC-STC rating:**		
		(kVA)		**(kW)**		
Prime Mover: (check applicable)	☐	**Photovoltaic**	☐	**Reciprocating Engine**	☐	**Turbine**
	☐	**Fuel Cell**	**Other**			
Energy Source: (check applicable)	☐	**Solar**	☐	**Wind**	☐	**Fuel Oil**
	☐	**Hydro**	☐	**Natural Gas***	☐	**Diesel**
	Other					
IEEE 1547.1 (UL 1741) Listed ?	☐	**YES**	☐	**NO**		

If the energy source is Natural Gas, please contact the WG&E Engineering Department as additional forms and information will be required during the application process.

Please attach any documentation provided by the inverter manufacturer describing the inverter's UL 1741 listing.

Estimated Install Date: _____ Estimated In-Service Date: _____

Interconnecting Customer Signature:

I hereby certify that, to the best of my knowledge, all of the information provided in this application is true and I agree to the Terms and Conditions on the following page:

Signature: _____ (Print Name): _____

Title: _____ Date: _____

Approval to Construct Interconnection Facility: *(For Department use only)*

Installation of the Facility is approved contingent upon the terms and conditions of this Agreement, and agreement to any system modifications, if required:

Are system modifications required? Yes ___ No ___ To Be Determined ___

Proof that the WG&E customer is the sole owner of the electric generator. Yes ___

Department Signature: _____ (Print Name): _____

Title: _____ Date: _____

Application Number: _____ Department waives inspection/Witness Test? Yes ____ No____

Terms and Conditions for Simplified Interconnection Agreement

1. **Construction of the Facility**. The Interconnecting Customer may proceed to construct the Facility once the Approval to Install the Facility has been signed by the Department.
2. **Interconnection and operation**. The Interconnecting Customer may operate Facility and interconnect with the Department's system once the following has occurred:
   - **2.1. Municipal Inspection**. Upon completing construction, the Interconnecting Customer will have the Facility inspected or certified by the local electrical wiring inspector. Request for inspection can be directed to the Westfield Building Department, #413-572-6251.
   - **2.2. Certificate of Completion**. The Interconnecting Customer returns the Certificate of Completion appearing as Attachment 2 to the Agreement to the Department at address noted.
   - **2.3. Department has completed or waived the right to inspection**.
3. **Department Right of Inspection**. Within ten (10) business days after receipt of the Certificate of Completion, the Department may, upon reasonable notice and at a mutually convenient time, conduct an inspection of the Facility to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with the Interconnection Standard. The Department has the right to disconnect the Facility in the event of improper installation or failure to return Certificate of Completion. If the Department does not inspect in ten (10) business days or by mutual agreement of the Parties, the Witness Test is deemed waived.
4. **Safe Operations and Maintenance**. The Interconnecting Customer shall be fully responsible to operate, maintain, and repair the Facility.
5. **Access**. The Department shall have access to the disconnect switch (if required) of the Facility at all times.
6. **Disconnection**. The Department may temporarily disconnect the Facility to facilitate planned or emergency Department work.
7. **Metering and Billing**. All Facilities approved under this Agreement qualify for bi-directional metering, as approved by the Department from time to time, and the following is necessary to implement the metering provisions:
   - **7.1. Interconnecting Customer Provides Meter Sockets**. The Interconnecting Customer shall furnish and install, if not already in place, the necessary meter sockets and wiring in accordance with accepted electrical standards.
   - **7.2. Department Installs Meters**. The Department shall furnish and install both of the following: a) a meter capable of bi-directional metering at the interconnection point and b) a Production Meter to measure the quantity of energy produced by the Customer's energy generating equipment. Installation shall occur within ten (10) business days after receipt of the Certificate of Completion if inspection is waived, or within ten (10) business days after the inspection is completed, if such meter is not already in place.
8. **Indemnification**. Except as the Commonwealth is precluded from pledging credit by Section 1 of Article 62 of the Amendments to the Constitution of the Commonwealth of Massachusetts, and except as the Commonwealth's cities and towns are precluded by Section 7 of Article 2 of the Amendments to the Massachusetts Constitution from pledging their credit without prior legislative authority, Interconnecting Customer and Department shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of, or are in any manner connected with, the performance of this Agreement by that party, except to the extent that such injury or damages to

unaffiliated third parties may be attributable to the negligence or willful misconduct of the party seeking indemnification.

9. **Limitation of Liability**. Each party's liability to the other party 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 either party be liable to the other party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.

10. **Termination**. This Agreement may be terminated under the following conditions:

    10.1. By Mutual Agreement. The Parties agree in writing to terminate the Agreement.

    10.2. By Interconnecting Customer. The Interconnecting Customer may terminate this Agreement by providing written notice to Department.

    10.3. By Department. The Department may terminate this Agreement

        10.3.1. if the Facility fails to operate for any consecutive 12 month period, or

        10.3.2. in the event that the Facility impairs the operation of the electric distribution system or service to other customers or materially impairs the local circuit and the Interconnecting Customer does not cure the impairment.

11. **Assignment/Transfer of Ownership of the Facility**. This Agreement shall survive the transfer of ownership of the Facility to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and so notifies the Department.

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12.1. Certificate of Completion for Simplified Interconnection Application and Agreement

Installation Information: ☐ **Check if owner-installed**

Contact Information: *(Legal Name and address of Interconnecting Customer or Company Name, where applicable)*

Customer or Company Name (print): _____

Contact Person, if Company: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Address of Facility (if different from above): _____

City: _____ State: _____ Zip Code: _____

Electrical Contractor Contact Information: *(where applicable)*

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Office): _____ (Mobile): _____

Facsimile Number: _____ E-Mail Address: _____

License Number: _____

Date of Approval to Install Facility granted by the Department: _____

Application Number: _____

Inspection:

The system has been installed and inspected in compliance with the local Building/Electrical Code of WESTFIELD, MASSACHUSETTS

Signed (Local Electrical Wiring Inspector, or attach signed electrical inspection):

_____ _____

Signature *(Print Name)*

_____ _____

Title *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 and proof that you, the WG&E customer, are the sole owner of the electric generation equipment, to:

Attn: Engineering Manager, Westfield Gas and Electric

100 Elm Street, P.O. Box 990

Westfield, MA 01085

[SECTION BREAK INSERTED FOR PRINTING]

13. Expedited/Standard Interconnection Application Process

Instructions for Application *(please do not submit this page)*

General Information: If you wish to submit an application to interconnect your generating facility using the Expedited or Standard Process, please fill out all pages of the attached application form (not including this page of instructions). Once complete, please sign, attach the supporting documentation requested and enclose an application fee of $3/kW (minimum of $300 and maximum of $10,000).

Contact Information: You must provide as a minimum the contact information of the legal applicant. If another party is responsible for interfacing with the Department (utility), you may optionally provide their contact information as well.

Generating Facility Information: Please locate a copy of your monthly bill, this will provide the correct Account Number and Meter Number for this application. If the facility is to be installed in a new location, prior to submittal of this application an account for service must be created. One can do so at our Main Office, visit 100 Elm Street, Westfield, MA, 01085, or contact our Customer Service Line #413-572-0100 for more information, or visit our website www.wgeld.org to submit a request for service.

UL 1741 Listed The standard UL 1741, "Inverters, Converters, and Controllers for Use in Independent Power Systems," addresses the electrical interconnection design of various forms of generating equipment. Many manufacturers choose to submit their equipment to a Nationally Recognized Testing Laboratory (NRTL) that verifies compliance with UL 1741. This "listing" is then marked on the equipment and supporting documentation.

DEP Air Quality Permit Needed? A generating facility may be considered a point source of emissions of concern by the Massachusetts Department of Environmental Protection (DEP). Therefore, when submitting this application, please indicate whether your generating facility will require an Air Quality Permit. You must answer these questions, however, your specific answers will not affect whether your application is deemed complete. Please contact the DEP to determine whether the generating technology planned for your facility qualifies for a DEP waiver or requires a permit.

Mail all materials to:

Attn: Energy Supply Manager, Westfield Gas and Electric

100 Elm Street, P.O. Box 990

Westfield, MA 01085

Generating Facility Expedited/Standard Interconnection Application and Agreement

Date Prepared: _____

Contact Information: *(Legal Name and address of Interconnecting Customer or Company Name, where applicable)*

Customer or Company Name (print): _____

Contact Person, if Company: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Alternative Contact Information: *(e.g., system installation contractor or coordinating company, where applicable)*

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Electrical Contractor Contact Information: *(where applicable)*

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Office): _____ (Mobile): _____

Facsimile Number: _____ E-Mail Address: _____

License Number: _____

Ownership Information: The Customer must fully own the Facility. Massachusetts General Laws prohibit a third-party from selling energy within the service territory of a municipal light department, such as WG&E. A third-party cannot maintain ownership or lease distributed generation equipment to a Customer of WG&E, instead WG&E's Customer must own the equipment outright. Any sale of energy to a Customer must be between WG&E and the Customer.

Please attach documentation which confirms customer-owned electric generation equipment such as copies of sales receipt and/or loan agreement.

Generating Facility Information

Address of Facility: _____

City: _____ State: _____ Zip Code: _____

Account Number: _____ Meter Number: _____

Type of Generating Unit: (check applicable)	☐	**Synchronous**	☐	**Inverter**	☐	**Induction**	
Manufacturer:			**Model:**				
Namplate Rating:		**(kW)**				**(kVAr)**	
						(Volts)	
	☐	**Single Phase**	☐	**Three Phase**			
System Design Capacity:		**(kW)**	**For Solar PV System, DC-STC rating:**				
		(kVA)				**(kW)**	
Prime Mover: (check applicable)	☐	**Photovoltaic**	☐	**Reciprocating Engine**	☐	**Steam Turbine**	
	☐	**Fuel Cell**	☐	**Gas Turbine**	☐	**Microturbine**	
	Other (Specify)						
Energy Source: (check applicable)	☐	**Solar**	☐	**Wind**	☐	**Fuel Oil**	
	☐	**Hydro**	☐	**Natural Gas***	☐	**Diesel**	
	Other (Specify)						
IEEE 1547.1 (UL 1741) Listed ?	☐	**YES**	☐	**NO**			
Need an Air Quality Permit from DEP ?	☐	**YES**	☐	**NO**	☐	**NOT SURE**	
If "YES", have you applied for it ?	☐	**YES**	☐	**NO**			
Planning to Export Power ?	☐	**YES**	☐	**NO**			
A Cogeneration Facility ?	☐	**YES**	☐	**NO**			
Anticipated Export Power Purchaser:							
Export Form: (check applicable)	☐	**Buy All / Sell All**					
	☐	**Purchased Power Agreement**					
	Other (Specify)						

If the energy source is Natural Gas, please contact the WG&E Engineering Department as additional forms and information will be required during the application process.

Estimated Install Date: _____ Estimated In-Service Date: _____

Agreement Needed By: _____

Interconnecting Customer Signature:

I hereby certify that, to the best of my knowledge, all of the information provided in this application is true:

Signature: _____ (Print Name): _____

Title: _____ Date: _____

Department Acknowledgement of Completed Application: *(For Department use only)*

The information provided in this application is complete:

Proof that the WG&E customer is the sole owner of the electric generation equipment. Yes ___

Department Signature: _____ (Print Name): _____

Title: _____ Date: _____

Application Number: _____

Generating Facility Technical Detail **Date:** _____

Information on components of the generating facility that are currently Listed:

	Equipment Type	Manufacturer	Model	National Standard
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____

Total Number of Generating Units in Facility: _____ Generator Unit Power Factor Rating: _____

Max. Adjustable Leading Power Factor: _____ Max. Adjustable Lagging Power Factor: _____

Generator Characteristic Data (for all inverter-based machines)

Max. Design Fault Contribution Current: _____ Instantaneous _____ or RMS: _____

Harmonic Characteristics: _____

Start-up power requirements: _____

Generator Characteristic Data (for all rotating machines)

Rotating Frequency: _____ (rpm) Neutral Grounding Resistor *(if applicable)*: _____

Additional Information for Synchronous Generating Units

Synchronous Reactance, Xd: _____ (PU) Transient Reactance, X'd: _____ (PU)

Subtransient Reactance, X''d: _____ (PU) Neg. Sequence Reactance, X_2: _____ (PU)

Zero Sequence Reactance, Xo: _____ (PU) kVA Base: _____

Field Voltage: _____ (Volts) Field Current: _____ (Amps)

Additional Information for Synchronous Generating Units

Rotor Resistance, Rr: _____ Stator Resistance, Rs: _____

Rotor Reactance, Xr: _____ Stator Reactance, Xs: _____

Magnetizing Reactance, Xm: _____ Short Circuit Reactance, Xd'': _____

Exciting Current: _____ Temperature Rise: _____

Frame Size: _____ Total Rotating Inertia, H: _____

Per Unit on kVA Base: _____

Reactive Power Required In Vars (No Load): _____

Reactive Power Required In Vars (Full Load): _____

Additional Information for Induction Generating Units that are Motor Started

Motoring Power: _____ (kW) Design Letter: _____

Interconnection Equipment Technical Detail **Date:** _____

Will a transformer be used between the generator and the point of interconnection? YES ____ NO ____

Will the transformer be provided by Interconnecting Customer? YES ____ NO ____

Transformer Data: *(if applicable, for Interconnecting Customer-Owned Transformer)*

Nameplate Rating:		**Single Phase or**		**Three Phase**		**(kVA)**	
Transformer Impedance:		**(%) on a**				**kVA Base**	
If Three Phase:							
Transformer Primary:		**(Volts)**				**Delta**	
		Wye Grounded		**Wye**		**Other**	
Transformer Secondary:		**(Volts)**				**Delta**	
		Wye Grounded		**Wye**		**Other**	

Transformer Fuse Data: *(if applicable, for Interconnecting Customer-Owned Fuse)*

(Attach copy of fuse manufacturer's Minimum Melt & Total Clearing Time-Current Curves)

Manufacturer Speed: _____ Type: _____ Size: _____

Interconnecting Circuit Breaker (if applicable):

Manufacturer: _____ Type: _____ Load Rating: _____ (Amps)

Interrupting Rating: _____ (Amps) Trip Speed: _____ (Cycles)

Interconnecting Circuit Breaker: *(if applicable)*

If microprocessor-controlled; List of Functions and Adjustable Setpoints for the protective equipment or software:

Setpoint Function	**Minimum**	**Maximum**
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____

If discrete components; Enclose copy of any proposed Time-Overcurrent Coordination Curves:

Mfg.: _____ Type: _____ Style/Catalog No.: _____ Prop. Setting: _____
Mfg.: _____ Type: _____ Style/Catalog No.: _____ Prop. Setting: _____
Mfg.: _____ Type: _____ Style/Catalog No.: _____ Prop. Setting: _____
Mfg.: _____ Type: _____ Style/Catalog No.: _____ Prop. Setting: _____
Mfg.: _____ Type: _____ Style/Catalog No.: _____ Prop. Setting: _____

Current Transformer Data: *(if applicable)*

Enclose copy of Manufacturer's Excitation & Ratio Correction Curves.

Mfg.: _____ Type: _____ Accuracy Class: _____ Prop. Ratio Conn.: _____
Mfg.: _____ Type: _____ Accuracy Class: _____ Prop. Ratio Conn.: _____

Potential Transformer Data: *(if applicable)*

Mfg.: _____ Type: _____ Accuracy Class: _____ Prop. Ratio Conn.: _____
Mfg.: _____ Type: _____ Accuracy Class: _____ Prop. Ratio Conn.: _____

General Technical Detail **Date:** _____

Enclose 3 copies of site electrical One-Line and Three-Line Diagrams showing the configuration of all generating facility equipment, current and potential circuits, and protection and control schemes, including DC schematics, with a Massachusetts registered professional engineer (PE) stamp.

Enclose 3 copies of any applicable site documentation that indicates the precise physical location of the proposed generating facility (e.g., USGS topographic map or other diagram or documentation).

Proposed Location of Protective Interface Equipment on Property: *(Include Address if Different from Application Address)*

_____

_____

_____

_____

Enclose copy of any applicable site documentation that describes and details the operation of the protection and control schemes.

Enclose copies of applicable schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).

Enclose a copy of all relay settings for both the inverters and utility grade relay and any other pertinent devices showing all set points, primary and secondary CT ratios, primary and secondary relay voltages, currents and time delay settings where applicable. For digital relays, enclose a copy or attach a file of the relay programmed settings and logic statements.

Please enclose any other information pertinent to this installation.

13.1. Certificate of Completion for Expedited/Standard Interconnection Application and Agreement

Installation Information: ☐ **Check if owner-installed**

Contact Information: *(Legal Name and address of Interconnecting Customer or Company Name, where applicable)*

Customer or Company Name (print): _____

Contact Person, if Company: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Address of Facility (if different from above): _____

City: _____ State: _____ Zip Code: _____

Electrical Contractor Contact Information: *(where applicable)*

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Office): _____ (Mobile): _____

Facsimile Number: _____ E-Mail Address: _____

License Number: _____

Date of Approval to Install Facility granted by the Department: _____

Application Number: _____

Inspection:

The system has been installed and inspected in compliance with the local Building/Electrical Code of WESTFIELD, MASSACHUSETTS

Signed (Local Electrical Wiring Inspector, or attach signed electrical inspection):

_____ _____

Signature *(Print Name)*

_____ _____

Title *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 and proof that you, the WG&E customer, are the sole owner of the electric generation equipment, to:

Attn: Engineering Manager, Westfield Gas and Electric

100 Elm Street, P.O. Box 990

Westfield, MA 01085

[SECTION BREAK INSERTED FOR PRINTING]

14. Agreement for Supplemental Analysis

This Agreement, dated _____ , is entered into by and between _____ ("Interconnecting Customer") and The Department, for the purpose of setting forth the terms, conditions and costs for conducting a Supplemental Analysis relative to the Expedited Process as defined in Section 1 and outlined in Section 3 of the Interconnection Standard. This Supplemental Analysis pertains to:

Application Number: _____ (the Interconnecting Customer's application number).

If the Supplemental Analysis determines the requirements for processing the application through the Expedited Process including any System Modifications, then the modification requirements, reasoning, and costs for these modifications will be identified and included in an executable Interconnection Service Agreement sent to the Interconnecting Customer for execution. If the Supplemental Analysis does not determine the requirements, it will include a proposed Impact Study Agreement as part of the Standard Process which will include an estimate of the cost of the study.

The Interconnecting Customer agrees to provide, in a timely and complete manner, all additional information and technical data necessary for The Department to conduct the Supplemental Analysis not already provided in the Interconnecting Customer's application.

All work pertaining to the Supplemental Analysis that is the subject of this Agreement will be approved and coordinated only through designated and authorized representatives of The Department and the Interconnecting Customer. Each party shall inform the other in writing of its designated and authorized representative, if different than what is in the application.

The Department anticipates that the Supplemental Analysis will cost $XX. No work will be performed until payment is received.

Please indicate your acceptance of this Agreement by signing below.

_____ _____

Interconnecting Customer Signature *(Print Name)*

[SECTION BREAK INSERTED FOR PRINTING]

15. Agreement for Impact Study

This Agreement, dated _____, is entered into by and between _____ ("Interconnecting Customer') and the Department, for the purpose of setting forth the terms, conditions and costs for conducting an Impact Study relative to the Standard Process as defined in Section 1 and outlined in Section 3 of the Interconnection Standard. This Impact Study pertains to:

Application Number: _____ (the Interconnecting Customer's application number).

1. The Interconnecting Customer agrees to provide, in a timely and complete manner, all additional information and technical data necessary for the Department to conduct the Impact Study not already provided in the Interconnecting Customer's application.

2. All work pertaining to the Impact Study that is the subject of this Agreement will be approved and coordinated only through designated and authorized representatives of the Department and the Interconnecting Customer. Each party shall inform the other in writing of its designated and authorized representative, if different than what is in the application.

3. Where there are other potentially Affected Systems, and no single Party is in a position to prepare an Impact Study covering all potentially Affected Systems, the Department will coordinate but not be responsible for the timing of any additional studies required to determine the impact of the interconnection request on other potentially Affected Systems. The Interconnecting Customer will be directly responsible to the potentially Affected System operators for all costs of any additional studies required to evaluate the impact of the interconnection on the potentially Affected Systems. The Department will not proceed with this Impact Study without the Interconnecting Customer's consent to have the other studies conducted.

4. If the Department determines, in accordance with Good Utility Practice, that the System Modifications to the Department EPS are not substantial, the Impact Study will determine the scope and cost of the modifications. If the Department determines, in accordance with Good Utility Practice, that the System Modifications to the Department EPS are substantial, the Impact Study will produce an estimate for the modification costs (within ±25%) and a Detailed Study Agreement and its estimated cost.

5. Impact Study, together with any additional studies contemplated in Paragraph 3, shall form the basis for the Interconnecting Customer's proposed use of the Department EPS and shall be furthermore utilized in obtaining necessary third-party approvals of any required facilities and requested distribution services. The Interconnecting Customer understands and acknowledges that any use of study results by the Interconnecting Customer or its agents, whether in preliminary or final form, prior to NEPOOL 18.4 approval, should such approval be required, is completely at the Interconnecting Customer's risk.

6. The Impact Study fee (except as noted below) is due in full prior to the execution of the Impact Study.

7. The Department will, in writing, advise the Interconnecting Customer in advance of any cost increase for work to be performed. Any such changes to the Department's costs for the work shall be subject to the Interconnecting Customer's consent. The Interconnecting Customer shall, within thirty (30) days of the Department's notice of increase, authorize such increase and make payment in the amount, or the Department will suspend the work and the corresponding agreement will terminate.

7.1. Final Accounting. Upon request by the Interconnecting Customer, the Department within ninety (90) business days after completion of the construction and installation of the System Modifications described in an attached exhibit to the Interconnection Service Agreement, shall provide Interconnecting Customer with a final accounting report of any difference between (a) Interconnecting Customer's cost responsibility under the Interconnection Service Agreement for the actual cost of such System Modifications, and (b) Interconnecting Customer's previous aggregate payments to the Department for such System Modifications. To the extent that Interconnecting Customer's cost responsibility in the Interconnection Service Agreement exceeds Interconnecting Customer's previous aggregate payments, the Department shall

invoice Interconnecting Customer and Interconnecting Customer shall make payment to the Department within forty-five (45) days. To the extent that Interconnecting Customer's previous aggregate payments exceed Interconnecting Customer's cost responsibility under this agreement, the Department shall refund to Interconnecting Customer an amount equal to the difference within forty-five (45) days of the provision of such final accounting report.

8. In the event this Agreement is terminated for any reason, the Department shall refund to the Interconnecting Customer the portion of the above fee or any subsequent payment to the Department by the Interconnecting Customer that the Department did not expend or commit in performing its obligations under this Agreement. Payments for work performed shall not be subject to refunding except in accordance with Paragraph 10 below.

9. Nothing in this Agreement shall be interpreted to give the Interconnecting Customer immediate rights to wheel over or interconnect with the Department's EPS.

10. Except as the Commonwealth is precluded from pledging credit by Section 1 of Article 62 of the Amendments to the Constitution of the Commonwealth of Massachusetts, and except as the Commonwealth's cities and towns are precluded by Section 7 of Article 2 of the Amendments to the Massachusetts Constitution from pledging their credit without prior legislative authority, Interconnecting Customer and Department shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of, or are in any manner connected with, the performance of this Agreement by that party, except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the party seeking indemnification. Notwithstanding the foregoing, the Interconnecting Customer hereby waives recourse against the Department and its Affiliates for, and releases the Department and its Affiliates from, any and all liabilities arising from or attributable to incomplete, inaccurate, or otherwise faulty information supplied by the Interconnecting Customer.

11. If either party materially breaches any of its covenants hereunder, the other party may terminate this Agreement by serving notice of sale on the other party to this Agreement.

12. This agreement shall be construed and governed in accordance with the laws of the Commonwealth of Massachusetts.

13. All amendments to this Agreement shall be in written form executed by both Parties.

14. The terms and conditions of this Agreement shall be binding on the successors and assigns of either Party.

15. This Agreement will remain in effect for a period of up to two years from its effective date.

16. This Agreement may be terminated under the following conditions.

16.1. The Parties agree in writing to terminate the Agreement.

16.2. The Interconnecting Customer may terminate this agreement at any time by providing written notice to Company.

16.3. The Department may terminate this Agreement if the Interconnecting Customer either:

16.3.1. has not paid the fee or,

16.3.2. has not responded to requests for further information in accordance with provisions in the Interconnection Standard.

16.3.3. in the event that the Facility impairs the operation of the electric distribution system or service to other customers or materially impairs the local circuit and the Interconnecting Customer does not cure the impairment.

Interconnecting Customer:

_____	_____
Signature	*(Print Name)*
_____	_____
Title	*Date*

The Department:

_____	_____
Signature	*(Print Name)*
_____	_____
Title	*Date*

[SECTION BREAK INSERTED FOR PRINTING]

16. Agreement for Detailed Study

This Agreement, dated , is entered into by and between _____ ("Interconnecting Customer') and the Department, for the purpose of setting forth the terms, conditions and costs for conducting an Impact Study relative to the Standard Process as defined in Section 1 and outlined in Section 3 of the Interconnection Standard. This Detailed Study pertains to:

Application Number: _____ (the Interconnecting Customer's application number).

1. The Interconnecting Customer agrees to provide, in a timely and complete manner, all additional information and technical data necessary for the Department to conduct the Detailed Study not already provided in the Interconnecting Customer's application.

2. All work pertaining to the Detailed Study that is the subject of this Agreement will be approved and coordinated only through designated and authorized representatives of the Department and the Interconnecting Customer. Each party shall inform the other in writing of its designated and authorized representative, if different than what is in the application.

3. Where there are other Affected Systems identified by the Impact Studies, and no single Party is in a position to prepare a Detailed Study covering all Affected Systems, the Department will coordinate but not be responsible for the timing of any additional studies required to determine the System Modifications of the interconnection request on other Affected Systems. The Interconnecting Customer will be directly responsible to the Affected System operators for all costs of any additional studies required to evaluate the impact of the interconnection on the Affected Systems. The Department will not proceed with this Detailed Study without the Interconnecting Customer's consent to have the other studies conducted.

4. The Department will provide an estimate of the costs of the System Modifications required as a result of the Detailed Study.

5. The Detailed Study, together with any additional studies contemplated in Paragraph 3, shall form the basis for the Interconnecting Customer's proposed use of the Department EPS and shall be furthermore utilized in obtaining necessary third-party approvals of any required facilities and requested distribution services. The Interconnecting Customer understands and acknowledges that any use of study results by the Interconnecting Customer or its agents, whether in preliminary or final form, prior to NEPOOL 18.4 approval, should such approval be required, is completely at the Interconnecting Customer's risk.

6. The Detailed Study fee (except as noted below) is due in full prior to the execution of the Detailed Study.

7. The Department will, in writing, advise the Interconnecting Customer in advance of any cost increase for work to be performed. Any such changes to the Department's costs for the work shall be subject to the Interconnecting Customer's consent. The Interconnecting Customer shall, within thirty (30) days of the Department's notice of increase, authorize such increase and make payment in the amount or the Department will suspend the work and the corresponding agreement will terminate.

7.1. Final Accounting. Upon request by the Interconnecting Customer, the Department within ninety (90) business days after completion of the construction and installation of the System Modifications described in an attached exhibit to the Interconnection Service Agreement, shall provide Interconnecting Customer with a final accounting report of any difference between (a) Interconnecting Customer's cost responsibility under the Interconnection Service Agreement for the actual cost of such System Modifications, and (b) Interconnecting Customer's previous aggregate payments to the Department for such System Modifications. To the extent that Interconnecting Customer's cost responsibility in the Interconnection Service Agreement exceeds Interconnecting Customer's previous aggregate payments, the Department shall invoice Interconnecting Customer and Interconnecting Customer shall make payment to the Department within forty-five (45) days. To the extent that Interconnecting Customer's previous aggregate payments exceed Interconnecting Customer's cost responsibility under this agreement, the

Department shall refund to Interconnecting Customer an amount equal to the difference within forty-five (45) days of the provision of such final accounting report.

8. In the event this Agreement is terminated for any reason, the Department shall refund to the Interconnecting Customer the portion of the above fee or any subsequent payment to the Department by the Interconnecting Customer that the Department did not expend or commit in performing its obligations under this Agreement. Payments for work performed shall not be subject to refunding except in accordance with Paragraph 9 below.

9. Nothing in this Agreement shall be interpreted to give the Interconnecting Customer immediate rights to wheel over or interconnect with the Department's EPS.

10. Except as the Commonwealth is precluded from pledging credit by Section of Article 62 of the Amendments to the Constitution of the Commonwealth of Massachusetts, and except as the Commonwealth's cities and towns are precluded by Section 7 of Article 2 of the Amendments to the Massachusetts Constitution from pledging their credit without prior legislative authority, Interconnecting Customer and Department shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of, or are in any manner connected with, the performance of this Agreement by that party, except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the party seeking indemnification.

Notwithstanding the foregoing, the Interconnecting Customer hereby waives recourse against the Department and its Affiliates for, and releases the Department and its Affiliates from, any and all liabilities arising from or attributable to information supplied by the Interconnecting Customer.

11. This agreement shall be construed and governed in accordance with the laws of the Commonwealth of Massachusetts.

12. All amendments to this Agreement shall be in written form executed by both Parties.

13. The terms and conditions of this Agreement shall be binding on the successors and assigns of either Party.

14. This Agreement will remain in effect for a period of up to two years from its effective date.

15. This Agreement may be terminated under the following conditions.

15.1. The Parties agree in writing to terminate the Agreement.

15.2. The Interconnecting Customer may terminate this agreement at any time by providing written notice to Department.

15.3. The Department may terminate this Agreement if the Interconnecting Customer either:

15.3.1. has not paid the fee or,

15.3.2. has not responded to requests for further information in accordance with provisions in the Interconnection Standard.

15.3.3. in the event that the Facility impairs the operation of the electric distribution system or service to other customers or materially impairs the local circuit and the Interconnecting Customer does not cure the impairment.

Interconnecting Customer:

_____	_____
Signature	*(Print Name)*
_____	_____
Title	*Date*

The Department:

_____	_____
Signature	*(Print Name)*
_____	_____
Title	*Date*

[SECTION BREAK INSERTED FOR PRINTING]

17. Interconnection Service Agreement

1. **Parties**. This Interconnection Service Agreement ("Agreement"), dated as of ("Effective Date") is entered into, by and between Westfield Gas and Electric, a Massachusetts municipal utility with a principal place of business at 100 Elm Street, Westfield, MA 01085 (hereinafter referred to as the "Department"), and _____, a corporation with a principal place of business at _____ (hereinafter referred to as the "Interconnecting Customer"). (The Department and Interconnecting Customer are collectively referred to as the "Parties"). Terms used herein without definition shall have the meanings set forth in Section 1.2 of the Interconnection Standard which is hereby incorporated by reference.

2. **Basic Understandings**. This Agreement provides for parallel operation of an Interconnecting Customer's Facility with the Department EPS to be installed and operated by the Interconnecting Customer at _____ (Facility name, address, and end-use customer account number, if applicable). A description of the Facility is located in Attachment 2. If the Interconnecting Customer is not the Customer, an Agreement between the Department and the Department's Retail Customer, attached as Section 18 to the Interconnection Standard, must be signed and included as an Attachment to this Agreement. The Interconnecting Customer has the right to operate its Facility in parallel with the Department EPS immediately upon successful completion of the protective relays testing as witnessed by the Department and receipt of written notice from the Department that interconnection with the Department EPS is authorized ("Authorization Date").

3. **Term**. This Agreement shall become effective as of the Effective Date. The Agreement shall continue in full force and effect until terminated pursuant to Section 4 of this Agreement.

4. **Termination**.

   4.1. This Agreement may be terminated under the following conditions.

   4.1.1. The Parties agree in writing to terminate the Agreement.

   4.1.2. The Interconnecting Customer may terminate this agreement at any time by providing sixty (60) days written notice to Department.

   4.1.3. The Department may terminate this Agreement upon the occurrence of an Event of Default by the Interconnecting Customer as provided in Section 18 of this Agreement.

   4.1.4. The Department may terminate this Agreement if the Interconnecting Customer either: (1) fails to energize the Facility within 12 months of the Authorization Date; or, (2) permanently abandons the Facility. Failure to operate the Facility for any consecutive 12 month period after the Authorization Date shall constitute permanent abandonment unless otherwise agreed to in writing between the Parties.

   4.1.5. The Department, upon 30 days notice, may terminate this Agreement if there are any changes in Department regulations or state law that have a material adverse effect on the Department's ability to perform its obligations under the terms of this Agreement.

   4.2. **Survival of Obligations**. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of termination. Sections 5, 10, 12, 13, and 25 as it relates to disputes pending or for wrongful termination of this Agreement shall survive the termination of this Agreement.

   4.3. **Related Agreements**. Any agreement attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

5. **General Payment Terms**. The Interconnecting Customer shall be responsible for the System Modification costs and payment terms identified in Attachment 4 of this Agreement and any approved cost increases pursuant to the terms of the Interconnection Standard.

   5.1. **Cost or Fee Adjustment Procedures**. The Department will, in writing, advise the Interconnecting Customer in advance of any cost increase for work to be Any such changes to the Department's costs for the work shall be subject to the Interconnecting Customer's consent. The Interconnecting Customer shall, within thirty (30) days of the Department's notice of increase, authorize such increase and make payment in the amount or the Department will suspend the work and the corresponding agreement will terminate.

   5.2. **Final Accounting**. Upon request by the Interconnecting Customer, the Department within ninety (90) business days after completion of the construction and installation of the System Modifications described in an attached exhibit to the Interconnection Service Agreement, shall provide Interconnecting Customer with a final accounting report of any difference between (a) Interconnecting Customer's cost responsibility under the Interconnection Service Agreement for the actual cost of such System Modifications, and (b) Interconnecting Customer's previous aggregate payments to the Department for such System Modifications. To the extent that Interconnecting Customer's cost responsibility in the Interconnection Service Agreement exceeds Interconnecting Customer's previous aggregate payments, the Department shall invoice Interconnecting Customer and Interconnecting Customer shall make payment to the Department within 45 days. To the extent that Interconnecting Customer's previous aggregate payments exceed Interconnecting Customer's cost responsibility under this agreement, the Department shall refund to Interconnecting Customer an amount equal to the difference within forty five (45) days of the provision of such final accounting report.

6. **Operating Requirements**

   6.1. **General Operating Requirements**. Interconnecting Customer shall operate and maintain the Facility in accordance with the applicable manufacturer's recommended maintenance schedule, in compliance with all aspects of the Department's Interconnection Standard. The Interconnecting Customer will continue to comply with all applicable laws and requirements after interconnection has occurred. In the event the Department has reason to believe that the Interconnecting Customer's installation may be the source of problems on the Department EPS, the Department has the right to install monitoring equipment at a mutually agreed upon location to determine the source of the problems. If the Facility is determined to be the source of the problems, the Department may require disconnection as outlined in Section 7.0 of the Interconnection Standard. The cost of this testing will be borne by the Department unless the Department demonstrates that the problem or problems are caused by the Facility or if the test was performed at the request of the Interconnecting Customer.

   6.2. **No Adverse Effects; Non-interference**. Department shall notify Interconnecting Customer if there is evidence that the operation of the Facility could cause disruption or deterioration of service to other Customers served from the same Department EPS or if operation of the Facility could cause damage to Department EPS or Affected Systems. The deterioration of service could be, but is not limited to, harmonic injection in excess of IEEE Standard 1547, as well as voltage fluctuations caused by large step changes in loading at the Facility. Each Party will notify the other of any emergency or hazardous condition or occurrence with its equipment or facilities which could affect safe operation of the other Party's equipment or facilities. Each Party shall use reasonable efforts to provide the other Party with advance notice of such conditions.

   The Department will operate the EPS in such a manner so as to not unreasonably interfere with the operation of the Facility. The Interconnecting Customer will protect itself from normal disturbances propagating through the Department EPS, and such normal disturbances shall not constitute unreasonable interference unless the Department has deviated from Good Utility Practice. Examples of such disturbances could be, but are not limited to, single-phasing events, voltage sags from remote faults on the Department EPS, and outages on the

Department EPS. If the Interconnecting Customer demonstrates that the Department EPS is adversely affecting the operation of the Facility and if the adverse effect is a result of a Department deviation from Good Utility Practice, the Department shall take appropriate action to eliminate the adverse effect.

6.3. Safe Operations and Maintenance. Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for, the facility or facilities that it now or hereafter may own unless otherwise specified in this Agreement. Each Party shall be responsible for the maintenance, repair and condition of its respective lines and appurtenances on their respective side of the PCC. The Department and the Interconnecting Customer shall each provide equipment on its respective side of the PCC that adequately protects the Department's EPS, personnel, and other persons from damage and injury.

6.4. Access. The Department shall have access to the disconnect switch of the Facility at all times.

6.4.1. Department and Interconnecting Customer Representatives. Each Party shall provide and update as necessary the telephone number that can be used at all times to allow either Party to report an emergency.

6.4.2. Department Right to Access Department-Owned Facilities and Equipment. If necessary for the purposes of the Interconnection Standard and in the manner it describes, the Interconnecting Customer shall allow the Department access to the Department's equipment and the Department's facilities located on the Interconnecting Customer's or Customer's premises. To the extent that the Interconnecting Customer does not own all or any part of the property on which the Department is required to locate its equipment or facilities to serve the Interconnecting Customer under the Interconnection Standard, the Interconnecting Customer shall secure and provide in favor of the Department the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

6.4.3. Right to Review Information. The Department shall have the right to review and obtain copies of Interconnecting Customer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Interconnecting Customer's Facility or its interconnection with the Department EPS. This information will be treated as customer-confidential and only used for the purposes of meeting the requirements of Section 4.2.4 in the Interconnection Standard.

7. Disconnection

7.1. Temporary Disconnection

7.1.1. Emergency Conditions. Department shall have the right to immediately and temporarily disconnect the Facility without prior notification in cases where, in the reasonable judgment of Department, continuance of such service to Interconnecting Customer is imminently likely to:

7.1.1.1. endanger persons or damage property or

7.1.1.2. cause a material adverse effect on the integrity or security of, or damage to, Department EPS or to the electric systems of others to which the Department EPS is directly connected.

Department shall notify Interconnecting Customer promptly of the emergency condition. Interconnecting Customer shall notify Department promptly when it becomes aware of an emergency condition that affects the Facility that may reasonably be expected to affect the Department EPS. To the extent information is known, the notification shall describe the emergency condition, the extent of the

damage or deficiency, or the expected effect on the operation of both Parties' facilities and operations, its anticipated duration and the necessary corrective action.

7.1.2. **Routine Maintenance, Construction and Repair**. Department shall have the right to disconnect the Facility from the Department EPS when necessary for routine maintenance, construction and repairs on the Department EPS. The Department shall provide the Interconnecting Customer with a minimum of seven calendar days planned outage notification consistent with the Department's planned outage notification protocols. If the Interconnecting Customer requests disconnection by the Department at the PCC, the Interconnecting Customer will provide a minimum of seven days notice to the Department.

7.1.3. Any additional notification requirements will be specified by mutual agreement in the Interconnection Service Agreement. Department shall make an effort to schedule such curtailment or temporary disconnection with Interconnecting Customer.

7.1.4. **Forced Outages**. During any forced outage, Department shall have the right to suspend interconnection service to effect immediate repairs on the Department EPS; provided, however, Department shall use reasonable efforts to provide the Interconnecting Customer with prior notice. Where circumstances do not permit such prior notice to Interconnecting Customer, Department may interrupt Interconnection Service and disconnect the Facility from the Department EPS without such notice.

7.1.5. **Non-Emergency Adverse Operating Effects**. The Department may disconnect the Facility if the Facility is having an adverse operating effect on the Department EPS or other customers that is not an emergency, and the Interconnecting Customer fails to correct such adverse operating effect after written notice has been provided and a maximum of 45 days to correct such adverse operating effect has elapsed.

7.1.6. **Modification of the Facility**. Department shall notify Interconnecting Customer if there is evidence of a material modification to the Facility and shall have the right to immediately suspend interconnection service in cases where such material modification has been implemented without prior written authorization from the Department.

7.1.7. **Re-connection**. Any curtailment, reduction or disconnection shall continue only for so long as reasonably necessary. The Interconnecting Customer and the Department shall cooperate with each other to restore the Facility and the Department EPS, respectively, to their normal operating state as soon as reasonably practicable following the cessation or remedy of the event that led to the temporary disconnection.

7.2. **Permanent Disconnection**. The Interconnecting Customer has the right to permanently disconnect at any time with 30 days written notice to the Department.

7.2.1. The Department may permanently disconnect the Facility upon termination of the Interconnection Service Agreement in accordance with the terms thereof.

8. **Metering**. Metering of the output from the Facility shall be conducted pursuant to the terms of the Interconnection Standard.

9. **Assignment**. Except as provided herein, Interconnecting Customer shall not voluntarily assign its rights or obligations, in whole or in part, under this Agreement without Department's written consent. Any assignment Interconnecting Customer purports to make without Department's written consent shall not be valid. Department shall not unreasonably withhold or delay its consent to Interconnecting Customer's assignment of this Agreement. Notwithstanding the above, Department's consent will not be required for any assignment made by Interconnecting Customer to an Affiliate or as collateral security in connection with a financing transaction. In all events, the Interconnecting Customer will not be relieved of its obligations under this Agreement unless, and until the assignee assumes in writing

all obligations of this Agreement and notifies the Department of such assumption.

10. **Confidentiality**. Department shall maintain confidentiality of all Interconnecting Customer confidential and proprietary information except as otherwise required by applicable laws and regulations, the Interconnection Standard, or as approved by the Interconnecting Customer in the Simplified or Expedited/Standard Application form or otherwise.

11. **Insurance Requirements**.

11.1. General Liability. In connection with Interconnecting Customer's performance of its duties and obligations under the Interconnection Service Agreement, Interconnecting Customer shall maintain, during the term of the Agreement, general liability insurance with a combined single limit of not less than:

11.1.1. Five million dollars ($5,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than five (5) MW.

11.1.2. Two million dollars ($2,000,000) for each occurrence and five million dollars ($5,000,000) in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one (1) MW and less than or equal to five (5) MW;

11.1.3. One million dollars ($1,000,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than one hundred (100) kW and less than or equal to one (1) MW;

11.1.4. Five hundred thousand dollars ($500,000) for each occurrence and in the aggregate if the Gross Nameplate Rating of Interconnecting Customer's Facility is greater than ten (10) kW and less than or equal to one hundred (100) kW, except for as provided below in subsection 11.2.

11.2. Pursuant to 220 CMR 18.03(2), no insurance is required for customers with facilities eligible for Class 1 Metering (facilities less than or equal to sixty (60) kW. However, the Department recommends that the Interconnecting Customer obtain adequate insurance to cover potential liabilities.

11.3. Any combination of General Liability and Umbrella/Excess Liability policy limits can be used to satisfy the limit requirements stated above.

11.4. The general liability insurance required to be purchased in this Section 11 may be purchased for the direct benefit of the Department and shall respond to third party claims asserted against the Department (hereinafter known as "Owners Protective Liability"). Should this option be chosen, the requirement of Section 11.1.1 will not apply but the Owners Protective Liability policy will be purchased for the direct benefit of the Department and the Department will be designated as the primary and "Named Insured" under the policy.

11.5. The insurance hereunder is intended to provide coverage for the Department solely with respect to claims made by third parties against the Department.

11.6. In the event the Commonwealth of Massachusetts, or any other governmental subdivision thereof subject to the claims limits of the Massachusetts Tort Claims Act, G.L. c. 258 (hereinafter referred to as the "Governmental Entity") is the Interconnecting Customer, any insurance maintained by the Governmental Entity shall contain an endorsement that strictly prohibits the applicable insurance Department from interposing the claims limits of G.L. c. 258 as a defense in either the adjustment of any claim, or in the defense of any lawsuit directly asserted against the insurer by the Department. Nothing herein is intended to constitute a waiver or indication of an intent to waive the protections of G.L. c. 258 by the Governmental Entity.

11.7. Notwithstanding the requirements of section 11.1 through 11.6, insurance for certain Governmental Entity facilities may be provided as set forth in section 11.7.1 and 11.7.2

below. Nothing herein changes the provision in subsection 11.1.4. that exempts Class I Net Metering facilities (less than or equal to 60 kW) from the requirement to obtain insurance. In addition, nothing shall prevent the Governmental Entity from obtaining insurance consistent with the provisions of subsection 11.1 through 11.6, if it is able and chooses to do so.

11.7.1. For solar photovoltaic (PV) facilities with a Gross Nameplate Rating in excess of 60 kW up to 500 kW, the Governmental Entity is not required to obtain liability insurance. Any liability costs borne by the Department associated with a third-party claim for damages in excess of the claims limit of the Massachusetts Tort Claims Act, M.G.L. c. 258, and market-based premium-related costs, if any, borne by the Department associated with insurance for such third-party claims shall be recovered annually on a reconciling basis in Department rates in a manner that shall be reviewed and approved by the Department.

11.7.2. For (a) PV facilities with a Gross Nameplate Rating in excess of 500 kW up to 5 MW, (b) wind facilities with a Gross Nameplate Rating in excess of 60 kW up to 5 MW, and (c) highly efficient combined heat and power facilities with a Gross Nameplate Rating of in excess of 60 kW up to 5 MW, the Governmental Entity is not required to obtain liability insurance, subject to the requirements of the following paragraph.

The Department shall either self-insure for any risk associated with possible third-party claims for damages in excess of the Massachusetts Tort Claims Act limit, or obtain liability insurance for such third-party claims, and the Department is authorized to charge and collect from the Governmental Entity its pro-rata allocable share of the cost of so doing, plus all reasonable administrative costs. The coverage and cost may vary with the size and type of facility, and may change (increase or decrease) over time, based on insurance market conditions, and such cost shall be added to, and paid for as part of the Governmental Entity's electric bill.

11.8. Insurer Requirements and Endorsements. All required insurance shall be carried by reputable insurers qualified to underwrite insurance in MA having a Best Rating of "A-". In addition, all insurance shall, include Department as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that Department shall not incur liability to the insurance carrier for payment of premium for such insurance; and (c) provide for thirty (30) calendar days' written notice to Department prior to cancellation, termination, or material change of such –insurance; provided that to the extent the Interconnecting Customer is satisfying the requirements of subpart (d) of this paragraph by means of a presently existing insurance policy, the Interconnecting Customer shall only be required to make good faith efforts to satisfy that requirement and will assume the responsibility for notifying the Department as required above.

If the requirement of clause (a) in the paragraph above prevents Interconnecting Customer from obtaining the insurance required without added cost or due to written refusal by the insurance carrier, then upon Interconnecting Customer's written Notice to Department, the requirements of clause (a) shall be waived.

11.9. Evidence of Insurance. Evidence of the insurance required shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by Interconnecting Customer.

The Interconnecting Customer is responsible for providing the Department with evidence of insurance in compliance with the Interconnection Standard on an annual basis.

Prior to the Department commencing work on System Modifications and annually thereafter, the Interconnecting Customer shall have its insurer furnish to the Department certificates of insurance evidencing the insurance coverage required above. The Interconnecting Customer shall notify and send to the Department a certificate of insurance for any policy written on a "claims-made" basis. The Interconnecting Customer will maintain extended reporting

coverage for three years on all policies written on a "claims-made" basis.

In the event that an Owners Protective Liability policy is provided, the original policy shall be provided to the Department.

11.10. Self Insurance. If Interconnecting Customer has a self-insurance program established in accordance with commercially acceptable risk management practices. Interconnecting Customer may comply with the following in lieu of the above requirements as reasonably approved by the Department:

- Interconnecting Customer shall provide to Department, at least thirty (30) calendar days prior to the Date of Initial Operation, evidence of such program to self-insure to a level of coverage equivalent to that required.
- If Interconnecting Customer ceases to self-insure to the standards required hereunder, or if Interconnecting Customer is unable to provide continuing evidence of Interconnecting Customer's financial ability to self-insure, Interconnecting Customer agrees to promptly obtain the coverage required under Section 11.1 through 11.7.

11.11. This section shall not allow any Governmental Entity to self-insure where the existence of a limitation on damages payable by a Government Entity imposed by the Massachusetts Tort Claims Act, G.L. c. 258, or similar law, could effectively limit recovery (by virtue of a cap on recovery) to an amount lower than that required in Section 11.1.1.

11.12. All insurance certificates, statements of self insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued and submitted to the following:

Attn: Energy Supply, Westfield Gas and Electric

100 Elm Street, P.O. Box 990

Westfield, MA 01085 (specific requirements)

12. Indemnification. Except as the Commonwealth is precluded from pledging credit by Section 1 of Article 62 of the Amendments to the Constitution of the Commonwealth of Massachusetts, and except as the Commonwealth's cities and towns are precluded by Section 7 of Article 2 of the Amendments to the Massachusetts Constitution from pledging their credit without prior legislative authority, Interconnecting Customer and Department shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of or are in any manner connected with the performance of this Agreement by that Party except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the Party seeking indemnification.

13. Limitation of Liability. Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including court costs and 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 or liability actually incurred. In no event shall either Party be liable to the other Party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.

14. Amendments and Modifications. No amendment or modification of this Agreement shall be binding unless in writing and duly executed by both Parties.

15. Permits and Approvals. Interconnecting Customer shall obtain all environmental and other permits lawfully required by governmental authorities for the construction and operation of the Facility. Prior to the construction of System Modifications the interconnecting customer will notify the Department that it has initiated the permitting process. Prior to the commercial operation of the Facility the

Customer will notify the Department that it has obtained all permits necessary. Upon request the Interconnecting Customer shall provide copies of one or more of the necessary permits to the Department.

16. Force Majeure. For purposes of this Agreement, "Force Majeure Event" means any event:

16.1. that is beyond the reasonable control of the affected Party; and

16.2. that the affected Party is unable to prevent or provide against by exercising commercially reasonable efforts, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war or terrorism, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lighting, storms, and other natural calamities; explosions or fire; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible. In no event will the unavailability or inability to obtain funds constitute a Force Majeure Event.

17. Notices.

17.1. Any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given on the date actually delivered in person or five (5) business days after being sent by certified mail, e-mail or fax with confirmation of receipt and original follow-up by mail, or any nationally-recognized delivery service with proof of delivery, postage prepaid, to the person

If to Department: _____

Attention: _____

Address: _____

City, State, Zip: _____

Phone: _____FAX: _____

If to Interconnecting Customer:: _____

Attention: _____

Address: _____

City, State, Zip: _____

Phone: _____FAX: _____

17.2. A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 16.1.

17.3. The Parties may also designate operating representatives to conduct the daily

communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's Notice to the other.

18. Default and Remedies

18.1. Defaults. Any one of the following shall constitute "An Event of Default."

18.1.1. One of the Parties shall fail to pay any undisputed bill for charges incurred under this Agreement or other amounts which one Party owes the other Party as and when due, any such failure shall continue for a period of thirty (30) days after written notice of nonpayment from the affected Party to the defaulting Party, or

18.1.2. One of the Parties fails to comply with any other provision of this Agreement or breaches any representation or warranty in any material respect and fails to cure or remedy that default or breach within sixty (60) days after notice and written demand by the affected Party to cure the same or such longer period reasonably required to cure (not to exceed an additional 90 days unless otherwise mutually agreed upon), provided that the defaulting Party diligently continues to cure until such failure is fully cured.

18.2. Remedies. Upon the occurrence of an Event of Default, the affected Party may at its option, in addition to any remedies available under any other provision herein, do any, or any combination, as appropriate, of the following:

18.2.1. Continue to perform and enforce this Agreement;

18.2.2. Recover damages from the defaulting Party except as limited by this Agreement;

18.2.3. By written notice to the defaulting Party terminate this Agreement;

18.2.4. Pursue any other remedies it may have under this Agreement or under applicable law or in equity.

19. Entire Agreement. This Agreement, including any attachments or appendices, is entered into pursuant to the Interconnection Standard. Together the Agreement and the Interconnection Standard represent the entire understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each Party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the Department's Interconnection Standard.

20. Supercedence. In the event of a conflict between this Agreement, the Interconnection Standard, or the terms of any other tariff, Exhibit or Attachment incorporated by reference, the terms of the Interconnection Standard, as the same may be amended from time to time, shall control. In the event that the Department files a revised tariff related to interconnection for Department approval after the effective date of this Agreement, the Department shall, not later than the date of such filing, notify the signatories of this Agreement and provide them a copy of said filing.

21. Governing Law. This Agreement shall be interpreted, governed, and construed under the laws of the Commonwealth of Massachusetts without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.

22. Non-waiver. None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

23. Counterparts. This Agreement may be signed in counterparts.

24. No Third Party Beneficiaries. This Agreement is made solely for the benefit of the Parties hereto. Nothing in the Agreement shall be construed to create any rights in or duty to, or standard of care

with respect to, or any liability to, any person not a party to this Agreement.

25. **Dispute Resolution**. Unless otherwise agreed by the Parties, all disputes arising under this Agreement shall be resolved pursuant to the Dispute Resolution Process set forth in the Interconnection Standard.

26. **Severability**. If any clause, provision, or section of this Agreement is ruled invalid by any court of competent jurisdiction, the invalidity of such clause, provision, or section, shall not affect any of the remaining provisions herein.

27. **Signatures**. IN WITNESS WHEREOF, the Parties hereto have caused two (2) originals of this Agreement to

Interconnecting Customer		**Department**	
By:	_____	By:	_____
Name:	_____	Name:	_____
Title:	_____	Title:	_____

The following attachments would be developed and included as appropriate for each specific Interconnection Service Agreement:

Attachment 1: Description of Facilities, including demarcation of Point of Common Coupling

Attachment 2: Description of System Modifications

Attachment 3: Costs of System Modifications and Payment Terms

Attachment 4: Special Operating Requirements, if any

Attachment 5: Section 19 - Reimbursement Policy

[SECTION BREAK INSERTED FOR PRINTING]

18. [REMOVED]

[SECTION BREAK INSERTED FOR PRINTING]

19. Buy All Sell All Reimbursement Policy

The following policy provisions shall be applicable to a Customer, as defined herein, that modifies existing or requests new customer-owned electric generation services from Westfield Gas & Electric after December 31, 2016, with the exception of a Customer that is an electric company, generation company, aggregator, supplier, energy marketer, or energy broker, as those terms are used in M.G.L. c. 164, §§ 1 and 220 C.M.R. 11.00.

The Customer must fully own the Facility. Massachusetts General Laws prohibit a third-party from selling energy within the service territory of a municipal light department, such as WG&E. A third-party cannot maintain ownership or lease distributed generation equipment to a Customer of WG&E, instead WG&E's Customer must own the equipment outright. Any sale of energy to a Customer must be between WG&E and the Customer.

Westfield Gas & Electric shall calculate an Electric Generation Credit as set forth below.

1. Any location with a Customer-Owned Electric Generation Facility shall be charged each Billing Period as follows:

(a) The Customer will be billed all monthly fees (by time of use if applicable) according to its rate classification and in conjunction with the Department's Customer-Owned Electric Generation Reimbursement Rider, which includes the calculated electric energy consumed at the customer site. Energy consumption is equal to the energy received from the Department plus the energy produced by the customer's generating equipment minus the energy provided to the Department.

(b) The Customer will receive an Electric Generation Reimbursement Credit equal to the product of the Department's applicable Electric Generation Reimbursement Credit rate multiplied by the metered production of the Customer's generation system.

2. For any Billing Period for which Westfield Gas & Electric calculates an Electric Generation Credit for a Customer, Westfield Gas & Electric shall apply the Credit to the Customer's account.

3. The Electric Generation Reimbursement Credit rate is based on WG&E's actual avoided cost determination for value of the generation and transmission savings, typically determined during cost of service analysis that is reviewed each January, with intervals not to exceed two years.

The provision of Customer-Owned Electric Generation Services does not entitle Westfield Gas & Electric to ownership of, or title to, the renewable energy or environmental attributes, including renewable energy certificates, associated with any electricity produced by a Customer-Owned Electric Generation Facility.

Westfield Gas & Electric reserves the right to alter this policy at any time, as necessary, to reflect changes in ISO New England markets or to correct circumstances which affect the operational integrity of the Department's distribution system.