

HOLYOKE GAS & ELECTRIC DEPT'S

Distributed Generation Policy

Effective: September 18, 2012

1. Introduction

The objective of this Policy is to promote “green” technologies in the City of Holyoke by accommodating the installation of renewable energy generating facilities by customers for the purpose of serving their own electric needs, in a manner that is beneficial to both the Customer and the other ratepayers in the City of Holyoke.

This document describes the Holyoke Gas & Electric Department's (HG&E) process and requirements for a Customer to connect a Distributed Generation (DG) system to the HG&E electric distribution system (EDS) including equipment specifications, technical, metering and operating requirements. The electric output of the DG system, hereinafter called the “Facility”, will be metered as set forth in Section 3 with pricing defined in applicable rate tariff.

All potential DG Customers must have an approved Interconnection Service Agreement with HG&E prior to the installation of a DG system. The Customer must meet all requirements in the Interconnection Service Agreement prior to commercial operation. Customers failing to follow this policy will not receive payment and may be required to disconnect the Facility.

1.1 Applicability

This Policy is applicable to any Customer who connects a Facility, which must be owned or leased and installed at such Customer's site, in Parallel with HG&E's EDS. If the Facility will always be isolated from HG&E's EDS, then this Policy does not apply (i.e., solar water heating type systems).

Third party Purchase Power Agreements (PPA's) are not allowed between such third party and Customer, since they allow generation developers to sell electricity directly to Customers competing with HG&E for that customer's sales – which is considered retail wheeling. State Law exempts municipal electric utilities such as HG&E from retail wheeling. Installations that do not meet the requirements defined above will be classified as DG Generators. DG Generators can sell to the ISO-NE wholesale markets or to third parties outside of HG&E's service territory. DG Generators may be required to register as an ISO-NE Market Participant and sign an interconnection agreement with ISO-NE in addition to the Interconnection Service Agreement with HG&E. These Customers will be charged a wheeling charge as determined by HG&E. HG&E and the DG Generator may mutually agree to enter into a PPA. Should both parties enter into a PPA, then all generation will be governed by the terms of the PPA.

1.2 Definitions

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

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

Distributed Generation (DG): A qualifying power-generating facility includes Photovoltaics, Wind, Hydroelectric, Biomass, Fuel Cells, Combined Heat and Power (CHP), and Municipal Solid Waste. A Customer may propose a different type power-generating facility and HG&E will conduct a 30 day review to determine if such facility is qualified or not under this Policy.

EDS: Electric Distribution System

Expedited Process: As described in Section 5.2, 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 point of interconnection, and all facilities ancillary and appurtenant thereto, including interconnection equipment, which the Interconnecting Customer requests to interconnect to HG&E's EDS.

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.

Interconnecting Customer: Entity that owns and/or operates the Facility interconnected to HG&E's EDS, with legal authority to enter into agreements regarding the construction or operation of the Facility.

Interconnection Service Agreement: An agreement for interconnection service between the Interconnecting Customer and HG&E.

Listed: A Facility that has successfully passed all pertinent tests to conform with IEEE Standard 1547.1-2005.

Parallel: The state of operating the Facility when electrically connected to HG&E's EDS.

Parties: The HG&E and the Interconnecting Customer.

Screen(s): Criteria by which the HG&E will determine if a proposed Facility's installation will adversely impact HG&E'S EDS in the Simplified and Expedited Processes as set forth in Section 5.

Simplified Process: As described in Section 5.1, 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 5.3, process steps from initial application to final written authorization for Facilities that do not qualify for Simplified or Expedited treatment.

System Modification: Modifications or additions to HG&E's EDS that are required for the benefit of the Interconnecting Customer.

Witness Test: The HG&E's right to witness the commissioning testing as defined in IEEE Standard 1547-2003.

1.3 Forms and Agreements

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

- Application Forms:

- a. Simplified Process application form and service agreement with Terms and Conditions (Attachment A)
- b. Expedited and Standard Process application form (Attachment B)

2. Availability

Customers wishing to install a Facility with HG&E are required to provide HG&E with all the technical information for the system and related equipment at least four weeks prior to installation and comply with all aspects of this document.

Any qualifying Facility must be located on property owned by the Customer within the City of Holyoke and must operate in Parallel with HG&E's EDS.

The credits paid for the generation output from the Facility shall be provided to the respective Customer of such Facility. In no circumstances shall the output from the Facility be provided, sold, or credited to a third party or another HG&E Customer.

- The customer must complete an Application,
- Provide a one-line diagram of the proposed Facility at the time of the application,
- Sign an Interconnection Agreement prior to commencing installation,
- Install an Itron bi-directional meter
- Install a separate Itron single-direction Facility meter,
- Comply with this Policy and HG&E's Rules and Regulations where not inconsistent with any specific provision hereof, and
- Comply with all applicable laws, regulations and standards.

HG&E, at its sole discretion, may limit the cumulative generating capacity of all DG systems within its service territory.

3. Metering

A separate single direction meter that measures all generation produced by the Facility will be installed. A bi-directional meter will be placed at the main service location that measures net consumption. These meters will be added together on the customer's account for electricity consumption billing and additionally all received electricity (produced by Facility) will be credited at the applicable tariff rate. For example, if the meter measuring the distributed generation reads 500 kWh and the bi-directional meter measuring consumption into and out of the house reads 300 kWh, then the 500 kWh will be added back to the bi-directional meter to get a reading of 800 kWh, which would be the consumption the house would normally see for that month. A monthly meter charge will be included that will cover the cost for maintenance of the meter.

HG&E shall furnish, read and maintain all revenue metering equipment. The Interconnecting Customer shall furnish, install and maintain all meter mounting equipment such as or including meter sockets, test switches, conduits and enclosures.

Billing shall be performed on a monthly basis as part of the normal meter reading and billing cycle. Customers will be charged on their monthly bill for all metered purchases (kWh delivered to customer) based on their rate class independently of the generation produced from the Facility. Metered sales (kWh delivered to HG&E from the Facility) will be credited based on applicable tariff rate.

Any sales may not be transferred to other accounts or meters assigned to the Customer besides that of the account where the Facility is located. In the event that the respective billing account changes ownership,

any sales will be transferred to the new owner with verification from Customer associated with such change and date associated therewith and the HG&E will require a resubmitted interconnection application depicting the new Customer and Interconnecting Customer, if different.

4. Interconnection

Interconnecting Customer intends to install a Facility that will be connected electrically to HG&E's EDS and operate in Parallel, synchronized with the voltage and frequency maintained by HG&E 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 HG&E's EDS in accordance with Good Utility Practice. The Interconnecting Customer and HG&E shall enter into an Interconnection Service Agreement, with exception of those Facilities that meet the Simplified screening.

The interconnection of the Facility with the HG&E EDS must be reviewed for potential impact to the HG&E EDS as described in Section 5, must meet the technical requirements of Section 6 and must be operated as described in Section 7. Any upgrades or system modifications to the HG&E EDS ("System Modifications") in order to accommodate interconnection of the Facility will be made by HG&E. In addition to the cost associated with the installation and construction of the Facility, the Interconnecting Customer shall be responsible for all HG&E study, metering, and System Modification costs, if applicable. All fees related to the interconnection process are payable in advance of work being performed.

The Interconnecting Customer should consult HG&E before designing, purchasing or installing any generating 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. HG&E will in no way be responsible for damages sustained as a result of the Interconnecting Customer's failure to ascertain the electric service characteristics at the proposed interconnection point.

The Facility should be operated in such a manner that it does not compromise, or conflict with, the safety or reliability of the HG&E EDS. The Interconnecting Customer should design its equipment in such a manner that faults or other disturbances on the HG&E EDS do not cause damage to the Interconnecting Customer's equipment. In addition to pre-construction analysis and review, HG&E reserves the right to conduct post-construction audits and inspections of operating Facilities and if any concerns are identified HG&E may disconnect Facility and require that either on-site Customer protective equipment be installed and/or that Customer pay for any necessary EDS System Modifications to remove such concern.

Authorization to interconnect will be provided once the Interconnecting Customer has met all terms of the interconnection process as outlined in this document. This Policy does not cover the use of the HG&E EDS to export power or the purchase of excess power.

5. Process Overview

There are four basic paths described below for interconnection of the Interconnecting Customer's Facility to the HG&E EDS.

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.

Expedited – This is for Listed Facilities that pass certain pre-specified Screens on radial HG&E systems.

Standard – This is for all Facilities not qualifying for either the Simplified or Expedited interconnection processes on radial HG&E systems. Connecting to the HG&E network independent of size will require this path.

Power Purchase Agreement – HG&E and the Customer may mutually agree to enter into a Purchase Power Agreement. Should both parties enter into a PPA, then all generation and pricing will be governed by the terms of the PPA. As noted in Section 1.1, PPA's between the Customer and a third party (ie, solar developer/owner) are not allowed.

All proposed new Facilities without respect to ownership, dispatch control or prime mover that will operate in Parallel with the HG&E EDS must submit a completed application and pay the appropriate application fee to the HG&E. Interconnecting Customers that are not likely to qualify for the Simplified or Expedited Process may opt to go directly onto the Standard Process path. Interconnecting Customers proposing to interconnect on the HG&E Network system will also go directly onto the Standard Process path. All other Interconnecting Customers must proceed through a series of Screens to determine their ultimate interconnection process path.

There is no application fee for Facilities that qualify for the Simplified Process. Expedited and Standard Process fees will be determined on a case-by-case basis.

5.1 Simplified Process

Interconnecting Customers using Listed single-phase inverter-based Facilities with power ratings of 10 kW or less receiving single-phase service from a single phase transformer, or using Listed three-phase inverter-based Facilities with power ratings 25 kW or less receiving three-phase service from a three-phase transformer configuration, and requesting an interconnection on a radial feeder where the aggregate Facility capacity on the circuit is less than 7.5% of the circuit annual peak load qualify for Simplified interconnection.

The Simplified Process is as follows:

- a. Interconnecting Customer submits a Simplified Process application.
- b. HG&E verifies Facility equipment passes the Screens for Simplified Process.
 - Radial Feeder
 - Power rating < 7.5% of feeder peak
 - Listed (UL 1741)
 - Power rating \leq 10 kW single-phase or \leq 25 kW three-phase
 - Service type
- c. If approved, HG&E signs the application and sends a copy to the Interconnecting Customer along with a cost estimate for any necessary modifications to the HG&E EDS.
- d. 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 Inspector, and/or other authority having jurisdiction, and this person signs the Certificate of Completion.
- e. The Interconnecting Customer returns the Certificate of Completion to the HG&E.
- f. HG&E will inspect the Facility for compliance with this Policy.

- g. The HG&E authorizes the Facility to operate in Parallel.

5.2 Expedited Process

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. Interconnecting Customer submits an Expedited / Standard Process application.
- b. HG&E verifies Facility equipment passes the Screens for Expedited Process.
 - Radial Feeder
 - Power rating < 15% of feeder peak
 - Listed (UL 1741)
 - Power rating \leq 50 kW single-phase or \leq 150 kW three-phase
 - Service type
 - Voltage drop on start < 2.5% primary and 5.0% for secondary
 - Compliance with IEEE Standards 1547 and 1547.1.
 - Fault current contribution < 10% of the feeder fault current
 - Transient stability appropriate for feeder
- c. HG&E may conduct internal studies as to identify System Modifications to the EDS made necessary by the Facility.
- d. HG&E prepares and sends the Interconnecting Customer a cost estimate and an appropriate executable Interconnection Service Agreement.
- e. If one or more Screens are not passed the Facility will become subject to the Standard Process.
- f. Interconnecting Customer returns the signed Interconnection Service Agreement.
- g. HG&E executes the Interconnection Service Agreement.
- h. Interconnecting Customer completes installation and, upon receipt of payment, the HG&E completes System Modifications as required.
- i. HG&E inspects completed installation for compliance with this Policy and attends a Witness Test. Then the Interconnecting Customer arranges for inspection of the completed installation by the local Electrical Inspector, and/or other authority having jurisdiction, and this person signs the Certificate of Completion.
- j. Interconnecting Customer sends Certificate of Completion to HG&E.
- k. The HG&E authorizes the Facility to operate in Parallel.

5.3 Standard Process

All Facilities not qualified for the Simplified Process or the Expedited Process must use the Standard Process.

The Standard Process is as follows:

- a. Interconnecting Customer submits an Expedited / Standard Process application.

- b. HG&E will conduct an initial review of the application. A meeting will be held between HG&E and the Interconnecting Customer. At this meeting, HG&E will provide the Interconnecting Customer with pertinent information.
- c. HG&E will provide a cost estimate for the study to determine any System Modifications to the EDS that are required.
- d. Interconnecting Customer pays for study.
- e. The HG&E will perform the study and determine the cost of required System Modifications.
- f. HG&E prepares and sends the Interconnecting Customer a cost estimate and an appropriate executable Interconnection Service Agreement.
- g. Interconnecting Customer returns the signed Interconnection Service Agreement.
- h. HG&E executes the Interconnection Service Agreement.
- i. Interconnecting Customer completes installation and, upon receipt of payment, the HG&E completes System Modifications as required.
- j. HG&E inspects completed installation for compliance with this Policy and attends a Witness Test. Then the Interconnecting Customer arranges for inspection of the completed installation by the local Electrical Inspector, and/or other authority having jurisdiction, and this person signs the Certificate of Completion.
- k. Interconnecting Customer sends Certificate of Completion to HG&E.
- l. The HG&E authorizes the Facility to operate in Parallel.

6. Interconnection Requirements

Interconnecting Customer shall design and construct the Facility in accordance with the applicable manufacturer's instructions and in compliance with Good Utility Practices and the requirements of this Policy.

Requirements are as follows:

- a. **Permits and Regulatory Approvals** - The Customer shall be solely responsible for obtaining and maintaining all City, State, and Federal authorizations, permits, licenses and other approvals required for the construction, operation, maintenance, and repair of the generation Facility throughout the operating term thereof. The Customer shall provide proof of such to the Department upon request.
- b. **Transient Voltage Conditions** – Because of unusual events on the HG&E EDS, there will be transient voltage fluctuations that will result in voltages exceeding the limits of the stated ranges. The Facility must be designed to handle these transient conditions.
- c. **Noise and Harmonics** – Noise and harmonics levels shall not exceed those allowed in the most current IEEE Standard 1547.

- d. **Frequency** – The HG&E EDS generally operates at 60 hertz. Instantaneous deviations from 60 hertz occur infrequently and may be as much as +/- two tenths of a cycle. The Facility should be designed to handle these transient conditions.
- e. **Machine Reactive Capability** – Facilities < 1 megawatt (“MW”) will not be required to provide reactive capability. Facilities \geq 1 MW may be required to provide reactive capability to regulate and maintain distribution system voltage within an acceptable range.
- f. **Protection Requirements** – In addition to any further HG&E requirements as part of the application process, any Facility to be interconnected with the HG&E distribution system must comply with the standards listed below.
 - IEEE Standard 1547, Latest.
 - UL Standard 1741.
 - IEEE Standard 929-2000

7. Operating Requirements

Interconnecting Customer shall operate and maintain the Facility in accordance with the applicable manufacturer’s recommended maintenance schedule and in compliance with Good Utility Practices and all requirements of this Policy.

Requirements are as follows:

- a. **No Adverse Effects; Non-Interference** - HG&E 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 by HG&E or if operation of the Facility could cause damage to the HG&E EDS. Each party shall notify the other of any emergency or hazardous condition or occurrence with its equipment or facilities that could affect the safe operation of the other party’s equipment or facilities.

The HG&E will operate the EDS in such a manner so as not to unreasonably interfere with the operation of the Facility. The Interconnecting Customer will protect itself from normal disturbances propagating through the HG&E EDS. Such normal disturbances shall not constitute unreasonable interference.

- b. **Safe Operation and Maintenance** - Each Party shall operate, maintain, repair and inspect and shall be fully responsible for the facilities it owns. The HG&E and the Interconnecting Customer shall each provide equipment on its respective side of the interconnection point that adequately protects the HG&E EDS, personnel and other persons from damage and injury.
- c. **Access** - The HG&E shall have access to the disconnect switch of the Facility at all times.

8. Disconnection

The HG&E may temporarily disconnect the Facility, in its sole discretion, for the following:

- a. **Emergency Conditions** – Immediate temporary disconnection. In the event that Facility damages HG&E’s EDS or any of HG&E’s customers’ equipment or wiring, the Customer shall be solely responsible for all costs associated with the repair and/or replacement of damaged portion of such system, equipment, and/or wiring; until this condition is satisfied, HG&E reserves right to keep Facility disconnected.
- b. **Routine Maintenance, Construction and Repair** – Temporary disconnection with appropriate notice.

- c. **Forced Outages** – Immediate temporary disconnection.
- d. **Non-Emergency Adverse Operating Effects** – Temporary disconnection with appropriate notice.
- e. **Modification of the Facility** – Immediate temporary disconnection. Reconnection only after Interconnecting Customer proves satisfactory compliance with this policy.

The HG&E and/or the Interconnecting Customer may permanently disconnect the Facility per the following; subject to HG&E terminating service with sufficient notice that it is doing so because the Facility i) failed to operate for any consecutive twelve-month period, ii) impairs the operation of HG&E's EDS or service to other customers or materially impairs the local circuit or iii) has not complied with this Policy or other applicable City, State or Federal requirements and the Customer does not cure after a sixty (60) day notice the problem at its sole expense.

a. Simplified Process – Either party may permanently disconnect the Facility upon sixty (60) days advance written notice to the other party.

b. Expedited/Standard Process – Either party may permanently disconnect the Facility in accordance with their contractual agreement.

9. Limitation of Liability, Indemnification, and Insurance

HG&E shall not be liable, directly or indirectly, to the Customer or any other person for any loss, injury, damage, casualty, fees or penalties, asserted on the basis of any theory, arising from, related to or caused by the construction, installation, operation, maintenance or repair of the Facility, and associated equipment and wiring, except to the extent of its own gross negligence or willful misconduct, but only to the extent permitted by law. Neither by inspection nor non-rejection nor in any other way does HG&E give any warranty, expressed or implied as to the adequacy, safety or other characteristics of any equipment, wiring or devices, installed on the Customer's premises, including the Facility. HG&E will not be held liable for any financial harm that this Policy or modifications to this Policy cause the Customer, Interconnecting Customer, and/or the Facility.

The Customer shall indemnify and hold harmless HG&E, its board members, managers, employees, agents, consultants, attorneys and assigns from and against any and all losses, claims, damages, costs, demands, fines, judgments, penalties, payments and liabilities, together with any costs and expenses (including attorneys' fees) incurred in connection with, resulting from, relating to or arising out of the construction, operation, maintenance and repair of the Facility, including the Customer's failure to comply with this Policy or any abnormality or failure in the operation of the Facility, or any adverse impact to HG&E's EDS or its other customers.

The Customer shall maintain sufficient insurance to cover any damage to HG&E's system caused by the construction, operation, maintenance and repair of the Facility and shall name HG&E as an additional insured. The Customer shall provide HG&E with proof of satisfactory insurance upon request by HG&E.

10. Amendments/Modification

The terms and conditions of this Distributed Generation Policy are subject to amendment and/or modification at any time by the HG&E, in its sole discretion, for the protection of its distribution system, service territory, or its customers. The Interconnecting Customer agrees to be bound by any such amendment and/or modification.



Simplified Process Interconnection Application and Service Agreement

Contact Information: Date Prepared: _____
 Legal Name and Address of Interconnecting Customer (or, Company name, if appropriate)
 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, if appropriate):
 Name: _____
 Mailing Address: _____
 City: _____ State: _____ Zip Code: _____
 Telephone (Daytime): _____ (Evening): _____
 Facsimile Number: _____ E-Mail Address: _____

Electrical Contractor Contact Information (if appropriate):
 Name: _____ Telephone: _____
 Mailing Address: _____
 City: _____ State: _____ Zip Code: _____

Facility Information:
 Address of Facility: _____
 City: _____ State: _____ Zip Code: _____
 Electric Service Company: _____ Account Number: _____ Meter Number: _____
 Electricity Supply Company: _____ Account Number: _____
 Generator/Inverter Manufacturer: _____ Model Name and Number: _____ Quantity: _____
 Nameplate Rating: _____ (kW) _____ (kVA) _____ (AC Volts) Single ___ or Three ___ Phase
 System Design Capacity: _____ (kVA) _____ (kVA) Battery Backup: Yes _____ No _____
 Net Metering: If Renewably Fueled, will the account be Net Metered? Yes _____ No _____
 Prime Mover: Photovoltaic
 Energy Source: Solar Wind Hydro Diesel Natural Gas Fuel Oil Other _____
 UL 1741.1 (IEEE 1547.1) Listed? Yes _____ No _____ External Manual Disconnect: Yes _____ No _____
 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:
 Customer Signature: _____ Title: _____ Date: _____

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

Approval to Install Facility (For Company 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 ___)
 Company Signature: _____ Title: _____ Date: _____
 Application ID Number: _____ Company Waives inspection/Witness Test Yes No

TERMS AND CONDITIONS FOR SIMPLIFIED INTERCONNECTIONS

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 Company.
2. Interconnection and operation. The Interconnecting Customer may operate the Facility and interconnect with the Company's system once the following has occurred:
 - 2.1. Terms and Conditions: Customer returns signed copy of this form to Company at address noted.
 - 2.2. Inverter Documentation: Customer submits documentation indicating IEEE 1547 / UL1741 listing.
 - 2.3. Municipal Inspection: Upon completing construction, the Interconnecting Customer will cause the Facility to be inspected or otherwise certified by the local electrical wiring inspector with jurisdiction.
 - 2.4. Certificate of Completion: The Interconnecting Customer returns the Certificate of Completion to the Company at address noted.
 - 2.5. Company has completed or waived the right to inspection. If witness test is deemed waived, customer submits photographs of installed distributed generation system and external AC disconnect switch.
 - 2.6. Company has issued interconnection approval.
3. Company Right of Inspection. Within ten (10) business days after receipt of the Certificate of Completion, the Company 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 Company Rules and Regulations. The Company has the right to disconnect the Facility in the event of improper installation or failure to return Certificate of Completion. If the Company does not inspect in 10 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 Company shall have access to the disconnect switch (if required) of the Facility at all times.
6. Disconnection. The Company may temporarily disconnect the Facility to facilitate planned or emergency Company work.
7. Metering and Billing. All Facilities approved under this Agreement qualify for Distributed Generation, as approved by HG&E from time to time, and must comply with Section 3 of the Distributed Generation Policy.
8. Indemnification. Interconnecting Customer and Company 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 Company.

10.3. By the Company. The Company may terminate this Agreement (1) if the Facility fails to operate for any consecutive 12 month period, or (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 Company.

12. Interconnection: Rules and Regulations and any other applicable requirements previously stated by Company to Customer in the Purchase and Sale Agreement.

Customer Signature

I hereby certify that, to the best of my knowledge, all of the information provided in the application is true and I agree to the Terms and Conditions above.

Interconnecting Customer Signature: _____

Interconnecting Customer Name (Printed): _____

Interconnection Application ID#: _____

Title: _____ Date: _____

As a condition of interconnection you are required to send (email preferred) a signed copy of this form to:

Name: Brian Beauregard
Company: City of Holyoke Gas & Electric Department
Address: 99 Suffolk Street
Holyoke, MA 01040
Email: bbeauregard@hged.com



EXPEDITED/STANDARD PROCESS INTERCONNECTION APPLICATION

Date Prepared: _____

Contact Information:

Legal Name and address of Interconnecting Customer applicant (or, if an Individual, Individual's Name)
Company Name: _____ Contact Person: _____

Mailing _____ Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Alternative Contact Information (if different from Applicant)

Name: _____

Mailing _____ Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Ownership (include % ownership by any electric utility): _____

Confidentiality Statement: "I agree to allow information regarding the processing of my application (without my name and address) to be reviewed by the Massachusetts DG Collaborative that is exploring ways to further expedite future interconnections." Yes ___ No ___

Generating Facility Information

Location (if different from above): _____

Electric Service Company: HG&E Account Number (if available): _____

Type of Generating Unit: Synchronous _____ Induction _____ Inverter _____

Manufacturer: _____ Model: _____

Nameplate Rating: _____ (kVAR) _____ (Volts) _____ Single _____ or 3 _____ Phase

System Total Design Capacity: _____ (KW DC_{STC}) _____ (kVA)

Prime Mover: Fuel Cell ___ Recip Engine ___ Gas Turb ___ Steam Turb ___ Microturbine ___ PV ___ Other ___

Energy Source: Solar ___ Wind ___ Hydro ___ Diesel ___ Natural Gas ___ Fuel Oil ___ Other _____ (Specify)

IEEE 1547.1 (UL 1741) Yes ___ No ___

Need an air quality permit from DEP? Yes ___ No ___ Not Sure ___

If "yes", have you applied for it? Yes ___ No ___

Is there other electrical work being done in the facility? Yes ___ No ___



Planning to Export Power? Yes ___ No ___ A Cogeneration Facility? Yes ___ No ___
 Anticipated Export Power Purchaser: _____
 Fixed Capacity Reservation contracted amount under Power Wheeling Service _____
 Export Form? Simultaneous Purchase/Sale ___ Net Purchase/Sale ___ Net Metering ___ Other _____ (Specify)
 Est. Install Date: _____ Est. In-Service Date: _____ Agreement Needed By: _____

Application Process

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

Interconnecting Customer Signature: _____ Title: _____ Date: _____

The information provided in this application is complete:

Company Signature: _____ Title: _____ Date: _____

Generating Facility Technical Detail

List components of the generating facility that are currently certified and/or listed to national standards

	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?

Harmonics _____ 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, X_d: _____ (PU) Transient Reactance, X'_d: _____ (PU)

Subtransient Reactance, X''_d: _____ (PU) Neg Sequence Reactance, X₂: _____ (PU)

Zero Sequence Reactance, X₀: _____ (PU) KVA Base: _____

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



Additional information for Induction 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 started by motoring

Motoring Power: _____ (KW) Design Letter: _____

Interconnection Equipment Technical Detail

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: _____ (kVA) Single ___ or Three ___ Phase
 Transformer Impedance: _____ (%) on a _____ KVA Base
 If Three Phase:
 Transformer Primary: _____ (Volts) ___Delta ___ Wye ___ Wye Grounded ___ Other
 Transformer Secondary: _____ (Volts) ___Delta ___ Wye ___ Wye Grounded ___ 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: _____ Type: _____ Size: _____ Speed: _____

Interconnecting Circuit Breaker (if applicable):

Manufacturer: _____ Type: _____ Load Rating: _____ Interrupting Rating: _____ Trip Speed: _____
 (Amps) (Amps) (Cycles)

Interconnection Protective Relays (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. _____	_____	_____
6. _____	_____	_____



(If discrete components)

(Enclose copy of any proposed Time-Overcurrent Coordination Curves)

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Current Transformer Data (if applicable):

(Enclose copy of Manufacturer's Excitation & Ratio Correction Curves)

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection:

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection:

Potential Transformer Data (if applicable):

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

General Technical Detail

Enclose 3 copies of site electrical One-Line Diagram showing the configuration of all generating facility equipment, current and potential circuits, and protection and control schemes with an Electrical registered professional engineer (PE) stamp in the state of Massachusetts.

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).

Please enclose any other information pertinent to this installation.



Certificate of Completion for Expedited/Standard Process Interconnections

Installation Information:

Check if owner-installed

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): _____

Electrical Contractor's Name (if appropriate): _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

License number: _____

Date of approval to install Facility granted by the Company: _____

Application ID number: _____

Inspection:

The system has been installed and inspected in compliance with the local Building/Electrical Code of _____
(City/County)

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

Name (printed): _____

Date: _____

As a condition of interconnection you are required to send/fax a copy of this form along with a copy of the signed electrical permit to the person listed below at HG&E:

Name: Brian Beauregard
Company: Holyoke Gas & Electric
Address: 99 Suffolk Street
City, State ZIP: Holyoke, MA 01040
Fax No.: 413-536-9353
E-mail: bbeauregard@hged.com