



EXPEDITED/STANDARD PROCESS INTERCONNECTION APPLICATION INSTRUCTIONS

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. Once complete, please sign and attach the supporting documentation requested.

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

Ownership Information: Please enter the legal names of the owner or owners of the generating facility. Include the percentage ownership (if any) by any electric service company (utility) or public utility holding company, or by any entity owned by either.

Confidentiality Statement: In an ongoing effort to improve the interconnection process for Interconnecting Customer-owned generating facilities, 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 Telecommunications and Energy (DTE). 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 generating facility location will not be shared.

Generating Facility Information – IEEE 1547 / UL1741 Listed This standard (“Inverters, Converters, and Controllers for Use in Independent Power Systems”) addresses the electrical interconnection design of various forms of generating equipment. Many manufacturers choose to submit their equipment to a Nationally Recognized Testing Laboratory (NRTL) that verifies compliance with UL1741. This “listing” is then marked on the equipment and supporting documentation.

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.



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: _____ Account Number (if available): _____ Type of

Generating Unit: Synchronous _____ Induction _____ Inverter _____ Manufacturer:

_____ Model: _____

Nameplate Rating: _____ (KW) _____ (kVAR) _____ (Volts) Single _ or Three _ Phase Prime Mover: Fuel

Design Capacity: _____ (KW)

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 ___



Planning to Export Power? Y e s ___ No ___ A Cogeneration Facility? Y e s ___
No ___ Anticipated Export Power Purchaser:

_____ 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. _____

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, Xd: (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, R_r: Stator Resistance, R_s:

Rotor Reactance, X_r: Stator Reactance, X_s:

Magnetizing Reactance, X_m: Short Circuit Reactance, X_d'':

Exciting Current: Temperature Rise:

Frame Size:

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

Potential Dat

Transformappla a
ble): (if

Manufacturer: Type: T_{vne}: Accuracy Class: Proposed Ratio Connection:



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

(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: _____

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____



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:

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 a Massachusetts-registered professional engineer (PE) stamp.

Subtransient Reactance, X''_d :	(PU)	Neg Sequence Reactance, X_2 :	(PU)
Zero Sequence Reactance, X_0 :	(PU)	KVA Base:	
Field Voltage:	(Volts)	Field Current:	(Amps)
Additional information for Induction Generating Units			
Rotor Resistance, R_r :		Stator Resistance, R_s :	
Rotor Reactance, X_r :		Stator Reactance, X_s :	
Magnetizing Reactance, X_m :		Short Circuit Reactance, X_d'' :	
Exciting Current:		Temperature Rise:	
Frame Size:			

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 Hingham, MA

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

Name (Printed): _____

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 Hingham Municipal Lighting Plant:

Name: Stephen Girardi
Email: sgirardi@hmlp.com
Company: Hingham Municipal Lighting Plant
Address: 31 Bare Cove Park Dr.
Hingham, MA 02043
Phone: 781-749-8315 x 214
Fax: 781-749-3524