Interconnection Request for A Small Generating Facility

The undersigned Interconnection Customer submits this request to interconnect its Small Generating Facility in the New England Control Area. The customer's proposed activities for the Generating Facility and the Point of Interconnection shall determine whether the procedures in Schedule 23 of the ISO New England Inc. Open Access Transmission Tariff or State-jurisdictional procedures will apply to the proposed interconnection.

This request form should be used for: (i) proposed generating facilities with Generating Facility Capacity of 20 MW or less; (ii) proposed Material Modifications to existing generating facilities with Generating Facility Capacity of 20 MW or less; and (iii) proposed increases in capacity of existing generating facilities where the proposed total Generating Facility Capacity will be less than or equal to 20 MW.[1]

The customer should submit its request to interconnect a Small Generating Facility to ISO New England Inc.

Transmission Provider:	**ISO New England Inc.**
Designated Contact Person:	**Dave Forrest**
Address:	**1 Sullivan Road, Holyoke, MA 01040-2841**
Telephone Number:	**413-540-4584**
Fax:	**413-540-4203**
E-Mail Address:	**dforrest@iso-ne.com**

Check for 2 MW or less _____

Check for larger than 2 MW but no larger than 20 MW _____

An Interconnection Request is considered complete when it provides all applicable and correct information required below. Per SGIP Section 1.5, documentation of site control must be submitted with the Interconnection Request.

Preamble and Instructions

An Interconnection Customer who requests a Federal Energy Regulatory Commission jurisdictional interconnection must submit this Interconnection Request by hand delivery, mail, e-mail, or fax to ISO New England Inc.

Processing Fee or Deposit

If the Interconnection Request is submitted under the Fast Track Process, the non-refundable processing fee is $500.

If the Interconnection Request is submitted under the Study Process, whether a new submission or an Interconnection Request that did not pass the Fast Track Process, the Interconnection Customer shall submit to ISO New England Inc. a non-refundable deposit of $1,000 towards the cost of the scoping meeting and the interconnection studies.

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[1] **Generating Facility Capacity** is the maximum gross megawatt electrical output at an ambient temperature of 20 degrees F of the Generating Facility and the aggregate maximum gross megawatt electrical output of the Generating Facility at an ambient temperature of 20 degrees F where it includes multiple energy production devices.

Interconnection Customer Information

Legal Name of the Interconnection Customer (or, if an individual, individual's name)

Name: _____

Contact Person: _____

Mailing Address: _____

City: _____ **State:** _____ **Zip:** _____

Facility Location (if different from above): _____

Telephone (Day): _____**Telephone (Evening):** _____

Fax: _____ **E-Mail Address:** _____

Alternative Contact Information (if different from the Interconnection Customer)

Contact Name: _____

Title: _____

Address: _____

_____

Telephone (Day): _____ **Telephone (Evening):** _____

Fax: _____**E-Mail Address:** _____

Project Information

ISO New England Inc. will post the Project Information for Generating Facilities on its web site at:
http://www.iso-ne.com/genrtion_resrcs/nwgen_inter/status/index.html

Application is for:
_____New Small Generating Facility
_____Capacity addition to or Material Modification of an Existing Small Generating Facility
_____Commencement of participation in the wholesale markets by an Existing Small Generating Facility

If capacity addition to or Material Modification of an existing facility, please describe: _____
_____

If the capacity addition increases the maximum gross megawatt electrical output at an ambient temperature of 20 degrees F of the Generating Facility to more than 20 MW, the Interconnection Customer, Schedule 22 shall apply.

Will the Small Generating Facility be used for any of the following?

Net Metering? Yes ___ No ___
To Supply Power to the Interconnection Customer? Yes ___No ___
To Supply Power to Others? Yes _____No _____

Is the Interconnection Request for:

A retail customer interconnecting a new Small Generating Facility that will produce electric energy to be consumed only on the retail customer's site? Yes_____No_____

A Qualifying Facility where 100% of the output will be sold to its host utility? Yes_____No_____

An Interconnection Customer interconnecting a new Small Generating Facility that plans to participate in the wholesale markets? Yes_____No_____

An existing Small Generating Facility commencing participation in the wholesale markets? Yes_____No_____

For installations at locations with existing electric service to which the proposed Small Generating Facility will interconnect, provide:

_____ _____
(Local Electric Service Provider) (Existing Account Number)

Contact Name: _____

Title: _____

Address: _____

_____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____E-Mail Address: _____

Requested Point of Interconnection: _____

Interconnection Customer's Requested In-Service Date: _____

Small Generating Facility Information

Data apply only to the Small Generating Facility, not the Interconnection Facilities.

Energy Source: ___ Solar ___ Wind ___ Hydro ___ Hydro Type (e.g. Run-of-River):_____
Diesel ___ Natural Gas ___ Fuel Oil ___ Other (state type) _____

Prime Mover: ___Fuel Cell ___Recip Engine ___Gas Turb ___Steam Turb
___Microturbine ___PV ___Other

Type of Generator: ____Synchronous ____Induction ____ Inverter

Generator Nameplate Rating: _____kW (Typical) Generator Nameplate kVAR: _____

Interconnection Customer or Customer-Site Load: _____kW (if none, so state)

Typical Reactive Load (if known): _____

Maximum Physical Export Capability Requested: _____kW

List components of the Small Generating Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

Is the prime mover compatible with the certified protective relay package? ____Yes ____No

Generator (or solar collector)
Manufacturer, Model Name & Number: _____
Version Number: _____

Nameplate Output Power Rating in kW: (Summer) _____ (Winter) _____
Nameplate Output Power Rating in kVA: (Summer) _____ (Winter) _____

Individual Generator Power Factor
Rated Power Factor: Leading: _____Lagging: _____

Total Number of Generators in wind farm to be interconnected pursuant to this Interconnection Request: _____ Elevation: _____ ___Single phase ___Three phase

Inverter Manufacturer, Model Name & Number (if used): _____

List of adjustable set points for the protective equipment or software: _____

Note: A completed Power Systems Load Flow data sheet must be supplied with the Interconnection Request.

Small Generating Facility Characteristic Data (for inverter-based machines)

Max design fault contribution current: _____ Instantaneous ___ or RMS? _____

Harmonics Characteristics: _____

Start-up requirements: _____

Small Generating Facility Characteristic Data (for rotating machines)

RPM Frequency: _____
Neutral Grounding Resistor (If Applicable): _____

Synchronous Generators

Direct Axis Synchronous Reactance, Xd: _____ P.U.
Direct Axis Transient Reactance, X'_d: _____ P.U.
Direct Axis Subtransient Reactance, X''_d: _____ P.U.
Negative Sequence Reactance, X_2: _____ P.U.
Zero Sequence Reactance, X_0: _____ P.U.
KVA Base: _____
Field Volts: _____

Field Amperes: _____

Induction Generators

Motoring Power (kW): _____
I_2^2t or K (Heating Time Constant): _____
Rotor Resistance, Rr: _____
Stator Resistance, Rs: _____
Stator Reactance, Xs: _____
Rotor Reactance, Xr: _____
Magnetizing Reactance, Xm: _____
Short Circuit Reactance, Xd'': _____
Exciting Current: _____
Temperature Rise: _____
Frame Size: _____
Design Letter: _____
Reactive Power Required In Vars (No Load): _____
Reactive Power Required In Vars (Full Load): _____
Total Rotating Inertia, H: _____ Per Unit on kVA Base

Note: Please contact ISO New England Inc. prior to submitting the Interconnection Request to determine if the specified information above is required.

Excitation and Governor System Data for Synchronous Generators Only

Provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted.

Interconnection Facilities Information

Will a transformer be used between the generator and the point of common coupling? ___Yes ___No

Will the transformer be provided by the Interconnection Customer? ____Yes ____No

Transformer Data (If Applicable, for Interconnection Customer-Owned Transformer)

Is the transformer: ____single phase _____three phase? Size: _____kVA
Transformer Impedance: _____% on _____kVA Base

If Three Phase:
Transformer Primary: _____ Volts _____ Delta _____Wye _____ Wye Grounded
Transformer Secondary: _____ Volts _____ Delta _____Wye _____ Wye Grounded
Transformer Tertiary: _____ Volts _____ Delta _____Wye _____ Wye Grounded

Transformer Fuse Data (If Applicable, for Interconnection Customer-Owned Fuse)

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

Manufacturer: _____ Type: _____ Size: _____ Speed: _____

Interconnecting Circuit Breaker (if applicable)

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

Current Transformer Data (If Applicable)

(Enclose Copy of Manufacturer's Excitation and 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 Information

Enclose two copies of site electrical one-line diagram showing the configuration of all Small Generating Facility equipment, current and potential circuits, and protection and control schemes. This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Small Generating Facility is larger than 50 kW. Are two copies of One-Line Diagram Enclosed? ____Yes ____No

Enclose copy of any site documentation that indicates the precise physical location of the proposed Small 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 the Interconnection Customer's address) _____

Enclose copy of any site documentation that describes and details the operation of the protection and control schemes. Is Available Documentation Enclosed? ___Yes ____No

Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).
Are Schematic Drawings Enclosed? ___Yes ____No

Applicant Signature

I hereby certify that, to the best of my knowledge, all the information provided in this Interconnection Request is true and correct.

For Interconnection Customer: _____Date: _____

Name (type or print): _____

ISO New England Inc. Use

Date Interconnection Request Received: _____ Received By: _____

Deposit Deficient Date Cured: _____

Site Control Documentation Deficient Date Cured: _____

Project Mapping Deficient Date Cured: _____

Technical Data Deficient Date Cured: _____

Date Deemed Valid Interconnection Request: _____ Deemed Valid By: _____