



**Level 2, 3 and 4 Interconnection Application for Certified, Inverter-Based
Generating Facilities Not Greater than 2 MW**

Please select one of the following Emera Maine service territories.

- Bangor Hydro District (T&D Utility)
- Maine Public District (T&D Utility)

The Customer-Generator applicant ("Applicant") hereby makes application to the T & D Utility to install and operate a generating facility interconnected with the transmission and distribution utility system. This application will be considered as an application for interconnection of generators under Expedited interconnection review provided the generator is not greater than 2 MW but shall serve as an Application for Standard interconnection review if greater than 2 MW or if Expedited review does not qualify the generator for interconnection.

An application is a Complete Application when it provides all applicable information required below. (Additional information to evaluate a request for interconnection may be required and will be so requested from the Interconnection Applicant by Utility after the application is deemed complete).

Once complete, please sign and include your \$ _____ application fee and mail to the following address applicable for your service territory:

Emera Maine
Maine Public District
Net Energy Billing Coordinator
PO Box 1209
Presque, Isle ME 04769-1209

Emera Maine
Bangor Hydro District
Net Energy Billing Coordinator
PO Box 932
Bangor, ME 04402-0932

(Make check payable to: Emera Maine)

1. Legal Name of Interconnecting Applicant (or, if an Individual, Individual's Name)

- a. Name: _____
- b. Company (If Applicable): _____
- c. Contact Person: _____
- d. Account Number: _____ *(Existing Account Number, if generator to be interconnected on the Customer side of a utility revenue meter.)*
- e. Address: _____
- f. City, State, Zip: _____
- g. Telephone (Day): _____
- h. Telephone (Evening): _____
- i. Fax: _____

- j. E-Mail Address: _____
- k. Type of Interconnect Service Applied for (choose one): _____ Network Resource _____ Energy Only
_____ Load Response (no export) _____ Net metering

2. Contact (if different from Interconnection Customer)

- a. Name: _____
- b. Account Number: _____
- c. Address: _____
- d. City, State, Zip: _____
- e. Telephone (Day): _____
- f. Telephone (Evening): _____
- g. Fax: _____
- h. E-Mail Address: _____
- i. Owner of the facility (include percent ownership by any electric utility):

3. Installing Electrical Contractor Information

- a. Company: _____
- b. Representative: _____
- c. Title: _____
- d. Street Address: _____
- e. Mailing Address (if different from street address): _____
- f. Email: _____
- g. Phone #: _____
- h. Fax #: _____

4. Timing

- a. Estimated Installation Date: _____
- b. Requested In-Service Date: _____

5. Generating Qualifications

- a. Manufacturer: _____

- b. Model Name and No.: _____
- c. Version No.: _____
- d. Serial No.: _____
- e. Nameplate Output Power Rating: (summer) _____ kW or: _____ kVA
(winter) _____ kW or: _____ kVA
- f. Individual Generator Power Factor: Rated Power Factor: Leading _____ Lagging _____
- g. Generating Facility/Inverter AC output voltage: _____ Volts
- h. Generating Facility Type:
1. Single Phase _____ Three Phase _____
 2. Synchronous _____ Induction _____ Inverter _____ Other _____
- i. Total Number of Generators in wind farm to be interconnected pursuant to this Interconnection
Request: _____ Elevation: _____ Single Phase: _____ Three Phase: _____
- j. Inverter Manufacturer, Model and number (if used): _____
- k. List of adjustable set points for the protective equipment or software: _____
- l. Rated current: _____ (amps)
- m. Location (if different from above): _____
- n. Interconnection Customer or Customer-Site Load: _____ kW (if none, so state)
- o. Typical Reactive Load (if known): _____
- p. Maximum Physical Export Capability Requested: _____ kW
- q. Prime Mover: Photovoltaic/Reciprocating Engine/Fuel Cell/Turbine/Other (describe) _____
- r. Energy Source: Photovoltaic/Wind/Hydro/Diesel/Natural Gas/Fuel Oil/Reciprocating Engine
Other (describe) _____
- s. Is the equipment UL1741 Listed? Yes / No
If YES, attach any documentation provided by the generator manufacturer describing the UL1741
listing for the generating facility to this application.
- t. Single line diagram for interconnection
- u. List components of the Small Generating Facility Equipment Package that are currently certified:

Equipment Type

Certifying Entity

Is the prime mover compatible with the certified protective relay package? ___ Yes ___ No

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

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

Max design fault contribution current: _____ Instantaneous or RMS?

Harmonics Characteristics:

Start-up requirements:

7. Small Generating Facility Characteristic Data (for rotating machines)

RPM Frequency: _____

(*) Neutral Grounding Resistor (If Applicable): _____

8. Synchronous Generators:

Direct Axis Synchronous Reactance, X_d : _____ 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: _____

9. Induction Generators:

Motoring Power (kW): _____

I²t 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 the T & D Utility prior to submitting this Interconnection Application to determine if the specified information in Section 9 above is required.

10. 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.

11. Interconnection Facilities Information Transformer Data (If Applicable, for Interconnection Customer-Owned Transformer):

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

Is the transformer: ___single phase ___three phase? Size: _____kVA

Transformer Impedance: _____percent 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:

	Set-point 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:

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

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Current Transformer Data (If Applicable): *Enclose copy of Manufacturer 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 Checklist

Please sign on the line beside each item listed below verifying that a complete package has been submitted and the Customer(s) are aware of all requirements:

If a 50 kW or smaller interconnection generator, enclose copy of site electrical one-line diagram showing the configuration of all Small Generating Facility equipment, current and potential circuits, and protection and control schemes.

If the Small Generating Facility is larger than 50 kW, the one-line diagram must be signed and stamped by a licensed Professional Engineer.

Is a 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). Yes No

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. 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). Yes No

Information Required Prior to Physical Interconnection

Installing Electrician: _____

Firm: _____

License No.: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____ Telephone: _____

Applicant Signature

I hereby certify that, to the best of my knowledge, all the information provided in the Interconnection Application is true and correct. I also agree to install a Warning Label provided by (utility) on or near my service meter location. Generating systems must be compliant with IEEE, NEC, ANSI, and UL standards, where applicable. By signing below, the Applicant also certifies that the installed generating equipment meets the appropriate preceding requirement(s) and can supply documentation that confirms compliance.

Signed: _____ Date: _____

FOR COMPANY USE ONLY

Contingent Approval to Interconnect the Small Generating Facility

Interconnection of the Certified, Inverter-Based Generating Facility is approved contingent upon the proper execution of the Level 2, 3 and 4 Interconnection Agreement and return the Certificate of Completion (or other evidence of local code official approval), when the Inverter-Based Generating Facility has been installed.

Company Signature: _____

Title: Net Energy Billing Coordinator Date: _____

Queue number: _____

Company waives inspection/witness test? Yes ____ No ____