

**Forms and Agreements 4: Level 2, Level 3 and Level 4  
Interconnection Application**

A Customer-Generator applicant ("Applicant") hereby makes application to \_\_\_\_\_ (Utility or T & D Utility) to install and operate a generating facility interconnected with the \_\_\_\_\_ 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.

Written applications should be submitted by mail, e-mail or fax to *[[insert utility name]]*, as follows:

[Utility]: \_\_\_\_\_  
[Utility's address]: \_\_\_\_\_  
Fax Number: \_\_\_\_\_  
E-Mail Address: \_\_\_\_\_  
[Utility] Contact Name: \_\_\_\_\_  
[Utility] Contact Title: \_\_\_\_\_

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).

**Section 1. Applicant Information**

Legal Name of Interconnecting Applicant (or, if an Individual, Individual's Name)  
Name: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Facility Location (if different from above):  
\_\_\_\_\_  
Telephone (Daytime): \_\_\_\_\_  
Telephone (Evening): \_\_\_\_\_  
Fax Number: \_\_\_\_\_  
E-Mail Address: \_\_\_\_\_

\_\_\_\_\_  
(Utility)

\_\_\_\_\_  
(Existing Account Number, if generator to be interconnected on the Customer side of a utility revenue meter)

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Type of Interconnect Service Applied for \_\_\_\_\_ Network Resource, \_\_\_\_\_  
(choose one)

Energy Only, \_\_\_\_\_ Load Response (no export) \_\_\_\_\_ Net metering

**Section 2. Generator Qualifications**

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 kVA: \_\_\_\_\_

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: \_\_\_\_\_

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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): \_\_\_\_\_

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

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**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: \_\_\_\_\_

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Start-up requirements: \_\_\_\_\_

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**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, X2 \_\_\_\_\_ P.U.

Zero Sequence Reactance, X0: \_\_\_\_\_ P.U.

KVA Base: \_\_\_\_\_

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Field Volts: \_\_\_\_\_  
Field Amperes: \_\_\_\_\_

### **Induction Generators:**

Motoring Power (kW): \_\_\_\_\_  
I<sup>2</sup>t or K (Heating Time Constant): \_\_\_\_\_  
Rotor Resistance, R<sub>r</sub>: \_\_\_\_\_  
Stator Resistance, R<sub>s</sub>: \_\_\_\_\_  
Stator Reactance, X<sub>s</sub>: \_\_\_\_\_  
Rotor Reactance, X<sub>r</sub>: \_\_\_\_\_  
Magnetizing Reactance, X<sub>m</sub>: \_\_\_\_\_  
Short Circuit Reactance, X<sub>d</sub>'': \_\_\_\_\_  
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 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.

### **Section 3. 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: \_\_\_\_\_ percent on \_\_\_\_\_ kVA Base

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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.: \_\_\_\_\_

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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: \_\_\_\_\_

**Section 4. General Information**

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

Is 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):

\_\_\_\_\_  
\_\_\_\_\_

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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 \_\_\_\_

**Section 5. 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: \_\_\_\_\_

**Section 6. Information Required Prior to Physical Interconnection  
(Not required as part of the application, unless available at time of application.)**

Installing Electrician: \_\_\_\_\_ Firm: \_\_\_\_\_  
License No.: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Telephone: \_\_\_\_\_

Installation Date: \_\_\_\_\_ Interconnection Date: \_\_\_\_\_

Signed: \_\_\_\_\_ Date: \_\_\_\_\_  
*(Inspector - if required)*

(In lieu of signature of Inspector, a copy of the final inspection certificate may be attached)