

BOARD POLICY 307: ATTACHMENT A



**Shelby Electric Cooperative**

Your Touchstone Energy® Partner



## Application for Distributed Generation Project

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I, as Requestor, have fully read, understand, and accept all provisions, terms, and conditions set forth in Shelby Electric Cooperative (Cooperative) Board Policy 307 - Interconnection and Parallel Operation of Distributed Generation.

I desire to interconnect electric generating equipment as a Distributed Generation Project (DGP) to the low-voltage premises wiring at my property. I desire to undertake Parallel Operation of this generating equipment with the electric system of the Cooperative as defined in Board Policy 307.

I desire to receive compensation/credit for any over-generation through (please initial one):

\_\_\_\_\_ the Cooperative's provisions for net metering as defined in Board Policy 308

\_\_\_\_\_ the Cooperative's provisions for Qualifying Facilities as defined in Board Policy 321

I agree to pay the non-refundable **application fee** of \$\_\_\_\_\_ to the Cooperative, which is necessary prior to the Cooperative accepting this Application for Distributed Generation.

I agree the Cooperative will evaluate and analyze the impact my DGP may have on (i) the operations of Cooperative electric system and (ii) the quality of electric service provided to the members of the Cooperative. The Cooperative has identified the **deposit for analysis** associated with this Application to be \$\_\_\_\_\_. Should a further deposit be required, the Cooperative will notify me. Should deposit dollars remain after the analysis, they will be credited toward any necessary construction costs associated with interconnection of my DGP or returned to me.

I understand that, if there is Cooperative system construction required, a **deposit for construction** will be required before construction required by the Cooperative for the interconnection would begin. Estimated costs of construction required by the Cooperative will be provided after analysis is complete, and I will be required to pay 110% of the estimated costs as a deposit for such construction.

I agree not to undertake Parallel Operation of any electric generating equipment on the low-voltage premises wiring at my service location without an "Authorization to Energize" duly executed by an authorized officer of the Cooperative.

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Signed (Requestor)

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Date

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Account Number

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Map Location Number

# Distributed Generation Project General Description and Electrical Characteristics

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**This application should be completed and returned to the Cooperative Member Services Department in order to begin processing the request.**

*INFORMATION: This application is used by the Cooperative to determine the required equipment configuration for the Requestor's interconnection. Every effort should be made to supply as much information as possible. The Cooperative reserves the right to request any additional information pertaining to the installation of generation equipment/net metering at any time.*

## **PART 1 (Required to be Completed for All Interconnection Requests)**

### **REQUESTOR/APPLICANT INFORMATION**

Requestor Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ County: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Email Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

### **DISTRIBUTED GENERATION PROJECT(DGP) SITE INFORMATION**

Requestor Cooperative Account Number: \_\_\_\_\_

Cooperative Map Location Number: \_\_\_\_\_

Physical Address of Site: \_\_\_\_\_

City: \_\_\_\_\_ County: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

### **PROJECT DESIGN/ENGINEERING (ARCHITECT) (as applicable)**

Company: \_\_\_\_\_

Contact Name: \_\_\_\_\_ License/Registration Number: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ County: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Email Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

## ELECTRICAL CONTRACTOR (as applicable)

Company: \_\_\_\_\_

Contact Name: \_\_\_\_\_ License/Registration Number: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ County: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Email Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

## TYPE OF GENERATOR

Photovoltaic  Wind  Microturbine  Diesel Engine  Gas Engine  Combustion Turbine

Battery  Other: \_\_\_\_\_

## CERTIFICATION

For inverter-based installations, is the inverter UL 1741 certified?  Yes  No

If yes, please provide evidence of certification.

## ESTIMATED LOAD AND GENERATOR RATING INFORMATION

The following information is necessary to help properly design the Cooperative Interconnection to the Requestor's DGP. This information is not intended as a commitment or contract for billing purposes.

Total Nameplate Rating: \_\_\_\_\_ kW-AC \_\_\_\_\_ kW-DC \_\_\_\_\_ kVAR

Minimum during production hours: \_\_\_\_\_ Maximum during production hours: \_\_\_\_\_

Annual Est Generation: \_\_\_\_\_ (kWh) Net Annual Est Energy Consumption: \_\_\_\_\_ (kWh)

## DESCRIPTION OF PROPOSED DGP INSTALLATION AND OPERATION

*Attach a description of the proposed DGP installation, including a detailed description of its planned location, the Point of Interconnection, structure(s) to be served by the generator, and the date you plan to operate the DGP generator.*

## ADDITIONAL INFORMATION

*In addition to the items listed above, please attach a detailed one-line diagram of the proposed DGP and any related facility, all applicable elementary diagrams, major equipment, (generators, transformers, inverters, circuit breakers, protective relays, etc.) specifications, test reports, etc., and any other applicable drawings or documents necessary for the proper design of the Interconnection. Also describe the DGP's planned operating mode (e.g., combined heat and power, peak shaving, etc.), and its address or grid coordinates.*

**PART 2 (Required to be Completed for Interconnection Requests Exceeding 10 kW)**  
(Complete all applicable items. Copy pages as required for additional generators.)

**SYNCHRONOUS GENERATOR DATA**

Unit Number: \_\_\_\_\_ Manufacturer: \_\_\_\_\_  
Total number of units with listed specifications on site: \_\_\_\_\_  
Type: \_\_\_\_\_ Date of manufacture: \_\_\_\_\_  
Serial Number (each): \_\_\_\_\_  
Phases: Single Three R.P.M.: \_\_\_\_\_ Frequency (Hz): \_\_\_\_\_  
Rated Output (for one unit): \_\_\_\_\_ Kilowatts \_\_\_\_\_ Kilovolt-Amperes  
Rated Power Factor (%): \_\_\_\_\_ Rated Voltage (Volts): \_\_\_\_\_ Rated Amperes: \_\_\_\_\_  
Field Volts: Field Amps: Motoring power (kW): \_\_\_\_\_  
Synchronous Reactance (Xd): \_\_\_\_\_ % on \_\_\_\_\_ KVA base  
Transient Reactance (X'd): \_\_\_\_\_ % on \_\_\_\_\_ KVA base  
Subtransient Reactance (X''d): \_\_\_\_\_ % on \_\_\_\_\_ KVA base  
Negative Sequence Reactance (X<sub>2</sub>): \_\_\_\_\_ % on \_\_\_\_\_ KVA base  
Zero Sequence Reactance (X<sub>0</sub>): \_\_\_\_\_ % on \_\_\_\_\_ KVA base  
Neutral Grounding Resistor (if applicable): \_\_\_\_\_  
\_\_\_\_\_  
Additional information: \_\_\_\_\_

**INDUCTION GENERATOR DATA**

Motoring power: \_\_\_\_\_ kW Equivalent MVA base: \_\_\_\_\_ MVA  
Rotor Resistance (Rr): \_\_\_\_\_ ohms Stator Resistance (Rs): \_\_\_\_\_ ohms  
Rotor Reactance (Xr): \_\_\_\_\_ ohms Stator Reactance (Xs): \_\_\_\_\_ ohms  
Magnetizing Reactance (Xm): \_\_\_\_\_ ohms Short Circuit Reactance (Xd''): \_\_\_\_\_ ohms  
Design letter: \_\_\_\_\_ Frame Size: \_\_\_\_\_  
Exciting Current: \_\_\_\_\_ Temp Rise (deg C°): \_\_\_\_\_  
Reactive Power Required: \_\_\_\_\_ Vars (no load), \_\_\_\_\_ Vars (full load)  
I<sub>2</sub><sup>2</sup>t or K (heating time constant): \_\_\_\_\_  
Additional information: \_\_\_\_\_

**PRIME MOVER (Complete all applicable items)**

Unit Number: \_\_\_\_\_ Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Date of manufacture: \_\_\_\_\_  
Serial Number: \_\_\_\_\_  
H.P. Rated: \_\_\_\_\_ H.P. Max.: \_\_\_\_\_ Inertia Constant: \_\_\_\_\_ lb.-ft.<sup>2</sup>  
Energy Source (hydro, steam, wind, etc.): \_\_\_\_\_

## GENERATOR TRANSFORMER (between generator and utility system; if supplied by applicant)

Generator unit number: \_\_\_\_\_ Date of manufacturer: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Serial Number: \_\_\_\_\_  
Size: \_\_\_\_\_ kVA  
High Voltage: \_\_\_\_\_ KV, Connection: delta wye, Neutral solidly grounded? Y N  
Low Voltage: \_\_\_\_\_ KV, Connection: delta wye, Neutral solidly grounded? Y N  
Tertiary Delta Winding: Y/N  
Transformer Impedance(Z): \_\_\_\_\_ % on \_\_\_\_\_ KVA base  
Transformer Resistance(R): \_\_\_\_\_ % on \_\_\_\_\_ KVA base  
Transformer Reactance (X): \_\_\_\_\_ % on \_\_\_\_\_ KVA base  
Neutral Grounding Resistor (if applicable): \_\_\_\_\_  
Transformer Fuse (if applicable)—Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Size: \_\_\_\_\_ Speed: \_\_\_\_\_

## INVERTER DATA (if applicable)

Type commutation: self line  
Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_  
Rated Power Factor (%): \_\_\_\_\_ Rated Voltage (Volts): \_\_\_\_\_ Rated Amperes: \_\_\_\_\_  
Inverter Type (ferroresonant, step, pulse-width modulation, etc): \_\_\_\_\_

Harmonic Distortion: Maximum Single Harmonic (%) \_\_\_\_\_  
Maximum Total Harmonic (%) \_\_\_\_\_

*Note: Attach all available calculations, test reports, and oscillographic prints showing inverter output voltage and current waveforms.*

## POWER CIRCUIT BREAKER (if applicable)

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_  
Rated Voltage (kilovolts): \_\_\_\_\_ Rated ampacity (Amperes): \_\_\_\_\_  
Interrupting rating (Amperes): \_\_\_\_\_ BIL Rating: \_\_\_\_\_  
Interrupting medium / insulating medium (ex. Vacuum, gas, oil ): \_\_\_\_\_ / \_\_\_\_\_  
Control Voltage (Closing): \_\_\_\_\_ (Volts) AC DC  
Control Voltage (Tripping): \_\_\_\_\_ (Volts) AC DC Battery Charged Capacitor  
Close energy: Spring Motor Hydraulic Pneumatic Other: \_\_\_\_\_  
Trip energy: Spring Motor Hydraulic Pneumatic Other: \_\_\_\_\_  
Bushing Current Transformers: \_\_\_\_\_ (Max. ratio), Relay Accuracy Class: \_\_\_\_\_  
Multi ratio?: No Yes: (Available taps) \_\_\_\_\_

**PART 3 (Required to be Completed for All Interconnection Requests)**

**SIGNATURES AND QUEUE DATE**

The Requestor agrees to provide the Cooperative with any additional information required to complete the Interconnection. The Requestor shall operate Requestor’s DGP and related equipment within all applicable contractual obligations, policies, and guidelines set forth by the Cooperative.

\_\_\_\_\_  
Requestor Date

**PART 4**

**---FOR COOPERATIVE USE ONLY---**

Map Location #: \_\_\_\_\_

Size of Service / Type of Meter: \_\_\_\_\_

Special Provisions: \_\_\_\_\_

**Requestor Interconnection Application and Confirmation of Payment Received**

Application Fee: \_\_\_\_\_ paid Analysis Deposit: \_\_\_\_\_ paid

Holding Date: \_\_\_\_\_ Time: \_\_\_\_\_ a.m./p.m.

Initial (Cooperative Representative): \_\_\_\_\_

Queue Date: \_\_\_\_\_

Initial (Cooperative Representative): \_\_\_\_\_

Return Application to:

Shelby Electric Cooperative  
1355 HWY 128, PO Box 560, Shelbyville, IL 62565  
217-774-3986 | 800-677-2612

[www.shelbyelectric.coop](http://www.shelbyelectric.coop)

*Annotated copy with Holding Date included to be provided to the Requestor*