

ELECTRIC COOPERATIVE

Application for Operation of Member-Owned Generation

This application should be completed as soon as possible and returned to the Cooperative Member Service representative in order to begin processing the request. See *Distributed Generation Procedures and Guidelines Manual for Members* for additional information.

INFORMATION: *This application is used by the Cooperative to determine the required equipment configuration for the Member interface. Every effort should be made to supply as much information as possible.*

PART 1

OWNER/APPLICANT INFORMATION

Company: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Representative: _____

PROJECT DESIGN/ENGINEERING (as applicable)

Company: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Representative: _____

ELECTRICAL CONTRACTOR (as applicable)

Company: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Representative: _____

TYPE OF GENERATOR (as applicable)

Photovoltaic _____ Wind _____ Microturbine _____

Diesel Engine _____ Gas Engine _____ Turbine Other _____

ESTIMATED LOAD INFORMATION

The following information will be used to help properly design the Cooperative Member interconnection. This information is not intended as a commitment or contract for billing purposes.

Total Site Load _____(kW) Total DG Output _____(kW)

Mode of Operation (check all that apply)

Isolated _____ Paralleling _____ Power Export _____

DESCRIPTION OF PROPOSED INSTALLATION AND OPERATION

Give a general description of the proposed installation, including when you plan to operate the generator.

PART 2

(Complete all applicable items. Copy this page as required for additional generators.)

SYNCHRONOUS GENERATOR DATA

Unit Number: _____ Total number of units with listed specifications on site: _____

Manufacturer: _____

Type: _____ Date of manufacture: _____

Serial Number (each): _____

Phases: Single _____ Three _____ R.P.M.: _____ Frequency (Hz): _____

Rated Output (for one unit): _____ Kilowatt: _____ Kilovolt-Amper: _____

Rated Power Factor (%): _____ Rated Voltage (Volts): _____ Rated Amperes: _____

Field Volts: _____ Field Amps: _____ Motoring power (kW): _____

Synchronous Reactance (X'd): _____ % on _____ KVA base

Transient Reactance (X'd): _____ % on _____ KVA base

Subtransient Reactance (X'd): _____ % on _____ KVA base

Negative Sequence Reactance (Xs): _____ % on _____ KVA base

Zero Sequence Reactance (Xo): _____ % on _____ KVA base

Neutral Grounding Resistor (if applicable): _____

I₂²t of K (heating time constant): _____

Additional Information: _____

INDUCTION GENERATOR DATA

Rotor Resistance (Rr): _____ ohms Stator Resistance (Rs): _____ ohms

Rotor Reactance (Xr): _____ ohms Stator Resistance (Rs): _____ ohms

Magnetizing Reactance (Xm): _____ ohms
Design letter: _____
Exciting Current: _____
Reactive Power Required: _____
Additional Information: _____

Short Circuit Reactance (Xd''): _____ ohms
Frame Size: _____
Temp Rise (deg C°): _____
Vars (no load), Vars _____ (full load)

PRIME MOVER (Complete all applicable items)

Unit Number: _____ Type: _____
Manufacturer: _____
Serial Number: _____ Date of manufacturer: _____
H.P. Rates: _____ H.P. Max.: _____ Inertia Constant: _____ lb.-ft²
Energy Source (hydro, steam, wind, etc.): _____

GENERATOR TRANSFORMER (Complete all applicable items)

TRANSFORMER (between generator and utility system)

Generator unit number: _____ Date of manufacturer: _____
Manufacturer: _____
Serial Number: _____
High Voltage: _____ KV, Connection: delta wye, Neutral solidly grounded? _____
Low Voltage: _____ KV, Connection: delta wye, Neutral solidly grounded? _____
Transformer Impedance (Z): _____ % on _____ KVA base
Transformer Resistance (R): _____ % on _____ KVA base
Transformer Reactance (X): _____ % on _____ KVA base
Neutral Grounding Resistor (if applicable): _____

INVERTER DATA (if applicable)

Manufacturer: _____ Model: _____
Rate Power Factor (%): _____ Rated Voltage (Volts): _____ Rated Amperes: _____
Inverter Type (ferroresonant, step, pulse-width modulation, etc.): _____
Type commutation: forced _____ line _____
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) _____

ADDITIONAL INFORMATION

In addition to the items listed above, please attach a detailed one-line diagram of the proposed 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.

SIGN OFF AREA

The Member agrees to provide the Cooperative with any additional information required to complete the interconnection. The Member shall operate his equipment within the guidelines set forth by the Cooperative.

Applicant

Date

ELECTRIC COOPERATIVE CONTACT FOR APPLICATION SUBMISSION AND FOR MORE INFORMATION:

Cooperative contact: _____
Title: _____
Address: _____

Phone: _____
Fax: _____

EXHIBIT A
DESCRIPTION OF FACILITIES AND POINT OF INTERCONNECTION

DG Owner/Operator will, at its own cost and expense, operate, maintain, repair, and inspect, and shall be fully responsible for its Facilities, unless otherwise specified on Exhibit A.

FACILITIES SCHEDULE NO.

[The following information is to be specified for each Point of Interconnection, if applicable]

- 1. Name:
- 2. Facilities location:
- 3. Delivery voltage:
- 4. Metering (voltage, location, losses adjustment due to metering location, and other:
- 5. Normal Operation of Interconnection:
- 6. One line diagram attached (check one):/ _____ Yes / _____
- 7. Facilities to be furnished by Cooperative:
- 8. Facilities to be furnished by DG Owner/Operator:
- 9. Cost Responsibility:
- 10. Control area interchange point (check one): / _____ Yes / _____ No
- 11. Supplemental terms and conditions attached (check one): / _____ Yes / _____ No
- 12. Cooperative rules for DG interconnection attached (check one): / _____ Yes /

[COOPERATIVE NAME]

[DG OWNER/OPERATOR NAME]

BY: _____

BY: _____

TITLE: _____

TITLE: _____

DATE: _____

DATE: _____