

Western Cooperative Electric

Application for Operation of Member-Owned Distributed Generation Systems

This application should be completed as soon as possible and returned to the Cooperative in order to begin processing the request. See Member Requirements for Installation and Interconnection for additional information.

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

PART 1

MEMBER/APPLICANT INFORMATION

Name: _____

Mailing Address: _____

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

Daytime Phone: _____ Evening Phone: _____

WESTERN Account Number: _____

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

Photovoltaic _____ Wind _____ Microturbine _____

Diesel Engine _____ Gas Engine _____ Turbine _____

Other _____

ESTIMATED LOAD, GENERATOR RATING AND MODE OF OPERATION INFORMATION

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

Total Site Load _____ (kW)

Residential _____ Commercial _____ Industrial _____

Generator Rating _____ (kW) Annual Estimated Generation _____ (kWh)

DESCRIPTION OF PROPOSED INSTALLATION AND OPERATION

Give a general description of the proposed installation, including a detailed description of its planned location and when you plan to operate the generator. Attach a single-line diagram showing the planned installation.

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-Ampere

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 (X_s): _____ % on _____ KVA base

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

Neutral Grounding Resistor (if applicable): _____

I_2^2 or K (heating time constant): _____

Additional information: _____

INDUCTION GENERATOR DATA

Rotor Resistance (R_r): _____ ohms Stator Resistance (R_s): _____ ohms

Rotor Reactance (X_r): _____ ohms Stator Reactance (X_s): _____ ohms

Magnetizing Reactance (X_m): _____ ohms Short Circuit Reactance (X_d): _____ ohms

Design letter: _____ Frame Size: _____

Exciting Current: _____ Temp Rise (deg C^o): _____

Reactive Power Required: _____ Vars (no load) _____ Vars (full load)

Additional information: _____

PRIME MOVER (Complete all applicable items)

Unit Number: _____ Type: _____

Manufacturer: _____

Serial Number: _____ Date of manufacturer: _____

H.P. Rated: _____ H.P. Max.: _____ Inertia Constant: _____ lb.-ft.²

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 g rounded? _____

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: _____

Rated 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 graphs 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. Also describe the project's planned operating mode (e.g., combined heat and power, peak shaving, etc.), and its address or grid coordinates.

END OF PART 2

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

Applicant Signature

Date

Printed Name

Street Address

City State Zip

PLEASE SUBMIT YOUR APPLICATION TO OUR MEMBER SERVICES MANAGER AS FOLLOWS:

Western Cooperative Electric
Member Services Manager
PO Box 278
WaKeeney, Kansas 67672
785-743-5561 Phone

