

Big Horn Rural Electric Company

Application for Operation of Customer-Owned Generation

This application should be completed and returned to the Cooperative, in order to begin processing the request.

INFORMATION: This application is used by the Cooperative to determine the required equipment configuration for the Customer interface. Every effort should be made to supply as much information as possible. You may have to contact your distributor so some of the information.

PART 1

OWNER/APPLICANT INFORMATION

Owner/Customer

Name: _____

Mailing Address: _____

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

Phone Number: _____ Representative: _____

Email Address: _____ Fax Number: _____

PROJECT DESIGN/ENGINEERING (ARCHITECT) (as applicable)

Company: _____

Mailing Address: _____

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

Email Address: _____ Fax Number: _____

ELECTRICAL CONTRACTOR (as applicable)

Company: _____

Mailing Address: _____

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

Email Address: _____ Fax Number: _____

TYPE OF GENERATOR (as applicable)

Photovoltaic _____ Wind _____ Microturbine _____

Diesel Engine _____ Gas Engine _____ Combustion Turbine _____

Other _____

ESTIMATED LOAD, GENERATOR RATING AND MODE OF OPERATION INFORMATION

The following information is necessary to help properly design the Cooperative customer 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)

Mode of Operation

Isolated _____ Paralleling _____ Power Export _____

DESCRIPTION OF PROPOSED INSTALLATION AND OPERATION

Give a general description of the proposed installation, including a detailed description of its planned location, the date you plan to operate the generator, the frequency with which you plan to operate it and whether you plan to operate it during on or off-peak hours.

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'd): _____ % on _____ KVA base

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

Neutral Grounding Resistor (if applicable): _____

I²t or K (heating time constant): _____

Additional information: _____

INDUCTION GENERATOR DATA

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)
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. -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): _____

INVERTOR 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: Attache 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*): _____ Rate ampacity (*Amperes*) _____

Interruption rating (Amperes): _____ BIL Rating: _____

Interruption medium / insulating medium (ex. Vacuum, gas, oil) _____

Control Voltage (Closing): _____ (Volts) AC DC

Control Voltage (Tripping): _____ (Volts) AC DC Batter Charged Capacitor

Close energy: Spring Motor Hydraulic Pneumatic Other: _____

Trip energy: Spring Motor Hydraulic Pneumatic Other: _____

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

SIGN OFF AREA

The customer agrees to provide the Cooperative with any additional information required to complete the interconnection. The customer 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: Jeff Pillow
Title: General Manager
Address: 415 South Street
P.O Box 270
Basin, WY 82410
Phone: 307-568-2419
Fax: 307-568-2402
e-mail: pillow@bighornrea.com