

# ATTACHMENT A

## SPOON RIVER ELECTRIC COOPERATIVE, INC.

### Application for Operation of Member-Owned Generation

This application should be completed and returned to the Spoon River Electric Cooperative, Inc. Member Service representative in order to begin processing the request. See Member Guidelines for Electric Power Generator Installation and Interconnection for additional information.

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

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#### **PART 1**

##### **OWNER/APPLICANT INFORMATION**

Owner/Member

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

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

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

Phone Number: \_\_\_\_\_ Representative: \_\_\_\_\_

Email Address: \_\_\_\_\_ Fax Number: \_\_\_\_\_

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

Company: \_\_\_\_\_ License/Registration Number \_\_\_\_\_

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

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

Phone Number: \_\_\_\_\_ Representative: \_\_\_\_\_

Email Address: \_\_\_\_\_ Fax Number: \_\_\_\_\_

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##### **ELECTRICAL CONTRACTOR (as applicable)**

Company: \_\_\_\_\_ License/Registration Number \_\_\_\_\_

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

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

Phone Number: \_\_\_\_\_ Representative: \_\_\_\_\_

Email Address: \_\_\_\_\_ Fax Number: \_\_\_\_\_

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**TYPE OF GENERATOR (as applicable)**

Photovoltaic \_\_\_\_\_ Wind \_\_\_\_\_ Microturbine \_\_\_\_\_  
Diesel Engine \_\_\_\_\_ Gas Engine \_\_\_\_\_ Combustion Turbine \_\_\_\_\_  
Other \_\_\_\_\_

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**ESTIMATED LOAD, GENERATOR RATING AND MODE OF OPERATION INFORMATION**

The following information is necessary 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)  
Residential \_\_\_\_\_ Commercial \_\_\_\_\_ Industrial \_\_\_\_\_  
Generator Rating \_\_\_\_\_ (kW) Annual Estimated Generation \_\_\_\_\_ (kWh)

**Mode of Operation**

Isolated \_\_\_\_\_ Paralleling \_\_\_\_\_ Power Export \_\_\_\_\_

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**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.

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

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Synchronous Reactance (Xd): \_\_\_\_\_ % 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): \_\_\_\_\_

$I_2^2t$  or K (heating time constant): \_\_\_\_\_

Additional information: \_\_\_\_\_

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### 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: \_\_\_\_\_

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### PRIME MOVER (Complete all applicable items)

Unit Number: \_\_\_\_\_ Type: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Serial Number: \_\_\_\_\_ Date of manufacture: \_\_\_\_\_

H.P. Rated: \_\_\_\_\_ H.P. Max.: \_\_\_\_\_ Inertia Constant: \_\_\_\_\_ lb.-ft.<sup>2</sup>

Energy Source (hydro, steam, wind, etc.) \_\_\_\_\_

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### GENERATOR TRANSFORMER (Complete all applicable items)

TRANSFORMER (between generator and utility system)

Generator unit number: \_\_\_\_\_ Date of manufacture: \_\_\_\_\_

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

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**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 oscillographic prints showing inverter output voltage and current waveforms.

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**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) \_\_\_\_\_

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**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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**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



SPOON RIVER ELECTRIC COOPERATIVE, INC. CONTACT FOR APPLICATION SUBMISSION AND FOR MORE INFORMATION:

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