# ATTACHMENT A

# SOUTHERN ILLINOIS ELECTRIC COOPERATIVE

## Application for Operation of Member Owned Generation

**This application should be completed and returned to the Cooperative.**

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.*

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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: _____

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

Company: _____License/Registration Number: _____

Mailing Address: _____

City: _____County:_____State:_____Zip Code: _____

Phone Number: _____Representative:_____

Email Address: _____ Fax Number: _____

**ELECTRICAL CONTRACTOR (as applicable)**

Company: _____License/Registration Number: _____

Mailing Address: _____

City: _____County:_____State:_____Zip Code: _____

Phone Number: _____Representative:_____

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 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 _____

## 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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_____

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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): _____
Synchronous Reactance (Xd): _____% on _____KVA base
Transient Reactance (Xd): _____% on _____KVA base
Subtransient Reactance (Xd): _____% 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: _____

**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 manufacture: _____
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 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: _____
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.

**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, a detailed site plan, 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 member agrees to provide the Cooperative with any additional information required to complete the interconnection. The member shall operate his/her equipment within the guidelines set forth by the Cooperative. The member also acknowledges receipt of Cooperative's Policy 472, INTERCONNECTION AND PARALLEL OPERATION OF DISTRIBUTED GENERATION and Policy 475, COOPERATIVE PURCHASE OF EXCESS MEMBER OWNED GENERATION CAPACITY, and verifies that he/she has read and understands the contents thereof and by the member's signature below agrees to be legally bound by the contents of Policies 472 and 475, as may be amended in the Cooperative's sole discretion, from time to time.

_____ _____

Applicant (Member) Date

COOPERATIVE CONTACT FOR APPLICATION SUBMISSION AND FOR MORE INFORMATION:

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|---|---|
| Cooperative contact: | Michael Logeman |
| Title: | Director of Engineering |
| Address: | P.O. Box 100 |
| | 7420 US Highway 51 South |
| | Dongola, IL 62926 |
| Phone: | 618-827-3555 |
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