United Electric
COOPERATIVE, INC.
A Touchstone Energy® Partner

Application for Operation of Interconnected Alternative Energy Source

This application must be completed and returned to the Cooperative *c*ontact in order to begin processing the request. In addition to the completed application, a $500 non-refundable application fee applies and may be paid by the member or member's contractor. If any make-ready work is required on the utility side, an engineering fee of $650 will apply as well as any costs associated with materials and labor.

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. This application is IN ADDITION TO the Interconnection Power Purchase Agreement that must be signed by the member after project approval.*

***NOTE: Members installing direct grid interconnected alternative energy sources only need to complete the highlighted portions of this application. Other types of generation must complete the entire application.**

PART 1

MEMBER/APPLICANT INFORMATION

Name: _____

Mailing Address: _____

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

Phone Number: _____ Fax Number: _____

Email: _____

ELECTRICAL CONTRACTOR INFORMATION

Company: _____ Contact Person: _____

Mailing Address: _____

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

Phone Number: _____ Fax Number: _____

Email: _____

TYPE OF ALTERNATIVE ENERGY SOURCE (please circle)

Photovoltaic (Solar) Windmill Microturbine

Diesel Gas Turbine

Hydro Bio-gas 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.

Electricity Use, Production and Purchases

(a) Anticipated annual electricity consumption of the facility or site: _____ (kWh)

(b) Anticipated annual electricity production of the generation system: _____ (kWh)

(c) Anticipated annual electricity purchases (a minus b): _____ (kWh)*

***Value will be negative if there are net sales to the Utility.**

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: _____

_____

_____

_____

_____

_____

_____

PART 2

Complete all applicable items. This information is required for your installation to be considered. The equipment manufacturer will provide the information requested in this section.

SYNCHRONOUS GENERATOR DATA

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

Manufacturer:_____

Type:_____Serial Number (each):_____Model No._____

Date of manufacture:_____Phases: Single OR Three R.P.M.:_____

Frequency (Hz):_____Rated Output (for one unit):_____Kilowatt_____Kilovolt-Ampere_____

Rated Power Factor (%):_____Rated Voltage (Volts):_____Motoring power (kW):_____

Rated Amperes:_____Field Volts:_____Field Amps:_____

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):_____

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:_____

GENERATOR STEP-UP TRANSFORMER (if applicable)

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

Manufacturer:_____Model:_____

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

Inverter Type (ferroresonant, step, pulse-width modulation, etc): _____

Inverter Rating (kw):_____Phases: _____

Type commutation: forced_ line___

Harmonic Distortion: Maximum Single Harmonic (%) _____
Maximum Total Harmonic (%) _____

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)_____/ _____

(Volts) AC DC

(Volts) AC DC Battery Charged Capacitor

Control Voltage (Closing): _____

Control Voltage (Tripping): _____

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) _____

SHORT CIRCUIT CURRENT CONTRIBUTION AND UNIT INRUSH CURRENT OF THE PROPOSED GENERATING FACILITY

Distributed Generator Short Circuit Current

Single Phase to Ground_____Amperes
Three-Phase Symmetrical_____Amperes
Three-Phase Asymmetrical_____Amperes

Does the Facility Start with the Aid of Grid Power? _____Yes _____No

If yes, what is the inrush Current?_____amps (inrush current)

Will this Generation be used to primarily offset the members' electrical energy consumption?
_____Yes _____No

If yes, generators up to 25 KW for Residential consumer rate class and up to 250 KW for all other consumer classes qualify for the cooperatives net metering AES service rate.

ADDITIONAL INFORMATION

In addition to the items listed above, please attach the following:

- detailed one-line diagram of the proposed facility
- all applicable elementary diagrams
- control schematics
- site plan
- major equipment - (generators, transformers, inverters, circuit breakers, protective relays, etc.)
- specifications
- test reports
- any other applicable drawings or documents necessary for the proper design of the interconnection

SIGN OFF AREA

Applicant Signature:_____Date_____

Print Name: _____

Application Received By:_____Date_____