GARKANE ENERGY COOPERATIVE, INC.

Distributed Generation Interconnection Application

Level 2 and 3

Over 25 kW Generation Capacity

This application should be completed by Interconnection Customers that are not eligible for net metering and with facility nameplate capacities no larger than 20 MW. This application form applies to all generating facilities except inverter-based generating facilities with a capacity of 25 kW or less. The Interconnection Customer is to complete all fields of this application form to the extent that such requested information is applicable to the proposed Generating Facility. If questions exist about the applicability of the requested information or assistance is needed, please contact the designated contact person identified below. The completed application should be submitted to:

Designated Contact Person: Mike Avant, Engineering Manager

Address: 1802 South Highway 89A, Kanab, Utah 84741

Telephone Number: 435-644-5026

Facsimile Number: 435-644-8120

E-Mail Address: mavant@garkaneenergy.com

Legal Name of the Customer (or, if an individual, individual's name):

Name: _____

Contact Person: _____

Mailing Address: _____

Physical Address: _____

City: _____ State: ____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Cell Phone: _____

Fax Number: _____

E-Mail Address: _____

System Installer/Consulting Engineer:

Name: _____

Contact Person: _____

Mailing Address: _____

Physical Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Cell Phone: _____

Facsimile Number: _____

E-Mail Address: _____

Electric Service Information for Applicant's Facility Where Generator Will Be Interconnected :

Application is for: ___ New Generating Facility ___ Capacity addition to existing Generating Facility

If capacity addition to existing Generating Facility, please describe:

_____

_____

_____

Will the Generating Facility be used for any of the following?

To Supply Power to the Interconnection Customer? ____Yes ____No

To Supply Power to Others? ____Yes ____No

Location of Proposed Generating Facility will interconnect, provide:

Physical Address: _____

City: _____ State: _____ Zip: _____

Garkane Account Number: _____

Garkane Meter Number: _____

Garkane Transformer Number: _____

Type of Service: ____ Single Phase ____Three Phase

Service Voltage: _____

Requested Point of Interconnection:

_____

_____

_____

Requested In-Service Date: _____

Is Facility going to be a Qualified Facility ("QF")? ____Yes ____ No

If yes, has Applicant completed FERC "Notice of Self Certification"? ____ Yes ____ No

Requested Procedure Under Which to Evaluate Interconnection Request:

Please indicate below which review procedure applies to the interconnection request.

____ Level 2 – Certified interconnection equipment with an aggregate electric nameplate capacity of 2 MW or less. Generation facility does not qualify for a Level 1 review or has been reviewed but not approved under a Level 1 review. The application fee amount is $50 plus $1.00 per kW of the Generating Facility's capacity. Proof provided demonstrating certification with the following standards as applicable; please indicate type of certification below:

____ IEEE Standard 1547

____ UL Standard 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems (January 2001).

OTHER Certification Per Utah Rule 746-312-5

____ Per Rule 746-312-5(2)

____ Per Rule 746-312-5(3)

____ Per Rule 746-312-5(4)

- Attach Certification Documentation to this Application

Level 2 Generator Nameplate Rating is limited to the lesser of per Utah Rule 746-312-7:

1. 2 MW maximum Generation Capacity.
2. A generating facility's point of common coupling must be on a portion of the public utility's distribution system which is under the interconnection jurisdiction of the commission and not be on a transmission line.
3. For interconnection of a proposed generating facility to a radial distribution circuit, the aggregate generation on the distribution circuit, including the proposed generating facility, must not exceed 15 percent of the distribution circuit's total highest annual peak load, as measured at the substation. For the purposes of this subsection, annual peak load will be based on measurements taken over the 60 months previous to the submittal of the application, measured for the circuit at the nearest applicable substation.
4. The proposed generating facility, in aggregation with other generation on the distribution circuit to which the proposed generating facility will interconnect, must not contribute more than 10 percent to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of common coupling.
5. If the proposed generating facility is to be connected to a single-phase shared secondary, the aggregate generation capacity connected to the shared secondary, including the proposed generating facility, must not exceed 20 kilowatts.
6. If a proposed single-phase generating facility is to be connected to a transformer center tap neutral of a 240 volt service, the addition of the proposed generating facility must not create a current imbalance between the two sides of the 240 volt service of more than 20 percent of nameplate rating of the service transformer.
7. No construction of facilities by the public utility on its own system shall be required to accommodate the generating facility.
8. The aggregate generation capacity on the distribution circuit to which the proposed generating facility will interconnect, including the capacity of the proposed generating facility, must not cause any distribution protective equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or customer equipment on the electric distribution system, to exceed 90 percent of the short circuit interrupting capability of the equipment. In addition, a proposed generating facility must not be connected to a circuit which already exceeds 90 percent of the circuit's short circuit interrupting capability, prior to interconnection of the facility.
9. For a proposed generating facility connecting to a three-phase, three wire primary public utility distribution line, a three-phase or single-phase generator must be connected phase-to-phase.
10. For a proposed generating facility connecting to three-phase, four wire primary public utility distribution line, a three-phase or single-phase generator must be connected line-to-neutral and must be effectively grounded.

11. If there are known or posted transient stability limitations to generating units located in the general electrical vicinity of the proposed point of common coupling, including, but not limited to within three or four transmission voltage level busses, the aggregate generation capacity, including the proposed generating facility, connected to the distribution low voltage side of the substation transformer feeding the distribution circuit containing the point of common coupling may not exceed 10 megawatts.
12. If a proposed generating facility's point of common coupling is on a spot network, the proposed generating facility must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, must not exceed the smaller of five percent of a spot network's maximum load or 50 kilowatts.

____ Level 3 – Aggregate electric nameplate capacity rating is 20 MW or less and the Generating facility is not certified; does not qualify for a Level 1 or Level 2 review; or has been reviewed but not approved under a Level 1or Level 2 review. The application fee amount is $100 plus $2.00 per kW of the Generating Facility's capacity.

Note: Descriptions for interconnection review categories do not list all Level 1, 2, and 3 criteria that must be satisfied. For a complete list of criteria, please refer to R746-312, Electrical Interconnection. Level 1 interconnection review of certified inverter-based Generating Facilities having a generation capacity of 25 kW or less requires a separate application form.

Aggregation of Meters:

Excess Net Meter Energy Credits from the Primary Account listed above will be applied to the Energy Charges on the following accounts in the order specified:

	Account Number	Meter Number	Rate Schedule
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____

Meter Aggregation Requirements Per Utah Rule 746-312-15

(1) For the purpose of measuring electricity usage under the net metering program, a public utility must, upon request from an interconnection customer, aggregate for billing purposes a meter to which the net metering facility is physically attached ("designated meter") with one or more meters ("additional meter") in the manner set out in this section. This rule is applicable only when:

(a) the additional meter is located on or adjacent to the premises of the electrical corporation's customer, subject to the electrical corporation's service requirements;

(b) the additional meter is used to measure only electricity used for the interconnection customer's requirements;

(c) the designated meter and the additional meter are subject to the same rate schedule; and

(d) the designated meter and the additional meter are served by the same primary feeder.

(2) An interconnection customer must give at least 30 business days notice to the utility to request that additional meters be included in meter aggregation. The specific meters must be identified at the time of such request. In the event that more than one additional meter is identified, the interconnection customer must designate the ranking order for the additional meters to which net metering credits, as defined in Subsection 54-15-104(3) and approved by the governing authority, are to be applied.

(3) The aggregation of meters will apply only to charges that use kilowatt-hours as the billing determinant. All other charges applicable to each meter account shall be billed to the interconnection customer.

(4) If in a monthly billing period the net metering facility supplies more electricity to the public utility than the energy usage recorded by the interconnection customer's designated meter, the utility will apply credits, as defined in Subsection 54-15-104(3) and approved by the governing authority, to the next monthly bill for the excess kilowatt-hours first to the designated meter, then to additional meters that are on the same rate schedule as the designated meter.

(5) If an additional meter changes service to a rate schedule that is different than the designated meter, the additional meter is not eligible for net metering credits, as defined in Subsection 54-15-104(3) and approved by the governing authority, for the remainder of the billing year and until such time as the additional meter receives service on the same rate schedule as the designated meter.

(6) If the designated meter changes service to a different rate schedule, aggregation of net metering credits is not allowed for the remainder of the billing year and may not occur until such time as the additional meters receive service on the same rate schedule as the designated meter.

(7) With the governing authority's prior approval pursuant to Section 54-15-105, a public utility may charge the interconnection customer requesting to aggregate meters a reasonable fee to cover the administrative costs of this provision.

Generating Facility Information:

Total Number of Generators in generation facility to be interconnected pursuant to this Interconnection Request: #: ____

Energy Source: ____Solar ____Wind ____ Hydro - Hydro Type (e.g. Run-of-River)

____ Diesel ____Natural Gas ____Fuel Oil ____Biomass

____Other (state type): _____

Prime Mover: ____Fuel Cell ____Reciprocating Engine ____Gas Turbine

____Steam Turbine ____Microturbine ____PV

____Other (Describe): _____

Type of Generator: ____Synchronous ____Induction ____Inverter

Generator Nameplate Rating kW: _____ Generator Nameplate kVAr: _____

Interconnection Customer or Customer-Site Load: _____kW (if none, so state)

Typical Reactive Load (if known): _____KVAr

Maximum Physical Export Capability Requested: _____ kW

List components of the Generating Facility equipment package that are currently certified (include proof from manufacture of certification in accordance with R746-312-5, Certifications):

	Equipment Type or Package	Certifying Entity
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____

Is the prime mover compatible with the certified protective relay package? ____ Yes ____ No

Generator (or solar collector) Manufacturer, Model Name & Number:

_____

_____

_____

Version Number: _____

Nameplate Output Power Rating in kW: (Summer) _____ (Winter) _____

Nameplate Output Power Rating in kVA: (Summer) _____ (Winter) _____

Rated Power Factor: Leading: _____Lagging: _____

Inverter Manufacturer, Model Name & Number (if used):

_____

_____

_____

List of adjustable set points for the protective equipment or software:

_____

_____

_____

Proposed Generating Facility Characteristic Data (for inverter-based machines):

Manufacturer: _____ Model: _____

Type: ____Forced Commutated ____Line Commutated

Electric Nameplate Capacity Rated Output: _____ Amps _____ Volts _____kW

Efficiency: _____% Power Factor: _____%

Max design fault contribution current: _____Amps ____Instantaneous ____RMS

Harmonics characteristics: _____

Start-up requirements: _____

Synchronous Generators:

Submit copies of the Saturation Curve and the Vee Curve.

Manufacturer: _____

Model: _____

Version: _____

Poles: ____Salient ____Non-Salient

Torque: _____ lb-ft at RPM: _____

Field Amperes: _____at rated generator voltage and current and _____% PF over-excited

Type of Exciter: _____

Output Power of Exciter: _____

Type of Voltage Regulator: _____

Locked Rotor Current: _____ Amps

Synchronous Speed: _____RPM

Min. Operating Freq./Time: _____

Generator Connection: ____Delta ____ Wye ____ Wye Grounded

Direct Axis Synchronous Reactance, Xd: _____ P.U.

Direct Axis Transient Reactance, X' d: _____P.U.

Direct Axis Subtransient Reactance, X" d: _____P.U.

Negative Sequence Reactance, X2: _____ P.U.

Zero Sequence Reactance, X0: _____ P.U.

KVA Base: _____

Maximum Field Volts: _____

Maximum Field Amperes: _____

Induction Generators:

Manufacturer: _____

Model No.: _____

Version No.: _____

Locked Rotor Current: _____ Amps

Phases: ____ Single ____Three-Phase

Motoring Power (kW): _____

I_2*I_2*t or K (Heating Time Constant): _____

Rotor Resistance, Rr: _____Ώ

Stator Resistance, Rs: _____

Stator Reactance, Xs: _____

Rotor Reactance, Xr: _____

Magnetizing Reactance, Xm: _____

Short Circuit Reactance, Xd'': _____

Exciting Current: _____ Amps

Frame Size: _____ Design Letter: ____ Temp. Rise: _____dC.

Reactive Power Required In Vars (No Load): _____

Reactive Power Required In Vars (Full Load): _____

Total Rotating Inertia, H: _____ Per Unit on kVA Base _____

Excitation and Governor System Data for Synchronous Generators Only:

Provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS). A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted.

Interconnection Facilities Information:

Will a transformer be used between the generator and the point of common coupling? ___ Yes ___No

Will the transformer be provided by the Interconnection Customer? ____ Yes ____No

Interconnection Customer Transformer Data (please provide information for all transformers, attach separate sheet if necessary):

Is the transformer: ____single phase ____ three phase Size: _____kVA

Transformer Impedance: _____% on _____kVA Base

Transformer Primary: _____ Volts ____Delta ____Wye ____ Wye Grounded

Transformer Secondary: _____ Volts ____Delta ____Wye ____ Wye Grounded

Transformer Tertiary: _____ Volts ____Delta ____Wye ____ Wye Grounded

Transformer Fuse Data (if applicable, for Interconnection Customer-Owned Fuse):

(Attach copy of fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)

Manufacturer: _____ Type: _____ Size: _____Speed: _____

Interconnecting Circuit Breaker (if applicable):

Manufacturer: _____ Type: _____

Load Rating (Amps): _____ Interrupting Rating (Amps): _____ Trip Speed (Cycles): _____

Interconnection Protective Relays (if applicable):

If Microprocessor-Controlled:

List of Functions and Adjustable Setpoints for the protective equipment or software:

Setpoint Function	Setpoint	Minimum	Maximum
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

If Discrete Components:

(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

Manufacturer	Type	Style/Catalog No.	Proposed Setting
_____	_____	_____	_____
_____	_____	_____	_____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

Current Transformer Data (If Applicable):

(Enclose Copy of Manufacturer's Excitation and Ratio Correction Curves)

Manufacturer	Type	Accuracy Class	Proposed Ratio Connection
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Potential Transformer Data (If Applicable):

(Enclose Copy of Manufacturer's Excitation and Ratio Correction Curves)

Manufacturer	Type	Accuracy Class	Proposed Ratio Connection
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Other Facility Information:

Enclose copy of site electrical one-line diagram showing the configuration of total proposed Generating Facility equipment, current and potential circuits, and protection and control schemes. Please include system impedance and distance for all segments of the generating facility.

One Line Diagram attached: ____ Yes ____ No

Enclose copy of any site documentation that indicates the precise physical location of the proposed Generating Facility (e.g., USGS topographic map, distance from public utility facility number, other diagram or documentation).

Plot Plan attached: ____ Yes ____ No

Enclose copy of any documents that provide proof of site control.

Site Control attached: ____Yes ____ No

CERTIFICATION:

I hereby certify that all of the information provided in this application request form is correct.

Applicant Signature: _____

Printed Name: _____

Title: _____

Date Signed: _____

Application Fee Included:

Amount: $_____