

BARTLETT ELECTRIC COOPERATIVE, INC.

APPLICATION FOR OPERATION OF MEMBER OWNED GENERATION

This application should be completed as soon as possible and returned to the Bartlett Electric Cooperative, Inc. (c/o Engineering Services Supervisor) in order to begin processing the request. See Distributed Generation Tariff and Distributed Generation Procedures and Guidelines Manual for Members for additional information.

INFORMATION: *This application is used by the Cooperative to determine the required equipment configuration for the Applicant interface. Every effort should be made to supply as much information as possible. Please print or type legibly.*

PART 1

OWNER/APPLICANT INFORMATION

Coop Member or Company Name: _____

Mailing Address: _____

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

Phone Number: _____ Representative (if company): _____

TYPE OF GENERATOR (as applicable)

A. Small Renewable \leq 20 kW

Photovoltaic _____ Wind _____ Other (describe) _____

B. Combustion Distributed Generation (Wholesale Producer)

Micro Turbine _____

Diesel Engine _____ Gas Engine _____ Turbine Other _____

PROJECT DESIGN/ENGINEERING (as applicable)

Company: _____

Mailing Address: _____

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

Phone Number: _____ Representative: _____

ELECTRICAL CONTRACTOR (as applicable)

Company: _____

Mailing Address: _____

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

Phone Number: _____ Representative: _____

ESTIMATED LOAD INFORMATION

The following information will be used to help properly design the Cooperative customer interconnection. This information is not intended as a commitment or contract for billing purposes.

Total DG AC Output _____(kW)

Mode of Operation (check all that apply)

Isolated _____ Paralleling _____ Power Export _____

DESCRIPTION OF PROPOSED INSTALLATION AND OPERATION

Give a general description of the proposed installation, including when you plan to operate the generator.

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 (Xs): _____ % on _____ kVA base

Zero Sequence Reactance (Xo): _____ % on _____ kVA base

Neutral Grounding Resistor (if applicable): _____

$I_2^2 t$ of 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. Rates: _____ 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): _____

INVERTER DATA (if applicable) (typical for small renewable wind and solar)

Manufacturer: _____ Model: _____
 Rate Power Factor (%): _____ Rated Voltage (Volts): _____ Rated Amperes: _____
 Inverter Type (ferroresonant, step, pulse-width modulation, etc.) _____
 Type commutation: forced line (typical for utility interactive; meets IEEE 1547)
 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, 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. Additionally, a \$200 non-refundable DG Application Fee must be paid before this Application is processed. However, if existing Cooperative facilities are not adequate to serve the proposed DG facilities the additional cost to upgrade these facilities must be paid as a non-refundable contribution-in-aid-of-construction before construction begins.

SIGN OFF AREA

The applicant agrees to provide the Cooperative with any additional information requested by the Cooperative to assist in the review of this Application required to complete the interconnection. The applicant shall operate his equipment within the guidelines set forth by the Cooperative.

Applicant (signature)_____
Date_____
Applicant (printed/typed name)**BARTLETT ELECTRIC COOPERATIVE, INC. CONTACT FOR APPLICATION
SUBMISSION AND FOR MORE INFORMATION:**

Cooperative contact: Engineering Services Supervisor
Address: 27492 Highway 95
Bartlett, Texas 76511

Phone: 254-527-3551
Fax: 254-527-3221

BARTLETT ELECTRIC COOPERATIVE, INC

**COOPERATIVE AGREEMENT FOR INTERCONNECTION AND PARALLEL
OPERATION OF DISTRIBUTED GENERATION ("Interconnection Agreement")**

SHORT FORM CONTRACT

This Interconnection Agreement ("Agreement") is made and entered into this ____ day of _____, 20____, ("Effective Date") by Bartlett Electric Cooperative, Inc., ("Cooperative"), a corporation organized under the laws of Texas, and _____ ("DG Owner/Operator"), each hereinafter sometimes referred to individually as "Party" or both referred to collectively as the "Parties". In consideration of the mutual covenants set forth herein, the Parties agree as follows:

The provisions of the Cooperative's Distributed Generation Tariff ("DG Tariff") shall be considered to be a part of this contract.

This agreement provides for the safe and orderly operation of the DG Owner/Operator's electrical facilities and the interconnection of the DG Owner/Operator's facility(ies) (collectively "Facility") at _____ and the electrical distribution system ("System") owned by the Cooperative.

This Agreement does not supersede any requirements of any applicable tariffs in place between the DG Owner/Operator and the Cooperative.

1. Intent of Parties: It is the intent of the DG Owner/Operator to interconnect an electric power generator to the Cooperative's electrical distribution system.

It is the intent of the Cooperative to operate the distribution system to maintain a high level of service to its customers and to maintain a high level of power quality.

It is the intent of both parties to operate in a way that helps ensure the safety of the public and respective employees.

2. Establishment of Point of Interconnection - The point where the electric energy first leaves the wires or facilities of the system owned by the Cooperative and enters the wires or facilities of the Facility provided by DG Owner/Operator is the "Point of Interconnection." Cooperative and DG Owner/Operator agree to interconnect the Facilities at the Point of Interconnection in accordance with the Cooperative's DG Tariff.

3. Operating authority: The DG Owner/Operator is responsible for establishing operating procedures and standards within their organization. The operating authority for the DG Owner/Operator and its operating authority shall ensure that the Operator in Charge of the generator constituting a part of the Facility is competent in the operation of the electrical generation system and is aware of the provisions of any operating agreements and regulations relating to the safe operation of electrical power systems.

The operating authority for the DG Owner/Operator is:

Name or title of operating authority _____

Address _____

Phone number _____

4. Operator in Charge: The Operator in Charge is the person identified by name or job title responsible for the real time operation of the Facility owned or leased by the DG Owner/Operator.

The Operator in Charge for the DG Owner/Operator is:

Name or title of operating authority _____

Address _____

Phone number _____

5. Limitation of Liability and Indemnification:

a. Notwithstanding any other provision in this Agreement, with respect to the Cooperative's provision of electric service to DG Owner/Operator and the services provided by the Cooperative pursuant to this Agreement, Cooperative's liability to DG Owner/Operator shall be limited as set forth in the Cooperative's tariffs and terms and conditions for electric service, which are incorporated herein by reference.

b. Neither Cooperative nor DG Owner/Operator shall be liable to the other for damages resulting from a Force Majeure event as hereinafter defined.

c. Notwithstanding Paragraph 5.b of this Agreement, the DG Owner/Operator shall assume all liability for, and shall indemnify and hold harmless Cooperative for, any claims, losses, damages, liabilities, costs, and expenses of any kind or character to the extent that they result from DG Owner/Operator's negligence or other wrongful conduct (including the negligence or wrongful conduct of DG Owner/Operator's operators and their agents, employees, or contractors) in connection with the design, construction or operation of the Facilities. Such indemnity shall include, but is not limited to, financial responsibility for (a) monetary losses; (b) reasonable costs and expenses of defending an action or claim; (c) damages related to death or injury; (d) damages to property; and (e) damages for the disruption of business.

d. Cooperative and DG Owner/Operator shall each be responsible for the safe installation, maintenance, repair and condition of their respective lines, wires, switches, or other equipment or property on their respective sides of the Point of Interconnection. The Cooperative, while retaining the right to inspect, does not assume any duty of inspecting the DG Owner/Operator's lines, wires, switches, or other equipment or property and will not be responsible therefore. DG Owner/Operator assumes all responsibility for the electric service supplied hereunder and the facilities used in connection therewith.

e. For the mutual protection of the DG Owner/Operator and the Cooperative, only with the Cooperative's prior written authorization are the connections between the Cooperative's service wires and the DG Owner/Operator's service entrance conductors to be energized.

f. The provisions of this Section 5 shall survive any termination of this Agreement.

6. **Metering:** Metering shall be accomplished as described in the Cooperative's DG Tariff.

7. **Insurance:** Insurance shall be required as described in the Cooperative's DG Tariff.

8. **Suspension of Interconnection:** It is intended that the interconnection should not compromise the Cooperative's protection or operational requirements. The operation of the DG Owner/Operator's Facility and the quality of electric energy supplied by the DG Owner/Operator shall meet the standards as specified by the Cooperative. If the operation of the DG Owner/Operator's Facility or quality of electric energy supplied (in the case of power export) does not meet the standards as specified, then the DG Owner/Operator shall take reasonable and expedient corrective action, including any such corrective action as requested by the Cooperative. The Cooperative shall have the right to disconnect the DG Owner/Operator's Facility, until compliance is reasonably demonstrated. Notwithstanding, the Cooperative may in its sole discretion disconnect the DG Owner/Operator's Facility from the distribution system without notice if the operating of the Generating Plant may be or may become dangerous to life and property.

9. **Compliance with Laws, Rules and Tariffs:** Both the Cooperative and the DG Owner/Operator shall be responsible for complying with all applicable laws, rules and regulations, including but not limited to the laws of the state of Texas, and the Cooperative's DG Tariff, other Tariffs, Rules and Regulations, By-Laws and other governing documents. The interconnection and services provided under this Agreement shall at all times be subject to the terms and conditions set forth in the tariff schedules and rules of the Cooperative as applicable to the electric service provided by the Cooperative, which tariffs and rules are hereby incorporated into this Agreement by this reference. The Cooperative shall have the right to publish changes in rates, classification, service or rule, with the proper notification to all DG owners/operators and Cooperative members.

10. **Maintenance Outages:** Maintenance outages will occasionally be required on the Cooperative's system, and the Cooperative will provide reasonable notice and planning as practicable to minimize downtime. It is noted that in some emergency cases such notice may not be reasonably possible. Compensation will not be made for unavailability of Cooperative's system due to outages.

11. **Access:** Access is granted as may be required by the Cooperative to the DG Owner/Operator's Facility for maintenance, operating and meter reading. The Cooperative reserves the right, but not the obligation, to inspect the DG Owner/Operator's Facility.

12. **Force Majeure:** For the purposes of this Agreement, a Force Majeure event is any event:

(a) that is beyond the reasonable control of the affected party; and

(b) that the affected Party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent that they satisfy the preceding requirements: acts of war, acts of terrorism, public disorder, rebellion or insurrection; floods, hurricanes, earthquakes, lighting, storms or other natural calamities; explosions or fires; strikes, work stoppages or labor disputes; embargoes; and sabotage. If a Force Majeure event prevents a Party from fulfilling any obligations under this agreement, such Party will promptly notify the other Party in writing and will keep the other Party informed on a continuing basis as to the scope and duration of the Force Majeure event. The affected Party will specify the

circumstances of the Force Majeure event, its expected duration and the steps that the affected Party is taking to mitigate the effect of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement if a Force Majeure event prevents a Party from fulfilling such performance of obligations but will use reasonable efforts to resume its performance as soon as possible.

13. Assignment - At any time during the term of this Agreement, the DG Owner/Operator may assign this Agreement to a corporation, an entity with limited liability or an individual (the "Assignee"), provided that the DG Owner/Operator obtains the prior written consent of the Cooperative in advance of the assignment. The Cooperative's consent will be at the Cooperative's discretion based on whether or not the Cooperative determines that the Assignee is financially and technically capable to assume ownership and/or operation of the DG unit. The company or individual to which this Agreement is assigned in accordance with the terms and conditions of this Agreement will be responsible for the proper operation and maintenance of the DG Facilities, and will be a party to all provisions of this Agreement.

14. Term: The term of this Agreement is a period of two (2) years from the Effective Date ("Initial Term"). This Agreement shall automatically renew in (1) year increments after the Initial Term unless terminated sooner. This Agreement may be canceled by either party with 30 days prior written notice to the other party during the Initial Term or any renewal period.

AGREED TO BY:

DG Owner/Operator

Cooperative

Name

Name

Title

Title

Date Signed

Date Signed