



DISTRIBUTED GENERATION POLICY

I. OBJECTIVE

This document establishes the terms and conditions for the interconnection of distributed generation facilities and for providing net energy metering services for peak generation capacity of not more than 10 kW for a residential application and 100 kW for a commercial application. Any requests to establish interconnection of distributed generation facilities above these limits will be at the sole discretion of Jefferson Energy Cooperative.

II. DEFINITIONS

The following words and terms shall have the following meanings unless the context clearly indicates otherwise:

- A. “Bi-directional meter” is a meter capable of measuring (but not necessarily displaying) electricity flow in both directions.
- B. “Bi-directional metering” means measuring the amount of electricity supplied by the Cooperative and the amount of electricity fed back to the Cooperative by the member’s distributed generation facility using a single meter.
- C. “Billing period” means, as to a particular member, the time period between the dates on which the Cooperative normally reads the retail service meter for billing purposes.
- D. “Cease to energize” means the cessation of energy outflow capability.
- E. “Distributed generation facility” means a facility owned and operated by a member of the Cooperative for the production of electrical energy that:
 - 1. Has peak generating capacity of not more than 10 kW for a residential application and 100 kW for a commercial application;
 - 2. Is located on the member’s premises;



3. Operates in parallel with the Cooperative's distribution facilities;
 4. Is connected to the Cooperative's distribution system on either side of the Cooperative's retail service meter; and
 5. Is intended primarily to offset part or all of the member's requirements for electricity.
- F. "Excess net energy" is the positive difference between the electricity generated by the member's distributed generation facility and the electricity consumed by the Member Generator during the billing period and delivered to JEC's electrical distribution system.
- G. "Interconnection" means the result of the process of adding a distributed generation facility to the electric cooperative's system.
- H. "Net metering" means measuring the difference, over the billing period, between electricity supplied to a Member Generator from the electric grid and the electricity generated and fed into the electric grid by the Member Generator, using a single bi-directional meter or an additional single direction meter.

III. POLICY

- A. It is the intent of Jefferson Energy Cooperative (JEC) to allow members to install Distributed Generation (DG), provided the member's DG facility does not adversely affect the Cooperative. The member must conduct his/her own analysis to determine the economic benefit of the DG operation.
- B. A DG facility that is not connected to JEC's system in any way is known as "stand-alone" or "isolated" DG. The member may operate a DG facility in stand-alone or isolated fashion as long as such DG facility does not adversely affect the Cooperative's system. A DG facility connected in any way to JEC's system shall be considered as in "parallel." For purposes of this Policy, a DG facility is considered operating in "parallel" anytime it is connected to JEC's system in any way, even if the member does not intend to export power. All provisions of the Policy shall apply to parallel operation of DG facilities as so defined.



- C. This Policy is not a complete description or listing of all laws, ordinances, rules and regulations, nor is the Policy intended to be an installation or safety manual. The member requesting to interconnect a DG facility to JEC's system is responsible for and must follow, in addition to all provisions of this Policy, all other JEC Member Policies, the current *IEEE 1547 – Standard Guide for Distributed Generation Interconnection*, *IEEE 1547.1 – Standard for Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems*, *ANSI C84.1 – American National Standard for Electrical Power Systems and Equipment-Voltage Ratings (60 Hertz)*, and *NEC Article 705 – Interconnected Electric Power Production Sources*.
- D. The member is solely responsible for all federal, state, and local permits, certifications, and qualifications associated with the operation of the DG facility. It is also the responsibility of the member to determine if the DG facilities require an Air Quality Permit or other environmental qualifications from the appropriate governing agency.
- E. A member may serve the load behind the meter at the location serving the DG facility but will not be allowed to serve multiple meters, multiple consuming facilities, or multiple members with a single DG facility or under a single DG contract.
- F. Safety:
1. All safety and operating procedures for joint use equipment shall be in compliance with the Occupational Safety and Health Administration (OSHA) Standard 29, CFR 1910.269, the NEC, and the equipment manufacturer's safety and operating manuals.



2. The safety of the general public, JEC employees and equipment shall in no way be reduced or impaired as a result of the interconnection. In general, the member's facilities will be held to the same standard of care that JEC is required to maintain. The member is solely responsible for the installation, maintenance, and safety of his/her wiring and equipment. JEC shall not in any way be liable for accidents, or damages, occurring to the member or to third parties because of contact with, or failure of, any portion of the member's installation.

G. Quality of Service:

1. The member's DG facility shall produce power at a minimum power factor of at least 95% or shall use power factor correction capacitors to ensure at least a 95% power factor.
2. The overall quality of the power provided by the member's DG facility including, but not limited to, the effects of harmonic distortion, voltage regulation, voltage flicker, switching surges and power factor, will be such that JEC's system is not adversely affected in any manner. The member must meet power quality requirements as stated in IEEE-1547 and ANSI C84.1.
3. In the event that adverse effects to power quality are caused in whole or in part by the member's DG facility, the member will correct the cause of such effects within 30 days, reimburse JEC for required correction on the Cooperative's facilities, and/or be disconnected from JEC's system.

H. Isolation Disconnect Switch:

1. The member must install a UL approved, visible load break isolation disconnect switch, per NEC Article 705 and additional requirements as set by JEC and stated below, at the Member's expense.
2. The switch will be located so as to be readily accessible to JEC personnel at all times in a location acceptable to both the member and JEC.



3. The switch shall be a type that can be secured in an open position by a lock owned by JEC. If JEC has locked the isolation disconnect switch open, the member shall not operate or close the switch.
4. JEC shall have the right to lock the switch open when, in the judgment of JEC:
 - a. It is necessary to maintain safe electrical operating and/or maintenance conditions.
 - b. The member's DG adversely affects JEC's system.
 - c. There is a system emergency or other abnormal operating condition warranting disconnection.
 - d. If the member is in violation of this policy.
5. JEC reserves the right to operate the isolation disconnect switch for the protection of JEC's system and employees even if it affects the member's facility. In the event JEC opens and/or closes the isolation disconnect switch:
 - a. JEC shall not be responsible for energizing or restoring the parallel operation of the DG facility.
 - b. JEC will make every reasonable effort to notify the member.

In the event that JEC does not open the isolation disconnect switch, this event shall not relieve the member of any liability for injury, death or damage attributable by the DG facility.
6. The member will not bypass the isolation disconnect switch at any time for any reason.
7. Signage shall be placed by the member at the isolation disconnect indicating the purpose of the switch along with contact names and numbers of the member.



8. Should JEC lose power serving the member's DG facilities for any reason, members with DG facilities shall not operate their DG facilities unless visibly disconnected from JEC's system.
9. Any modifications to the isolation disconnect switch may be deemed as tampering.
- J. Closed transition transfer switches are NOT allowed for any DG facilities.
- K. System Protection:
 1. Any DG facility must cease to energize JEC's system upon a loss of voltage on JEC's system. The DG facility shall automatically disconnect the generation from the JEC's system per ANSI C84.1. In the event the DG facility fails to disconnect, creating a hazardous condition on JEC's system, the member shall be liable for resulting damage and injuries. Unless otherwise agreed to, reconnection shall be permitted 5 minutes after the utility voltage and frequency return to normal range.
 2. JEC normally applies automatic reclosing after fault clearing on all distribution lines. Most faults on a utility circuit are temporary, and the reclosing is intended to restore service as quickly as possible. The duration of outages due to temporary faults is most frequently in the range of 0.1 – 30 seconds, but varies depending on many factors. The DG Owner/Operator must insure that the DG facility is disconnected from JEC's system prior to automatic reclosing. The existing automatic reclosing schemes assume that the circuit is dead and do not employ any voltage check, phasing, or synchronization schemes. JEC shall assume no responsibility for damage to DG facility equipment due to out-of-phase reclosing.
 3. The member will be responsible for protecting its generating equipment in such a manner that distribution system outages, short circuits or other disturbances do not damage the member's generating equipment. JEC shall assume no responsibility for damage to DG facility equipment due to system disturbances and/or anomalies.



L. Liability:

1. The member agrees to ensure that all contractors and employees who perform any obligations of the member related to the DG facility are covered by worker's compensation and employer's liability insurance, as may be required by applicable law.
2. JEC shall not be liable to any person, directly or indirectly, for loss of property, injury, or death resulting from the interconnection of a co-generator or distributed generation facility to its system. The member shall assume all liability for and shall indemnify, hold harmless, and defend JEC against any claims, losses, costs, and expenses of any kind or character to the extent that they result from or are related to the members negligence or other wrongful conduct in connection with the design, construction, operation, or installation of the member's co-generation or distributed generation system.
3. The member agrees to notify his/her homeowner's or business insurance company of the plans to install generating equipment, in writing with a copy provided to Jefferson Energy Cooperative.

M. Plan Review Process:

1. The member must submit an application/contract accompanied by the specifications/manuals of the DG facility, a one-line diagram showing all DG sources, the point of connection, and disconnect means.
2. JEC will review the application/contract and accompanying documents and will return an interconnection analysis to the member within 30 days.
3. If corrections or changes to the plans, specifications and other information are to be made by the member, the 30 day period may be reinitialized when such changes or corrections are provided to JEC.



4. The member acknowledges and agrees that any review or acceptance of such plans, specifications and other information by JEC shall not impose any liability on JEC and does not guarantee the adequacy of the member's equipment or DG facility to perform its intended function. JEC disclaims any expertise or special knowledge relating to the design or performance of generating installations and does not warrant the efficiency, cost-effectiveness, safety, durability, or reliability of such DG installations.
5. In the event it is necessary at the time of initial interconnection or at some future time for JEC to modify electric delivery systems in order to serve the member's DG facilities and/or purchase or continue to purchase the output of the member's DG facilities, or because the quality of the power provided by the member's DG facility adversely affects JEC's delivery system, the member will be responsible to pay JEC for all costs of modifications required by JEC for the interconnection of the member's DG facilities.
6. If member requires three-phase service and three-phase service is not available in the area, the member may incur additional cost for such service or improvements as determined by JEC. JEC reserves the right to refuse three-phase service.
7. JEC may, at its sole discretion, prevent the interconnection or disconnect the interconnection of DG facilities due to reasons such as safety concerns, reliability issues, power quality issues, breach of this policy or any other reasonable issue. Any disconnection may be without prior notice.
8. A prospective DG member may not be allowed to interconnect a distributed generation facility if doing so will cause the total rated generating alternating current capacity of all interconnected distributed generation facilities within the JEC's service territory to exceed 0.2% of the JEC's annual peak demand for the previous year. In any case where a prospective DG member has submitted a notification form and that member's interconnection would cause the total rated generating alternating current capacity of all interconnected distributed generation facilities to exceed 0.2% of the JEC's peak demand for the previous year, the JEC shall send written notification to such prospective DG member.



9. JEC may impose additional requirements for the Applicant and/or Generator, including limitation on the number of member generators and total capacity of DG systems that may be interconnected to any distribution feeder line, circuit, or network that JEC determines are necessary to protect public safety and system reliability.

N. Net Metering:

The Cooperative will use either a single-directional or bi-directional meter depending upon how the DG facility is connected to the distribution system. If the DG facility is connected to the distribution system on the DG member's side of the retail service meter, the Cooperative will use a bi-directional meter for net metering. If the DG facility is connected to the distribution system on the Cooperative's side of the retail service meter, the Cooperative will install an additional single directional meter for net metering.

O. Obligations to Purchase Excess Net Energy:

When the electricity generated by the member's distributed generation facility exceeds the electricity supplied by the Cooperative during the billing period, then such excess net energy shall be purchased by JEC pursuant to the JEC's Net Metering Service Schedule NM.

P. Notice of Change in Installation:

1. The member will notify JEC in writing thirty (30) days in advance of making any change affecting the characteristics, performance, or protection of the DG facility.
2. If any modification undertaken by the member will create or has created conditions which may be unsafe or adversely affect JEC's system, the member shall immediately correct such conditions or be subject to immediate disconnection from JEC's system



3. Any change in the operating characteristics of the DG facility including, but not limited to, size of generator, total facility capacity, nature of facility, fuel source, site change, hours of operation, or type used, may require a new application/contract process.
- Q. The member will have a licensed electrician with an unrestricted license test all aspects of the protection systems up to and including tripping of the generator and interconnection point at start-up and annually thereafter. Testing will verify all protective set points and relay/breaker trip timing and shall include procedures to functionally test all protective elements of the system as well as a cease to energize functionality test per IEEE-1547. These tests are both visual and operational. JEC requires documentation in writing for initial start up testing and annual testing.
- R. The member shall notify JEC prior to the sale or transfer of the DG facilities or the premises upon which the facilities are located. The member shall not assign its rights or obligations under any agreement entered into pursuant to these rules without the prior written consent of JEC, which consent shall not be unreasonably held.

IV. RESPONSIBILITY

- A. President & CEO
- B. VP of Line Services

REVISED DATES: August 27, 2008
December 23, 2008
October 27, 2010



APPENDIX A

Jefferson Energy Cooperative

Distributed Generation Facilities and Net Energy Metering Interconnection Application

Members must not operate their generation facilities in parallel with Jefferson Energy Cooperative’s system until they have received written authorization for parallel operation from Jefferson Energy Cooperative. Unauthorized parallel operation of member’s generating facilities could result in injury to persons and/or damage to equipment or property.

Member must remit payment for Application Fee when submitting Application.

Application Fee:

Residential (10 kW and less): \$75 (Subject to Change)
 Commercial (100 kW and less): \$300 (Subject to Change)

Section 1 – Contact Information

A. Applicant Information (Where the generation facility will be installed)

Name: _____
 Mail Address: _____ City: _____ State: _____ Zip Code: _____
 Facility Location (if different from above): _____
 City: _____ State: _____ Zip Code: _____
 Daytime Phone Number: _____ Account Number: _____
 Email: _____

B. Contractor Information

Company Name: _____ Contact Name: _____
 Mail Address: _____ City: _____ State: _____ Zip Code: _____
 Business Number: _____ Email: _____

Section 2 – Generating Facility Information

Generator Type (check one): Solar _____ Wind _____ Fuel Cell _____ Hydro _____ Other _____
 Generator Manufacturer: _____
 Generator Model Name and Number: _____
 Generator Power Rating (kW): _____
 Inverter Manufacturer: _____
 Inverter Model Name/Number: _____
 Inverter Power Rating (kW): _____
 Disconnect Switch Manufacturer/Model Number: _____
 Disconnect Switch Rating (Amps): _____

Section 3 – Attachments

A single-line diagram is required showing the Member’s installation of its generating facilities and the interconnection to Jefferson Energy Cooperative’s system. Devices such as the service panel, disconnect switches (per policy), inverters, all generators, circuit breakers, etc. must contain the electrical rating and operating voltages. A copy of the specifications/manuals for all equipment shall be provided

Verification is required that the homeowner’s or business insurance company has been notified in writing of the plans to install generating equipment.

Section 4 – Installation Information

Installation Date: _____ Proposed Interconnection Date: _____

Section 5 – Certifications

A copy of the signed jurisdictional approval (permit) for member’s generating facility from the local government entity with jurisdiction over the member’s project (generally the local building and inspections department).

Note: This will not delay the application process, but is required to complete the interconnection notification.

Certification by a licensed electrician of test results verifying all protective set points and relay/breaker trip timing are correctly functioning per IEEE-1547.

I hereby certify that, to the best of my knowledge, all of the information provided in this Application is true and correct.

Applicant Signature: _____



APPENDIX B

JEFFERSON ENERGY COOPERATIVE

**CONTRACT
FOR DISTRIBUTED GENERATION FACILITY INTERCONNECTION**

This Interconnection Agreement (“Agreement”) is made and entered into this ____ day of _____, 20____, by Jefferson Energy Cooperative, (“JEC”), a corporation organized under the laws of Georgia, 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:

This agreement provides for the safe and orderly operation of the electrical facilities interconnecting the DG Owner/Operator’s facility at _____

(land location or description of project) and the electrical distribution facility owned by JEC.

DG Owner/Operator’s acceptance of this contract is an agreement to abide by and meet all requirements as set forth in JEC’s Distributed Generation Policy.

This Agreement does not supersede any requirements of any by-laws, applicable tariffs, rates, rules and regulations in place between the DG Owner/Operator and JEC.

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



It is the intent of JEC to operate the distribution system to maintain a high level of service to their members and to maintain a high level of power quality.

It is the intent of both parties to operate the facilities in a way that ensures the safety of the public and their employees.

2. **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 shall ensure that the Operator in Charge of the generator 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, along with address and phone number).

3. **Operator in Charge:** The operator in charge is the person identified by name or job title responsible for the real time operation of all electrical facilities related to the interconnection and owned by their organization.

The operator in charge for the DG Owner/Operator is _____

(Name or title of operator in charge, along with address and phone numbers).

4. **Suspension of Interconnection:** It is intended that the interconnection should not compromise JEC’s protection or operational requirements. The operation of the DG Owner/Operator’s System and the quality of electric energy supplied by the DG Owner/Operator shall meet the standards as specified by JEC. If the operation of the DG Owner/Operator’s system or quality of electric energy supplied (in the case of power export) does not meet the standards as specified, then JEC will notify the DG Owner/Operator to take reasonable and appropriate corrective action. JEC shall have the right to disconnect the DG Owner/Operator’s System, until compliance is reasonably demonstrated. Notwithstanding, JEC may in its sole discretion disconnect the DG Owner/Operator’s generating plant from the Distribution Facility without notice if the operating of the Generating Plant imposes a threat, in JEC’s sole judgement, to life and property.



5. **Maintenance Outages:** Maintenance outages will occasionally be required on JEC's system, and JEC will provide as much notice and planning as practical to minimize downtime.
6. **Access:** Access is required at all times by JEC to the DG Owner/Operator's site for maintenance, operating and meter reading. JEC reserves the right, but not the obligation, to inspect the DG Owner/Operator's facilities.
7. **Liability and Indemnification:** The DG Owner/Operator shall assume all liability for and shall indemnify JEC for any claims, losses, costs, and expenses of any kind or character to the extent that they result from the DG Owner/Operator's negligence or other wrongful conduct in connection with the design, construction or operation of the DG Owner/Operator's facility. JEC shall not be liable to any person, directly or indirectly, for loss of property, injury, or death resulting from the interconnection of a cogenerator or distributed generation facility to its system. The member agrees to notify his/her homeowner's or business insurance company of the plans to install generating equipment, in writing with a copy provided to Jefferson Energy Cooperative.
8. **Term:** This Agreement becomes effective when executed by both Parties and shall continue in effect until terminated. It may be canceled by the DG Owner with not less than 30 days notice to the other party. JEC may cancel it if the DG Owner is in breach of it or is inactive for 6 months.



AGREED TO BY

DG Owner/Operator

Jefferson Energy Cooperative
Director of Economic Development

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Jefferson Energy Cooperative
System Engineer

Name: _____

Title: _____

Date: _____

