

**Procedures for Interconnecting
a Certified Inverter-Based Small Generating Facility No
Larger than 10 kW ("10 kW Inverter Process")**

_____ Electric Cooperative, Inc has adopted a uniform procedure to process requests for interconnecting small, inverter-based generating facilities no larger than 10 kW. The procedure was developed by the Federal Energy Regulatory Commission (FERC) as a way of streamlining the process of Member interconnections and includes these documents:

- This description of the procedures involved in the interconnection process;
- The Application for interconnecting the generator;
- The Terms and Conditions of the interconnection;
- The Certificate of Completion

The process contains the following steps:

- 1.0 The Interconnection Member ("Member") completes the Interconnection Request ("Application") and submits it to _____ Electric Cooperative, Inc. ("Cooperative").
- 2.0 The Cooperative acknowledges to the Member receipt of the Application within three Business Days of receipt.
- 3.0 The Cooperative evaluates the Application for completeness and notifies the Member within ten Business Days of receipt that the Application is or is not complete and, if not, advises what material is missing.
- 4.0 The Cooperative verifies that the Small Generating Facility can be interconnected safely and reliably using the screens contained in the Fast Track Process in the Small Generator Interconnection Procedures (SGIP), reprinted below. The Cooperative has 15 Business Days to complete this process. Unless the Cooperative determines and demonstrates that the Small Generating Facility cannot be interconnected safely and reliably, the Cooperative approves the Application and returns it to the Member. Note to Member: Please check with the Cooperative before submitting the Application if disconnection equipment is required.
 - 4.0.1 Screens
 - 4.0.1.1 The proposed Small Generating Facility's Point of Interconnection must be on a portion of the Cooperative's Distribution System that is subject to the Tariff.
 - 4.0.1.2 For interconnection of a proposed Small Generating Facility to a radial distribution circuit, the aggregated generation, including the proposed Small Generating Facility, on the circuit shall not exceed 15 % of the line section annual peak load as most recently measured at the substation. A line section is that portion of a Cooperative's electric system connected to a Member bounded by automatic sectionalizing devices or the end of the distribution line.

- 4.0.1.3 For interconnection of a proposed Small Generating Facility to the load side of spot network protectors, the proposed Small Generating Facility must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, shall not exceed the smaller of 5 % of a spot network's maximum load or 50 kW¹.
- 4.0.1.4 The proposed Small Generating Facility, in aggregation with other generation on the distribution circuit, shall not contribute more than 10 % to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of change of ownership.
- 4.0.1.5 The proposed Small Generating Facility, in aggregate with other generation on the distribution circuit, shall not cause any distribution protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or Interconnection Member equipment on the system to exceed 87.5 % of the short circuit interrupting capability; nor shall the interconnection be proposed for a circuit that already exceeds 87.5 % of the short circuit interrupting capability.
- 4.0.1.6 Using the table below, determine the type of interconnection to a primary distribution line. This screen includes a review of the type of electrical service provided to the Interconnecting Member, including line configuration and the transformer connection to limit the potential for creating over-voltages on the Cooperative's electric power system due to a loss of ground during the operating time of any anti-islanding function.

Primary Distribution Line Type	Type of Interconnection to Primary Distribution Line	Result/Criteria
Three-phase, three wire	3-phase or single phase, phase-to-phase	Pass screen
Three-phase, four wire	Effectively-grounded 3 phase or Single-phase, line-to-neutral	Pass screen

- 4.0.1.7 If the proposed Small Generating Facility is to be interconnected on single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed Small Generating Facility, shall not exceed 20 kW.

¹ A spot Network is a type of distribution system found within modern commercial buildings to provide high reliability of service to a single Member. (Standard Handbook for Electrical Engineers, 11th edition, Donald Fink, McGraw Hill Book Cooperative)

- 4.0.1.8 If the proposed Small Generating Facility is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition shall not create an imbalance between the two sides of the 240 volt service of more than 20 % of the nameplate rating of the service transformer.
 - 4.0.1.9 The Small Generating Facility, in aggregate with other generation interconnected to the transmission side of a substation transformer feeding the circuit where the Small Generating Facility proposes to interconnect shall not exceed 10 MW in an area where there are known, or posted, transient stability limitations to generating units located in the general electrical vicinity (e.g., three or four transmission busses from the point of interconnection).
 - 4.0.1.10 No construction of facilities by the Cooperative on its own system shall be required to accommodate the Small Generating Facility.
- 5.0 After installation, the Member returns the Certificate of Completion to the Cooperative. Prior to parallel operation, the Cooperative may inspect the Small Generating Facility for compliance with standards which may include a witness test, and may schedule appropriate metering replacement, if necessary.
- 6.0 The Cooperative notifies the Member in writing that interconnection of the Small Generating Facility is authorized. If the witness test is not satisfactory, the Cooperative has the right to disconnect the Small Generating Facility. The Member has no right to operate in parallel until a witness test has been performed, or previously waived on the Application. The Cooperative is obligated to complete this witness test within ten Business Days of the receipt of the Certificate of Completion. If the Cooperative does not inspect within ten Business Days or by mutual agreement of the Parties, the witness test is deemed waived.
- 7.0 Contact Information – The Member must provide the contact information for the legal applicant (i.e., the Interconnection Member). If another entity is responsible for interfacing with the Cooperative, that contact information must be provided on the Application.
- 8.0 Ownership Information – Enter the legal names of the owner(s) of the Small Generating Facility. Include the percentage ownership (if any) by any utility or public utility holding Cooperative, or by any entity owned by either.
- 9.0 UL1741 Listed – This standard ("Inverters, Converters, and Controllers for Use in Independent Power Systems") addresses the electrical interconnection design of various forms of generating equipment. Many manufacturers submit their equipment to a Nationally Recognized Testing Laboratory (NRTL) that verifies compliance with UL1741. This "listing" is then marked on the equipment and supporting documentation.