

Fayetteville Public Works Commission
Interconnection of Renewable Generation Equipment 10kW or Less

The residential/commercial customer installing a renewable generation system with a nameplate rating of 10 kW or less and with plans to interconnect with PWC's distribution grid with the intent of selling excess power back to PWC must submit an application requesting interconnection. Upon approval of the application and prior to interconnection, the customer's system must be verified by PWC as meeting all interconnection standards and the customer will be required to enter into a written agreement with PWC, which specifies the installation and operating requirements to ensure that personal safety and system reliability will not be compromised.

Steps to Achieve Interconnection /Parallel Operation

1. Application process:

- a. Interconnecting Customer submits a Simplified Application filled out properly and completely.
 - b. PWC acknowledges to the Interconnecting Customer receipt of the application within 10 business days of receipt.
 - c. PWC evaluates the application for completeness and notifies the Interconnecting Customer within 10 business days of receipt that the application is or is not complete and, if not, advises what is missing.
2. PWC verifies Facility equipment can be interconnected safely and reliably.
3. If approved, PWC signs the application approval line and sends to the Interconnecting Customer. In certain rare circumstances, PWC may require the Interconnecting Customer to pay for minor System Modifications. If so, a description of work and an estimate will be sent back to the Interconnecting Customer for approval. The Interconnecting Customer would then approve via a signature and payment for the minor System Modifications. If the Interconnecting Customer approves, PWC performs the System Modifications. Then, PWC signs the application approval line and sends to the Interconnecting Customer.
4. Upon receipt of the signed application, the Interconnecting Customer installs the Facility. Then the Interconnecting Customer arranges for inspection of the completed installation by the local electrical wiring inspector, or other authority having jurisdiction, and this person signs the Certificate of Completion. If the Facility was installed by an electrical contractor; this person also fills out the Certificate of Completion.
5. The Interconnecting Customer returns the Certificate of Completion to PWC.
6. Following receipt of the Certificate of Completion, PWC may inspect the Facility for compliance with standards by arranging for a Witness Test. The Interconnecting Customer has no right to operate in parallel (interconnect) until a Witness Test has been performed. PWC is obligated to complete this Witness Test within 15 business days of the receipt of the Certificate of Completion. If PWC does not inspect in 15 business days or by mutual agreement of the Parties, the Witness Test is deemed waived.
7. Assuming the wiring inspection and/or Witness Test is satisfactory, PWC notifies the Interconnecting Customer in writing that interconnection is authorized. If the Witness Test is not satisfactory, PWC has the right to disconnect the Facility, and will provide information to the Interconnecting Customer describing clearly what is required for approval.

If rejected, PWC will advise the customer why the project was not approved, and what is required to bring it into compliance.

Note: Should applicant choose to begin construction prior to the project being approved by PWC, they do so with the understanding the system/interconnection is subject to final approval by PWC. Installation of additional PWC -owned interconnection facilities, at the customer's expense, may be required by PWC at a later date if the customer's generation system, despite compliance with the interconnection standards, causes safety, reliability or power quality problems.

Requirements for Interconnection

Requirements for Interconnection: The customer understands and agrees that they must provide verification of the following items before interconnection will be made.

- That any renewable generation system equipped with a voltage inverter has been manufactured installed and shall be operated in compliance with Underwriters' Laboratory (UL) standard 1741 for distributed generation systems and has been identified and listed as "Utility Interactive."
- That the system installation complies with the National Electric Code (NEC) and all applicable local codes (latest editions) and that the system has been inspected and approved by the electrical inspector have legal jurisdiction. See list of applicable standards.
- Provide a copy of property deed verifying member's ownership of property where the PV system is installed.
- That the system shall be installed, operated and maintained in accordance with the manufacturers, government and industry standards and specifications.
- Provide a line drawing of small generator system inverter wiring.
- Customer shall furnish a properly executed certificate of insurance to PWC clearly evidencing the required coverage and any exclusions applicable to such coverage.

Note: A distributed generation equipment system (meaning all interface components including switchgear, inverters, integrated generator or other interface devices) may be considered eligible for interconnected generation if it has been submitted by a manufacturer to a nationally recognized testing and certification laboratory (NRTL) and has been tested, identified, and listed by the NRTL as meeting UL standard 1741 for continuous interactive operation with a utility grid.

Is this an induction type system? Yes No

If yes, it must be verified by PWC as meeting program specifications.

The customer agrees to provide the PWC with any additional information required to complete the interconnection and agrees that the generation system's metering point shall be designed, installed, operated and maintained in accordance with:

- The guidelines and specifications set forth in the application and PWC's Agreement for Interconnection of Distributed Generation for Facilities 10 kW or less.
- PWC's Service Rules and Regulations

Customer acknowledges receiving copies of these documents: Yes No

Customer Understands and Agrees

- Tests of the customer's generator system to insure that the system is installed and meets the PWC's guidelines and requirements shall be documented by the installer, or their qualified designated representative; and PWC reserves the right to witness testing of the system. These tests shall be successfully completed in accordance with the manufacturer's published recommendation prior to

interconnection to PWC's distribution system. Maintenance to the generator system shall also be performed in accordance with the manufacturer's published maintenance procedures.

- The accepted application is for the original applicant only. Future owner/operators must submit a new application to PWC. The initial owner/operator assumes the responsibility of ensuring any new owner/operator is aware they must re-apply or provide evidence that the generation system has been removed or disabled to prevent future interconnection.
- Upon acceptance and approval of an application, PWC will advise the customer of any specific interconnection wiring requirements and costs, if applicable. Customer understands and agrees that payment of these costs must be made prior to PWC making the interconnection and that they must enter into an Interconnection Agreement with the PWC before interconnection can be made and that the actual interconnection will not be made until all requirements have been satisfied.
- The customer understands and agrees they are liable for and shall bear any costs associated with any power quality, reliability, safety issues or problems created by the interconnection and operation of their generation system at any time, and that they are prohibited from altering the accepted design without submitting a new "Application to Interconnect A Small Renewable Generation System" and obtaining new approval.
- PWC reserves the right to at anytime, in its discretion, to amend or modify the Small Renewable Generation System program standards and guidelines.
- As the customer-owner of the generator system, I hereby certify that to the best of my knowledge, all of the information provided is true and correct and that the small renewable generator system will comply with PWC's interconnection standards and requirements. I also authorize PWC to contact the manufacturer, installer, or any other party associated with the installation, as may be necessary to process my application and insure compliance with the program standards.
- PWC agrees to credit the generator customer's account for all power generated and delivered through PWC's system metering point.

Important

Most projects require certain permits and licenses which must be obtained before development. In this regard, PWC is required to advise you that before we can enter into a contract involving your generated electricity, you must apply for and receive a certificate of public convenience and necessity from the North Carolina Utilities Commission. This certificate is required by N.C. General Statutes §62-110.1(a) before construction or renovation of an electrical generating facility.

Note: Should the customer desire to apply to participate in the North Carolina Green Power (NCGP) program, the member-owner should contact NCGP@ ncgreenpower.org or call NC Green Power Resource Manager at 919-857-9027 to get specific information.

Renewable Generation System

Owner's Signature: _____

Date: _____

If application mailed, please mail to: Fayetteville Public Works Commission
P.O. Box 1089
Fayetteville, NC 28302
attn: Mark Brown

PWC Status of Application

Date Application Rec'd: _____ Application Approved: Yes No

Reviewed by: _____

If no, specify reason(s):

Applicant Notified on: _____ (date)

By: _____

List of Applicable Standards

1. IEEE 929 – Recommended Practice for Utility Interface of Photovoltaic (PV) Systems, latest published edition)
2. IEEE 1547 – Standard for Interconnecting Distributed Resources with Electric Power Systems, latest published edition
3. IEEE 1547.1 –2005 Standard Conformance Test Procedures for Interconnection Distributed Energy Resources with Electric Power Systems
4. IEEE P1547.3 Draft: Guide for Monitoring, Information Exchange, and Control of Distributed Resources Interconnected with Electric Power Systems
5. UL 1741 – Inverters, Converters and Controllers for use in Independent Power Systems, latest published edition
6. NFPA 70 – National Electrical Code, latest published edition