

ELECTRIC (E)
RULE E-5
INTERCONNECTION - CONNECTION WITH COGENERATION AND
SMALL POWER PRODUCERS

E-5.01 GENERAL

The purpose of this rule is to provide for the purchase of energy from customers of the Utility meeting the interconnection requirements for Qualifying Facilities.

All interconnections with the electric distribution system require prior written approval by the Utility department of Engineering, the completion of the Interconnection Agreement (see Appendix I) and the payment of all applicable fees.

E-5.02 DEFINITIONS

As used in this rule, unless otherwise specified:

- A. "Qualifying Facility" means a cogeneration or a small power production facility which meets the criteria for qualification contained in 18 C.F.R. Section 292.203, or such other criteria as may be reasonably prescribed by rule by the Utility.
- B. "Customer" means a customer of Utility who owns or operates a Qualifying Facility.
- C. kW – Kilowatts is a measure of power: 1,000 watts = 1 kW
- D. kWh – Kilowatt Hours is a measure of the consumption of energy. A 1 kW heater used over one hour will consume 1 kWh of energy.
- E. PV – Photovoltaic: PV system inverters and generators are sized according to the maximum power output they can produce in kW.
- F. AC – Alternating Current
- G. DC – Direct Current
- H. "Battery Storage" – Utility approved battery components that include a home energy management system.
- I. "Home Energy Management System" - a system that integrates wind, solar, battery and/or bidirectional vehicle, facilities to the home.

E-5.03 CUSTOMER-OWNED QUALIFYING FACILITIES

Utility may authorize up to 6,000 kW of capacity, in the aggregate, of solar, wind, or other renewable energy from Customer-owned Qualifying Facilities within the service area of Utility.

The Customer system maximum installed capacity for any individual residential location is limited to the capacity in kW sufficient to produce energy up to the level of total consumption of the residence based on actual consumption for the immediately preceding twelve months, using standard efficiency and availability calculations for the Los Alamos service area as defined by the Department, with a maximum allowed solar, wind or other renewable generation per Customer of 10 kW DC. Battery Storage may be installed if approved by the Utility. All home connected Battery Storage installations must have a Utility approved Home Energy Management System.

The Customer system maximum installed capacity for any commercial location is limited to the capacity in kW sufficient to produce energy up to the level of total consumption of the Customer based on actual consumption for the immediately preceding twelve months, using standard efficiency and availability calculations as defined by the Department, with a maximum allowed of 100 kW DC, if the capacity available on the transformer serving the Customer is sufficient. For commercial Customers, an upgrade of transformer capacity will be at the Customer's expense.

The Customer shall submit system specifications which size the output of the PV system to offset existing average annual consumption. The Customer can obtain this information from their utility bill or by calling Customer service (505-662-8333). The utility will compare the previous annual consumption to the proposed production using the "PVWATTS" website (<https://pvwatts.nrel.gov/>) or an equivalent energy output estimation method.

E-5.04 PROCEDURE FOR INTERCONNECTION

- A. General. Unless otherwise specifically provided for in a special interconnection agreement negotiated with the Utility, the procedures for standard interconnection agreements and interconnections set forth in this rule shall be followed.
- B. Conditions of interconnection. Utility shall interconnect with any Qualifying Facility which:
- 1) is covered by a signed standard or special interconnection agreement between the Customer and Utility, which is consistent with the approved form of agreement set forth in this rule;
 - 2) is capable of operating safely and commencing the delivery of power into the Electric Utility's system, including but not limited to protection from over currents, fault currents, frequency disturbances, and voltage differentials;
 - 3) has met all applicable safety and performance standards established by local and national electrical codes, including the most recent National Electrical Code (NEC), the most recent National Electrical Safety Code (NESC), the Institute of Electrical and Electronics Engineers (IEEE), and Underwriters Laboratories, as well as all applicable safety and performance standards adopted by rule of the Utility that are necessary to protect public safety and system reliability;
 - 4) was constructed in accordance with a design that has been submitted to and approved by the Utility;
 - 5) has been installed by a licensed electrician who has obtained all required permits and inspections.
- C. Isolation transformers and disconnection switches. Utility shall not require an isolation transformer for interconnection of single phase photovoltaic or wind Facilities meeting the requirements of Subsection B of this section. If Utility determines that an isolation transformer is required for other types of Qualifying Facilities, the Utility may require the transformer by providing written notice to the Customer at the time of application. The Customer shall have installed and maintained in proper operating condition, at Customer's sole expense, a separate load break disconnect switch as a visible means of disconnection, unless the Customer and Utility shall agree in writing to the use of the meter as a visible means of disconnecting single-phase photovoltaic facilities.
- D. Meters. A single reversible meter shall be used unless an alternate metering arrangement is agreed to by the Customer and Utility. The register shall be used to measure the amount of energy delivered by the Utility to the Customer and will measure the amount of energy which is produced by the Qualifying Facility and delivered to Utility. The Customer shall be required to pay the cost of the required related metering equipment with the exception of the meter. Within twenty (20) days of receiving notification from the Customer of the intent to interconnect, the Utility will notify the Customer of any metering costs. Charges for special metering costs shall be paid by the Customer, or arrangements for payment agreed to between the Customer and Utility, prior to the Utility authorizing interconnected operation.

- E. Liability insurance. Customers are urged to obtain adequate liability insurance to cover risks, liabilities, and consequences, which may arise as a result of interconnection with a utility system. For good cause shown, the Utility may require a Customer to obtain general liability insurance.
- F. Provision of interconnection agreement. The Utility shall provide a standard interconnection agreement within ten (10) days of a request for such form. When a Customer enters into an interconnection agreement pursuant to this rule, the Utility shall provide the Customer with a copy of that interconnection agreement. Utility shall provide a blank application form for interconnection within ten (10) days of a written request for such form. The Utility shall maintain a file of each interconnection agreement entered into by the Utility.

E-5.05 METERING CALCULATION

Utility shall calculate each Customer's bill for the billing period using the standards and conditions stated in this section.

- A. Applicable rate. Customers shall be billed for service in accordance with the rate structure and monthly charges that the Customer would be assigned if the Customer had not interconnected a Facility with the Utility's system, plus any incremental cost of required metering equipment. Energy produced or consumed on a monthly basis shall be measured in accordance with standard metering practice. Power supplied to the Customer will be billed at the Customer's applicable rate under the Utility's current rate schedule.
- B. Credit for energy supplied to the Utility. The credit to the Customer for energy supplied to the Utility will be based on the wholesale cost. The wholesale cost is the Utility's Electric Coordination Agreement (ECA) total capacity and energy costs, for a twelve-month rolling average, calculated from the Los Alamos County Resource Pool invoices.

E-5.06 COMPLAINTS AND INVESTIGATIONS

Any disputes over the implementation of this rule shall be addressed in accordance with dispute resolution procedures set forth in the rules governing service from the Utility.

E-5.07 SEVERABILITY

If any part of this rule or any application thereof is held invalid, the remainder of this rule or its application to other situations or persons shall not be affected.

E-5.08 EXEMPTION OR VARIANCE

- A. Any interested person may file an application for an exemption or a variance from the requirements of this rule. Such application shall:
 - 1) describe the situation which necessitates the exemption or variance;
 - 2) set forth the effect of complying with this rule on the utility and its Customers if the exemption or variance is not granted;
 - 3) identify the Section of this rule for which the exemption or variance is requested;
 - 4) describe the result which the request will have if granted;
 - 5) state how the exemption or variance will promote the achievement of the purposes of this rule; and,
 - 6) state why no other reasonable alternative is available.

- B. If the Utility determines that the exemption or variance is consistent with the purposes of this rule, the exemption or variance may be granted. The Utility may, at its option, require an informal conference or formal evidentiary hearing prior to the granting of the variance. All exemption or variance requests will be considered on an individual basis and the Customer shall be responsible for all necessary system upgrade costs as determined by the utility.

E-5.09 REQUEST FOR STAY PENDING AMENDMENT, EXEMPTION, OR VARIANCE

A request for an amendment, exemption, or a variance from the requirements of this rule may include a request that the Utility stay the application of the affected portion of this rule for the transaction specified in the motion. Utility has the sole discretion to determine whether to grant a request for an amendment, exemption or variance or an accompanying request for a stay. In reviewing such request, Utility will not act unreasonably.

E-5.10 CUSTOMER INFORMATION

Utility will provide information to all Customers regarding this rule, including, but not limited to, contact persons and a description of terms and conditions for purchases from Qualifying Facilities.