

**Supplement to
Interconnection Requirements for Small Generating Facilities
For
Net Metered Solar Photovoltaic Customer Installations**

Background

1. The Interconnection Requirements for Small Generation Facilities (Standards) specify the minimum requirements for interconnection of Customer owned generation with the Lincoln County Power District No.1 (Lincoln County Power) electric system. Nothing in this Supplement relieves a Customer of the obligation to comply with those Standards. This Supplement only sets out in detail specific requirements that relate directly to a net metered solar photovoltaic installation by the Customer.
2. The Lincoln County Building Department may have additional requirements. The Customer is responsible to obtain any necessary permits from Lincoln County and to provide all designs to Lincoln County as appropriate.

Design

1. The provider or installer of the system must design the system in accordance with the above referenced Standards, and in particular the most recent edition of the National Electrical Code (NEC).
2. The provider or installer of the system must submit the design to the Power District for review and approval before installation begins.

Minimum System Requirements

1. The system must contain an appropriately sized and rated grid tie inverter to prevent backfeed into Lincoln County Power electrical system during an outage. The grid tie inverter must meet Underwriters Laboratories (UL) 1741 and IEEE 1547 standards, which are intended to protect utility workers from electric shock as they repair power lines during a blackout and also protect a homeowner's equipment and appliances from damage due to power quality fluctuations. To meet the standard, inverters must:
 - a. Immediately disconnect from the grid if power quality falls out of specifications.
 - b. Detect and prevent feeding electricity to the utility grid when the grid source is no longer present.
 - c. Wait for five minutes of clean power from the grid before trying to reconnect.
2. The system must contain an appropriately sized and rated AC safety disconnect switch. The safety disconnect switch shall be separate from and shall not be a feeder breaker in

the Customer's load center or distribution panel. The AC safety disconnect switch shall be separate from and shall not be integral to the grid tie inverter. The AC safety disconnect switch must be accessible for operation by Lincoln County Power at all times. The AC safety disconnect switch must be located such that it is readily visible to utility personnel. The safety switch does not need to be fusible, but may be so at the Customer's option. The safety disconnect switch must meet the requirements of UL 98 and must:

- a. Be rated to operate under full load.
 - b. Include a lockable handle.
 - c. Be rated for outdoor applications.
 - d. Be designed such that switch, mechanism and handle are always connected, even when the enclosure door is open.
 - e. Have a single-point grounding connection, providing continuity for both the equipment grounding conductor (EGC) and the grounding electrode conductor (GEC). The grounding lug shall be permanently bonded to the metal of the AC safety disconnect cabinet.
3. The grid tie inverter, AC safety disconnect, and the meter main or load center shall be connected by copper conductors and shall not rely on conduit connections for bonding.

Labels and Markings

1. Other labels and marking requirements of the NEC shall apply. This Supplement identifies only those labels and markings required specifically by the Power District.
2. Any labels and field markings required by this Supplement shall meet the following requirements:
 - a. The label shall be permanently affixed to equipment or wiring method and shall not be hand written.
 - b. The label shall be of sufficient durability to withstand the environment involved and shall meet ANSI Z535.4-2011.
3. Any disconnecting means that are not load-break-rated, such as fuses, module quick connects (leads), combiner boxes or other switches that are located in series with the safety disconnect switch must be marked, "Do not open under load" in accordance NEC Section 690.16(B).
4. The safety disconnect switch shall be labeled in accordance with NEC Section 690.17 with the following label:



5. The load center or meter panel at which Lincoln County Power's meter is installed shall be marked with the following label.



Inspection and Testing

1. Following installation of the system, contact Lincoln County Power engineering department at 775-728-8207 to schedule inspection and test of the system.
2. Lincoln County Power inspection and testing is solely to demonstrate that the Customer's solar photovoltaic system installation does not present a hazard to utility personnel. Lincoln County Power inspection is not intended to ensure the Customer's solar photovoltaic system installation meets all necessary code requirements. Responsibility to ensure the Customer's solar photovoltaic system installation meets all necessary code requirements is that of the installer and the local building inspection department.
3. During inspection and testing, Lincoln County Power will seek to verify proper labeling and marking, and to ensure proper location and operation of the grid tie inverter and the AC safety disconnect switch.
4. Initial inspection of a system shall be performed at no cost. Lincoln County Power may charge a Customer a \$50 fee should re-inspection and testing of a failed system be necessary.

Metering

1. Following inspection and testing of the Customer solar photovoltaic system, Lincoln County Power will install a bi-directional meter to measure the energy flow to and from the Customer's premises.
2. Installation of the meter shall be at no cost to the Customer.