

United Power Interconnection Standards for Distributed Energy Resources (DERs)



Production Meters Are Required on ALL installations

AC Disconnect Switch Requirement for Automatic Transfer Switch (ATS)

A single lockable disconnect switch, which can provide a visible open point, between United Power's distribution system and all sources of energy at the Member's facility (solar, battery, generator, vehicle-to-home interface, etc.), is required for all installations. The AC disconnect switch shall be placed between the main service panel and the production meter.

Meter collar adapters shall not be used as a means of interconnecting onsite generation because they (1) do not provide a visible disconnect; (2) introduce potential safety hazard; and (3) can reduce service quality.

Production Meter Housing Wiring

Wires coming from solar facilities must run through the top of the production meter.

Tampering

Members or Member's agents shall not under any circumstances cut meter seals or access, tamper with, remove, or modify the production or net meter. Any such action could result in a fine and/or personal injury.

Islanding/Switching

Islanding

Islanding occurs when a DER becomes separated from the main generation source on a distribution system but continues to independently serve a portion of the distribution system. DERs shall be equipped with protective devices and controls designed to prevent the DER from being connected to a de-energized distribution system. All inverters must be UL 1741 certified and comply with IEEE 1547.

Interconnection Disconnect Switch

Each DER installation shall include a manually operated, lockable, disconnect switch with a visual break. The disconnect switch shall be visible, located near the United Power electric meter, and accessible at all times by United Power personnel to allow the DER to be disconnected safely during maintenance or outage conditions. The disconnect switch shall be rated to interrupt the maximum output of the DER, shall be rated for the voltage and fault current

requirements of the DER, and shall meet all applicable NEMA, UL, ANSI, IEEE, and NEC standards as well as local and state electrical codes. The disconnect switch shall be permanently labeled with text indicating that the switch is for the DER. The labeling shall also clearly indicate the open and closed position of the switch. The disconnect switch must be located on the output or load side of the DER such that the entire DER can be isolated from United Power's distribution system.

If the site contains more than one DER unit or system (e.g. solar and battery), a single disconnect switch may be used, provided it is rated to handle the total capacity of all DER units and creates a clearly visible open point between all DER systems and the United Power system when opened. If more than one disconnect is used, each must meet the requirements in this section, be located near the United Power electric meter, and be labeled to clearly indicate multiple disconnects are used to isolate the DER system(s) at the site. Other devices such as circuit breakers or fuses may be considered as a substitute for a disconnect switch under the following conditions: (1) If a circuit breaker is used, it shall be draw-out and capable of being locked into the disconnected position and (2) If a fuse is used, it shall be capable of being removed from the bus to provide a visual open point. The Member or Member's agent shall lock-out the breaker or remove and tag the fuses whenever requested by United Power.

Disconnect Switch Operation

United Power operational procedures requires visible break in the circuit between themselves and all potential sources of generation when working on deenergized equipment. The visible break disconnect switch will be used for this purpose during both planned outage work and unplanned outage restoration. Under no circumstances shall the Member or Member's agent tamper with or attempt to close a disconnect switch that has been open and locked out/tagged out by United Power personnel.