

TDPUD Interconnection Requirements

Distributed Energy Resources (DER) Interconnection Standards Photovoltaic/Solar or Wind Electric Generating Facilities Rated 1000 Kilowatts Or Less

A. General

1. This Document sets forth the requirements and conditions for interconnecting customer-owned photovoltaic/solar or wind electric generation facilities (DER) for parallel operation with the District's electric distribution system. The interconnecting entity shall be designated Customer-Generator.
2. The Customer-Generator and/or their agents or representatives shall not make any substantial modifications to the generating Facility, including but not limited to alterations to the protective functions of the inverter, combiner panel, energy management device, or other protective devices, without prior written notification and approval by the District of any such proposed modifications. Customer– Generator shall submit a new Solar Application and Interconnection agreement to notify the District of with the proposed modification.

B. Requirements

1. The Customer-Generator's Facility shall be installed in compliance with this Agreement and District Standards, Customer-Generator shall adhere to the following:
 - a. Customer wiring will not enter the sealed utility section for any reason.
 - b. The District will not approve any field modified panels.
 1. Exception: Field modified panels re-certified by a Nationally Recognized Testing Laboratory (NRTL).
 - c. The burden of equipment protection is not the responsibility of the District, therefore the District will not accept line side taps. All DER shall connect to the load side of the service disconnecting means, such as the main breaker.
 1. Exception: An approved Electric Utility Service Equipment Requirements Committee (EUSERC) "Solar-Ready" service panel with a dedicated circuit breaker shall be permitted upon prior District approval.
2. The Customer-Generator's inverter or combiner panel shall comply with the following standards for parallel operation with the District.
 - a. Institute of Electrical and Electronics Engineers (IEEE) Std. 1547, "Standard for Interconnecting Distributed Resources with Electric Power Systems."
 - b. Underwriters Laboratories (UL) Subject 1741, "Inverters, Converters, and Controllers for Use in Independent Power Systems."
 - c. IEEE Std. 519, "Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems."
3. The maximum total and individual harmonic distortion for voltage and current injected by the Customer-Generator's Facility into the District's electrical distribution system shall conform to the requirements of IEEE Std. 519 and IEEE Std. 1547. A Facility causing harmonic interference is subject to being disconnected from the District's electrical distribution system until the condition has been corrected. If the cause of the problem is traceable to the Customer-Generator's Facility, all costs associated with determining and correcting the problems shall be at the Customer's expense.
4. Any voltage flicker on District's electrical distribution system caused by the Customer-Generator's Facility shall not exceed the limits defined by the "Maximum Borderline of Irritation Curve" identified in IEEE Std. 519. Voltage flicker is a sudden change in voltage (occurring in seconds or fractions of a second) that can cause objectionable changes in the visible output of lighting systems. Voltage flicker requirements are necessary to minimize the adverse effects experienced by other customers on the District's electrical distribution system.
5. The Customer-Generator's Facility shall be capable of operating at some point within a power factor range of 0.95 leading to 0.95 lagging. Operation outside this range may be acceptable provided

the cumulative power factor of the Customer's entire Facility, measured at the electric meter, is within the noted range. All costs associated with correcting power factor problems shall be at the Customer's expense.