

Taunton Municipal Lighting Plant

INTERCONNECTION STANDARDS

For Customer-Owned, Grid-Connected
Electric Generating Systems of 60kW or Less

A. General

This “Interconnection Standard for Customer-Owned, Grid-Connected Electric Generating Systems of 60 Kilowatts or Less” sets forth the requirements and conditions for interconnected non-utility-owned electric generation where such generation may be connected for parallel operation with the electrical system of Taunton Municipal Light Plant (TMLP). Generating systems will be permitted to interconnect to the TMLP’s electric distribution system only after a determination by the TMLP that such interconnection will not interfere with the operation of the distribution circuit.

B. Interconnection Requirements

1. Customer shall comply with all the latest applicable National Electric Code (NEC) requirements [NEC Articles 690 and 705], building codes, and shall obtain electrical permit(s) for the equipment installation.
2. Customer shall provide space for metering equipment, meter base and all necessary wiring as per TMLP requirements. Customer may be required to provide a working telephone connection or internet connection at the meter point.
3. Customer’s over-current device at the service panel shall be marked to indicate power source and connection to the TMLP distribution system.
4. Customer shall provide a safety disconnect device located adjacent to the TMLP metering equipment. The disconnect device must be lockable by means of a padlock in either the open or closed position.
5. The Customer shall assume full responsibility for all maintenance of the generator and protective equipment and shall keep records for all maintenance. These records shall be available to the TMLP for inspection upon request and reasonable notice.
6. Customer’s power production control system shall comply with NEC Articles 690 and 705, as well as the current Institute of Electrical and Electronics Engineers (IEEE) Standards 929 for parallel operation with TMLP, if applicable. Specifically, and without limiting the foregoing sentence, the Customer’s power production control system must:

- a. Automatically disconnect from the TMLP power source upon loss of TMLP voltage and not reconnect until the TMLP's voltage has been restored for at least ten (10) minutes continuously;
 - b. Automatically initiate a disconnect from the TMLP source within six (6) cycles if Customer's voltage falls below 60 Volts rms to ground (nominal 120 V rms base) on any phase; and
 - c. Automatically initiate a disconnect from the TMLP's system within two (2) seconds if the voltage rises above 132 Volts rms phase to ground or falls below 104 Volts rms phase to ground (nominal 120 V rms base) on any phase.
7. Customer shall pay all costs associated with the design, installation, operation, and maintenance of the generation equipment on the customer's side of the meter, as well as the revenue meter that is capable of registering the bi-directional flow of electricity as the customer's premises ("Bi-Directional Revenue Meter").
8. Customer shall deliver the excess energy to TMLP at the customer's premises. TMLP will install and maintain a Bi-Directional Revenue Meter at the customer's premises at a level of accuracy that meets all applicable standards, regulations and statutes. If at any time such bi-directional metering equipment is found to be inaccurate by applicable metering standards, TMLP shall cause it to be made accurate by repair or replacement. The meter readings for the period of inaccuracy shall be adjusted by TMLP to correct such inaccuracy so far as the same can be reasonably ascertained; otherwise, the inaccuracy will be deemed to have existed for one half (1/2) of the time period which elapsed between the date such equipment last tested accurate and the date that such equipment was found inaccurate. In addition to regular routine tests, which shall be made in accordance with applicable standards, TMLP shall cause such equipment to be tested at any time upon request of and in the presence of a representative of Customer, but in no event may Customer request more than one test per year. If such equipment proves accurate within applicable metering standards, when tested upon request of Customer in addition to regular routine tests, the expense of such test shall be borne by Customer. Upon the request of the Customer, a separate meter may be installed to measure production of the renewable generation source ("Generator Meter") at Customer's sole expense. In the event of a discrepancy between the Bi-Directional Revenue Meter and the Generator Meter, the Bi-Directional Revenue Meter shall control unless the Bi-Directional Revenue Meter is found to be inaccurate pursuant to the meter testing provisions set forth above. Customer shall pay for any non-standard meter electrical hook-up requested by the Customer.
9. Customer shall not commence parallel operation of the generation equipment until inspection and written approval of the interconnection facilities has been provided

by TMLP. Such approval shall not be unreasonably withheld. The TMLP shall have the right to have representatives present at the initial testing of the customer's protective apparatus, and shall retain the right to periodically inspect the facility to ensure that appropriate safety standards continue to be met. The Customer shall notify the TMLP of its intent to test the generating system not less than two (2) working days prior to the scheduled test.

10. Once in operation, Customer shall make no changes or modifications in the equipment, wiring, or the mode of operation without the prior written approval of TMLP and the local authority. Once in operation, TMLP shall have the right to disconnect the Customer's generation equipment from the TMLP system if at any time the TMLP determines in its sole discretion that either (a) the facility may endanger TMLP personnel, or (b) the continued operation of Customer's facility may endanger the integrity of the TMLP's electric system, the TMLP shall have the right to disconnect Customer's facility from the TMLP's electric system. Customer's facility shall remain disconnected until such time as TMLP is satisfied that the condition(s) that caused the problems referenced in (a) or (b) of this section 3.3 have been corrected.
11. Customer will remove system from service and cause inspection of all function parts by a qualified person at least every two years. The Customer shall retain all records pertaining such inspection and will make them available for the TMLP's review upon request by TMLP.
12. **Solar Photovoltaic Equipment** shall be in compliance with Underwriters Laboratories (UL) 1741, *Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Systems*; UL 1703, *Standard for Safety: Flat-Plate Photovoltaic Modules and Panels*; and IEEE 1262-1995, *Recommended Practice for Qualification of Photovoltaic (PV) Modules*; and the solar system shall be installed in compliance with IEEE Standard 929-2000, *Recommended Practice for Utility Interface of Photovoltaic Systems*.

C. Safety

All Safety and operating procedures for joint use equipment shall be in compliance with the Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.269, the National Electrical Code (NEC), Massachusetts State Building Code rules, TMLP standards, and equipment manufacturer's safety and operating manuals.