

**MERRIMAC MUNICIPAL LIGHT DEPARTMENT**  
**CUSTOMER OWNED RENEWABLE GENERATION**  
**TERMS AND CONDITIONS**

**M.D.P.U. No 82**

POLICY

The Merrimac Municipal Light Department (MMLD) sets forth these interconnection requirements, equipment specifications, and proposed metering for residential customers who may choose self generation of electric energy using photovoltaic (PV), wind or co-generation electric generating equipment. **The Building Department must be contacted regarding installations to assure all applicable permits are obtained.**

1. APPLICABILITY OF POLICY

- a) This policy is intended for use at residential properties only. Specifically, owner occupied, single family/duplex homes. MMLD will offer bi-directional metering to their customers who generate electricity, on the customer's side of the meter, provided that the generating capacity of the customer-generating facility does not exceed ten (10) kilowatts.
- b) Customer generation types include photovoltaic, wind turbine units, and micro turbine (heat recovery) installations.
- c) Traditional gasoline or natural gas fired portable or permanently mounted emergency generators are explicitly excluded from this policy.
- d) Maximum peak electric output of the generating installation covered by this policy is 10 kW.
- e) The customer is solely responsible for securing and complying with all local permitting processes including zoning, electrical, building inspection, and any and all other special permits that may be required.

2. GENERAL PROVISIONS

**Access Control**

Representatives of MMLD shall, at all reasonable times, have access to the Facility to make reasonable inspections. At the Facility, MMLD representatives shall identify themselves to the Interconnecting Customer's representative, state the object of their visit, and conduct themselves in a manner that will not interfere with the construction or operation of the Facility. MMLD will have control such that it may open or close the required disconnect switch.

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**M.D.P.U. No 82**

**Force Majeure**

An event of Force Majeure means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond either party's control. A Force Majeure event does not include an act of negligence or intentional wrongdoing. Neither MMLD nor the Interconnecting Customer will be considered in default as to any obligation under Interconnection Requirements if prevented from fulfilling the obligation due to an event of Force Majeure. However, a party whose performance is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations under this Interconnection Requirements.

**Indemnification**

The Interconnecting Customer shall at all times indemnify, defend, and hold MMLD harmless from any and all damages, losses, claims, including claims and actions relating to injury or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from MMLD's performance of its obligations under this Interconnection Policy on behalf of the Interconnecting Customer, except in cases of gross negligence or intentional wrongdoing by MMLD.

**Interconnection Problems**

If, due to the interconnection of the Facility, when combined with pre-existing facilities interconnected to MMLD's system, the rating of any of MMLD's equipment or the equipment of others connected to MMLD's system will be exceeded or its control function will be adversely affected, MMLD shall have the right to require the Interconnecting Customer to pay for the purchase, installation, replacement or modification of equipment to eliminate the condition. Where such action is deemed necessary by MMLD, MMLD will, where possible, permit the Interconnecting Customer to choose among two or more options for meeting MMLD's requirements.

**3. METERING**

- a) The generating facility must be inverter-based.
- b) The aggregate generation capacity on the distribution circuit to which the Customer Generating Facility will interconnect, including the capacity of the Customer-Generating Facility, shall not contribute more than 10% to the distribution circuit's maximum fault

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current at the point on the high voltage (primary) level that is nearest the proposed point of common coupling as determined by the MMLD.

- c) If a single-phase Customer-Generating Facility is to be connected to a transformer center tap neutral of a 240 volt service, the addition of the Customer-Generating Facility shall not create an imbalance between the two sides of the 240 volt service of more than 20% of nameplate rating of the service transformer.
- d) The Facility shall provide a disconnect switch at the interconnection point with MMLD that can be opened for isolation. The switch shall be in a location accessible to Company personnel at all times. MMLD shall have the right to open this disconnect switch during emergency conditions and with reasonable notice to the Interconnecting Customer at other times. MMLD shall exercise such right in accordance with Good Utility Practice. The switch shall be gang operated, have a visible break when open, be rated to interrupt the maximum generator or photovoltaic output and be capable of being locked open, tagged and grounded on the MMLD side by MMLD personnel. The switch shall be code compliant and of a type generally accepted for use in this application. The switch should be located within view of the MMLD revenue meter.
- e) Interconnecting Customer will be responsible for reasonable and necessary costs incurred by MMLD for the purchase, installation, operation, maintenance, testing, repair and replacement of metering and data acquisition equipment.
- f) If, at any time, any metering equipment is found to be inaccurate by a margin greater than that allowed under applicable criteria, rules and standards, MMLD shall cause such metering equipment to be made accurate or replaced. The cost to repair or replace the meter shall be borne by MMLD. Meter readings for the period of inaccuracy shall be adjusted so far as the same can be reasonably ascertained; provided, however, no adjustment prior to the beginning of the preceding month shall be made except by agreement of the Parties. Each Party shall comply with any reasonable request of the other concerning the sealing of meters, the presence of a representative of the other Party when the seals are broken and the tests are made, and other matters affecting the accuracy of the measurement of electricity delivered from the Facility. If either Party believes that there has been a meter failure or stoppage, it shall immediately notify the other.
- g) MMLD shall own the meter and the Interconnecting Customer shall pay to MMLD a monthly charge to cover meter maintenance, incremental reading and billing costs, the allowable return on the invoice cost of the meter and the depreciation of the meter, if any. These charges, if any, are set forth in the applicable MMLD rates, as amended from time to time.

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**M.D.P.U. No 82**

**4. REQUIREMENTS FOR INVERTER BASED INSTALLATIONS**

- h) MMLD's distribution circuits generally operate with automatic reclosers, which activate following a trip without regard to whether the Facility is keeping the circuit energized. The Interconnecting Customer is responsible for protecting their equipment from being re-connected out of synch with MMLD's system.
- i) For Facilities that utilize photovoltaic (PV) technology, it is required that the system be installed in compliance with IEEE Standard 929-2000, "IEEE Recommended Practice for Utility Interface of (PV) Systems". The inverter shall meet the Underwriters Laboratories Inc. Standard UL 1741, Static Inverters and Charge Controllers for Use in PV Power Systems". Based on the information supplied by the Interconnecting Customer, if MMLD determines the inverter is in compliance with UL 1741, the Interconnecting Customer's request for interconnection will be approved.
- j) For facilities that utilize wind technology or other direct current energy sources and employ inverters for production of alternating current, the inverter shall meet the Underwriters Laboratories Inc. Standard UL 1741, "Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems." Based on the information supplied by the Interconnecting Customer, if MMLD determines the inverter is in compliance with UL 1741, the Interconnecting Customer's request for interconnection will be approved.
- k) The following information must be submitted by the Interconnecting Customer for review and acceptance by MMLD prior to MMLD's approving the Interconnecting Customer's request for interconnection:
  - An electrical one-line diagram depicting the entire system and how the inverter will be interconnected relative to the service entrance panel and the electric revenue meter.
  - The make, model and manufacturer's specification sheet for the inverter.

**5. EXCESS GENERATION DELIVERED TO MMLD**

- a) MMLD will monitor the delivered kWh by means of a bidirectional meter. This meter will be owned by MMLD and will be read for billing once/month.
- b) All kilowatt hours generated by the Facility and received by MMLD will be credited on a monthly basis. The rate per kWh will be the average of the Locational Marginal Price (LMP) for the Northeast Massachusetts (NEMA) load zone. The credit will appear on the customer's next monthly invoice as a line item with the nomenclature of "Solar Metering Credit".