

# **BOYLSTON MUNICIPAL LIGHT DEPARTMENT INTERCONNECTION REQUIREMENTS FOR CUSTOMER OWNED GENERATION FACILITIES**

## **POLICY**

**EFFECTIVE DATE: 5/20/2019**

This policy sets forth interconnection requirements, equipment specifications, and proposed metering for residential customers who may choose self generation of electric energy using renewable energy sources including wind and solar.

## **1. APPLICABILITY OF POLICY**

1. This policy is intended for use at residential properties only. Specifically, owner occupied, single family/duplex homes.
2. Customer generation types include photovoltaic, wind turbine units, and micro turbine (heat recovery) installations. Traditional gasoline or natural gas fired portable or permanently mounted emergency generators are explicitly excluded from this policy.
3. Maximum System capacity is limited to 10 kW (AC), Inverter rating.
4. 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. APPLICATION**

**\*\*Application Forms Attached\*\* \*\*\* SEE ADDITIONS SECTION 10-2 \*\*\***

### **Application Process**

1. Read and become familiar with the Policy “Interconnection Requirements for Customer Owned Generation Facilities.”
2. Sign and return two (2) copies of the “Simplified Process Interconnection Application and Service Agreement- Form A” and one line diagram of the proposed system to the Light Department.
3. BMLD will respond in writing via e-mail and hard copy of the notice to proceed.
4. Customer must apply for all required permits from the Town of Boylston prior to the start of any electrical work.
5. Contact the Town of Boylston Wiring Inspector and request for approval of location for the required disconnect switch and relation of the service entrance and revenue meter.
6. Once the work has been completed, contact the Town of Boylston Wiring Inspector and request a final inspection of the Facility and sign the “Certificate of Completion-Form B.”

### **3. GENERAL PROVISION**

#### **Notice Provisions**

If at any time, in the reasonable exercise of BMLD's judgment, operation of the facility adversely affects the quality of service to BMLD's customers or interferes with the safe and reliable operation of the Distribution System, BMLD may discontinue interconnection service to the Interconnecting Customer until the condition has been corrected. Unless an emergency exists or the risk of one is imminent, BMLD shall give the Interconnecting Customer reasonable notice of its intention to discontinue service and where practical, allow suitable time for interconnecting customer to remedy the offending condition. BMLD's judgment with regard to discontinuance of deliveries or disconnection of facilities under this paragraph shall be made in accordance with Good Utility Practice. In the case of such discontinuance, BMLD shall immediately confer with the Interconnecting Customer regarding the conditions causing such discontinuance and its recommendation concerning the timely correction thereof.

#### **Access and Control**

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

#### **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 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 intentional wrongdoing. Neither BMLD 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 save BMLD harmless from any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demands, suits, recoveries, cost and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from BMLD's performance of its obligations under this Interconnection Requirements on behalf of the Interconnecting Customer, except in cases of gross negligence or intentional wrongdoing by BMLD.

## **4. PROTECTION REQUIREMENTS**

### **General Requirements**

- a. If, due to the interconnection of the Facility, when combined with pre-existing facilities interconnected to BMLD's system, the rating of any of BMLD's equipment or the equipment of others connected to BMLD's system will be exceeded or its control function will be adversely affected, BMLD 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 BMLD, BMLD will, where possible, permit the Interconnecting Customer to choose among two or more options for meeting BMLD's requirements as described in this Protection Policy.
  
- b. The Facility shall provide a disconnect switch (30 amp D.C, 600 volt, line side of inverter, to be used to shut down the flow of power from the system) at the interconnection point with BMLD that can be opened for isolation. The switch shall be in a location accessible to BMLD personnel at all times. BMLD shall have the right to open this disconnect switch during emergency conditions and with reasonable notice to the Interconnecting Customer at other times. BMLD 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 BMLD side by BMLD 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 revenue meter.

## 5. REQUIREMENTS FOR INVERTER-BASED INSTALLATIONS

### Facilities

- a. BMLD's distribution circuits generally operate with automatic reclosing following a trip without regard to whether the Facility is keeping the circuit energized. The Interconnecting Customer is responsible for protecting its equipment from being re-connected out of synchronism with BMLD's system by an automatic line enclosure operation.
- b. The following information must be submitted by the Interconnecting Customer for review and acceptance by BMLD prior to BMLD's approving the Interconnecting Customer's request for interconnection:
  - An electrical one-line diagram or sketch depicting 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.
- c. For Facilities that utilize photovoltaic technology, it is required that the system be installed in compliance with IEEE Standard 929-2000, "IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems". 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 BMLD determines the inverted is in compliance with UL 1741, the Interconnecting Customer's request for interconnection will be approved.
- d. 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 BMLD determines the inverter is in compliance with UL 1741 the Interconnecting Customer's request for interconnection will be approved.

## **6. METERING**

### **Metering, Monitoring, and Communication**

This Section sets forth the rules, procedures, and requirements for metering, monitoring and Communication between the Facility and BMLD where the interconnected facility exports power or is net metered or may otherwise be subject to ISO requirements. Interconnecting Customer will be responsible for reasonable and necessary costs incurred by BMLD for the purchase, installation, operation, maintenance, testing, repair and replacement of metering and data acquisition equipment. Interconnecting Customer's metering (and data acquisition, as required) equipment shall conform to rules and applicable operating requirements.

### **Metering, Related Equipment, and Billing**

BMLD shall furnish, read and maintain all revenue metering equipment. The Interconnecting Customer shall furnish and maintain all meter mounting equipment such as or including meter sockets, test switches, conduits, and enclosures. Except as provided below, BMLD shall own the meter and the Interconnecting Customer shall pay to BMLD 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 BMLD rates, as amended from time to time.

All metering equipment installed pursuant to this Policy and associated with the Facility may be routinely tested by BMLD at the Interconnecting Customer's expense, in accordance with applicable company and/or ISO-NE criteria, rules and standards. 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, BMLD shall cause such metering equipment to be made accurate or replaced. The cost to repair or replace the meter shall be borne by BMLD if BMLD owns the meter. 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.

## **7. BILLING**

Pertaining to a customer of the BMLD with an on-site Facility of 10 kilowatts (“kW”) or less in size. The BMLD will measure both the amount of kWh’s received and delivered, on a monthly basis.

During any regular billing interval, the electric customer will be billed the rate applicable to the electric customer’s class of service.

The electric customer will be billed for all kWh’s delivered from the BMLD at the applicable rate and will be credited for all kWh’s, not used by the customer, returned to the BMLD system at 60% of their applicable rate.

These dollar credits shall be used to offset the customer’s current monthly bill with any remaining credits being used in subsequent months to offset any future bills by the BMLD.

The credits received from the solar facility can only be used to offset the account that the solar facility is located on; credits are not transferable to any other account.

At the end of the December billing cycle, (or termination of service), if any remaining dollar credits have gone unused during the past twelve months, BMLD may reimburse the customer the value of the remaining dollar amounts.

At the termination of a customer’s service if any remaining dollar credits have gone unused BMLD will reimburse the customer the value of the remaining dollar amounts.

## **8. NET METERING CAP**

The Boylston Municipal Light Department (BMLD), at its sole discretion, sets the maximum kW of Generation Facilities connected to our facilities through net metering not to exceed 3% of BMLD’s all time peak load.

BMLD’s maximum peak load is 7,217 kW. The maximum aggregate solar capacity connected to BMLD system will be 217 kW. This amount may be adjusted from time to time as BMLD’s Electric Peak load changes.

The BMLD may install and operate its own electric generation facility that uses solar, wind, fuel cell, or hydroelectric power to generate power up to any size.

The BMLD may purchase all of the output of a new, stand alone generation facility that uses solar, wind, fuel cell, or hydroelectric power to generate electric power.

## 9. TERMS AND CONDITIONS

BMLD's Terms and Conditions in effect from time to time, where not inconsistent with any other specific provision hereof, are part of this policy.

## 10. ADDITIONS

**\*\* Customers that have a facility with a signed interconnection agreement prior to March 1, 2016 will be grandfathered under the 11/23/2015 Policy. \*\***

### 10-1

Customers with an accepted and approved interconnection policy and approved facility prior to 3/31/2016 will be grandfathered under their signed accepted policy for the time of ten (10) years starting 5/1/2016. At the end of the 10 year period, billing for those affected customers will be under the new policy starting 5/1/2016.

### 10-2

**\*\* Customers applying after May 20, 2019 can apply for the Massachusetts Municipal Light Plant Solar Program. Under this program customer can apply for a rebate for the purchase, installation, and usage of PV solar panels on owner's homes. Customers must apply after BMLD approval with MMWEC, BMLD's joint action agency. Application deadline is March 30, 2020.**

**\*\*Eligible solar installations must be 10 kW (AC) or less, less than 20% shading, and facing between 90 and 270 degrees to receive rebate.**

**\*\* More information regarding application process and rebate can be found at [MMWEC.org](http://MMWEC.org)**

# Simplified Process Interconnection Application and Service Agreement Form A

## **Contact Information:**

Date Prepared: \_\_\_\_\_

## **Legal Name and address of Interconnecting Customer:**

Customer Name (print): \_\_\_\_\_

Mailing address: \_\_\_\_\_

City/Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone # (day): \_\_\_\_\_

(Evening): \_\_\_\_\_ Cell: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

## **Contractor contact Information:**

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City/Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone #: \_\_\_\_\_

(Evening): \_\_\_\_\_ Cell: \_\_\_\_\_

E-Mail Address \_\_\_\_\_

## **Facility Information:**

Address of Facility: \_\_\_\_\_

City/Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

**Account # (on bill):** \_\_\_\_\_ **Meter # (on Bill):** \_\_\_\_\_

Inverter Manufacturer: \_\_\_\_\_ Model # and Name: \_\_\_\_\_ Qty: \_\_\_\_\_

Nameplate Rating : \_\_\_\_\_ (kW) \_\_\_\_\_ (kva) \_\_\_\_\_ (ac volts) single \_\_\_\_\_ or Three Phase \_\_\_\_\_

System Design Capacity: \_\_\_\_\_ (kW) \_\_\_\_\_ (kva)

Prime Mover: Photovoltaic ☐ Micro Turbine ☐ Fuel Cell ☐ Turbine ☐ Other ☐

Energy Source: Solar ☐ Wind ☐ Hydro ☐ Other ☐

IEEE 1547.1 (UL 1741) Listed? Yes \_\_\_\_\_ No \_\_\_\_\_



**Simplified Process Interconnection Application and Service Agreement -  
Form A**

**\*\*Before beginning construction contractor must contact Town Building Department and  
Wiring Inspector for any applications required by the Town of Boylston. \*\***

**BOYLSTON LIGHT DEPARTMENT APPLICATION #:** \_\_\_\_\_

**Interconnecting Customer**

Sign \_\_\_\_\_

Print \_\_\_\_\_

Date \_\_\_\_\_

**Light Department**

Sign \_\_\_\_\_

Print \_\_\_\_\_

Date \_\_\_\_\_

# Certificate of Completion

## Simplified Process Interconnections – Form B

### **Installation Information:**

**Application #:** \_\_\_\_\_

Customer Name (print): \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City / Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

Telephone #: \_\_\_\_\_ Cell #: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Installation Address (if different from above): \_\_\_\_\_

Electrical Contractor's Name: \_\_\_\_\_

Electrical Contractor's Company: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City / Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Business Phone #: \_\_\_\_\_ Cell #: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

License #: \_\_\_\_\_

### **Inspection:**

The system has been installed and inspected with the local Building / Electrical Code of  
(Town/county): \_\_\_\_\_

Signed (Electrical Wiring Inspector): \_\_\_\_\_

Name (print): \_\_\_\_\_ Date: \_\_\_\_\_

**\*Attach copy of Electrical permit\***

**\*Please attach any documentation provided by the inverter manufacturer describing the inverter's UL 1741 listing\***

# Certificate of Completion

## Simplified Process Interconnections – Form B

I hereby certify that, to the best of my knowledge, all of the information provided in this application is true and I agree to the Terms and Conditions on the following page:

Interconnecting Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name: \_\_\_\_\_

### Final Connection Approval: (BMLD use only)

Installation of the Facility is approved contingent upon the terms and conditions of this Agreement, and agreement to any modifications, if required:

Are any system modifications required at this time? Yes \_\_\_\_\_ No \_\_\_\_\_

To Be Determined \_\_\_\_\_

Company Signature: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Application ID number: \_\_\_\_\_

Company waives inspection/Witness Test? Yes \_\_\_\_\_ No \_\_\_\_\_