

DISTRIBUTED GENERATION POLICY



Adopted by the Board of Light Commissioners: September 18, 2017

Purpose

The Electric Light Department (ELD) recognizes the long-term value of increasing distributed generation in the Town of Ipswich. Facilitating local power sources will improve price stability, enhance system resiliency, and increase local control while supporting the best interest of ELD's engineering, economic, and environmental requirements.

Applicability

The ELD will enter into an agreement with customer-generators that own a net metering facility. A net metering facility is an electric generation facility that uses solar, wind, hydroelectric, or combined heat and power to generate electric power. Customers interested in pursuing any other type of generation facility must submit a written request to the Electric Light Manager. Eligible customer-generators are existing ELD customers in good standing that own the property on which the proposed net metering facility will be installed.

The primary intent of the net metering facility must be to offset the customer-generator's own electric power requirements. The rated capacity of the net metering facility will be limited based on the customer-generator's class of service as specified in the ELD's *Schedule of Electric Rates*, and is not to exceed 90% of the customer-generator's average load. Average load will be determined by the most recent 12 months of billing history or by a pro forma load estimate. New or unoccupied residences may have their load estimated by submitting an official load assessment and occupancy permit.

Customer-generators served under the "Residential Rate" in the ELD's *Schedule of Electric Rates* are limited to a rated system capacity of 10 kW-DC, not to exceed 90% of average load. Customer-generators served under the "General or Commercial – B" rate or "Power Rate – C" in the ELD's *Schedule of Electric Rates* are limited to a rated system capacity of 30 kW-DC, not to exceed 90% of average load. Beginning June 20, 2017, the cumulative limit for new net metered distributed generation will be 500 kilowatts (DC). The purpose of this limit is to avoid an uncontrolled growth, which could jeopardize the integrity of the local electric system. The Electric Light Manager has the discretion to increase or decrease this limit.

Power Purchase Agreements

Customers interested in developing a larger system must submit a proposal for a power purchase agreement (PPA). The Electric Light Manager has the discretion to accept or deny any PPA proposals and to negotiate their terms. Each PPA proposal will be evaluated on a case-by-case basis for its economic, engineering, and environmental merit. PPA proposals for systems larger than 250 kilowatts (DC) will require a nonrefundable application fee of up to \$15,000 for the purposes of conducting a system impact study.

Third-Party Lease Agreements

Arrangements in which customers purchase power from any entity other than the ELD are not permitted.

Billing & Crediting

At the end of the monthly billing period, the customer-generator will be billed for the electricity consumed at the designated service rate.

At the end of the monthly billing period, the customer-generator's account will be credited for the electricity provided into the ELD's system at an amount equal to \$0.10.

For the billing period ending in March of each year (or at the termination of service), any remaining credit balance in a customer-generator's account will be returned to the ELD's Sustainability Fund. Customer-generators will not receive any cash payments for unused credit balances remaining at the end of this annual cycle. Any customer charge or minimum charge associated with a customer-generator's class of service will still apply.

Existing Net Metering Customers

Customer-generators with net metering agreements authorized by the ELD prior to June 20, 2017 will remain grandfathered under the previous crediting structure until April 1, 2022. These customer-generators will receive monetary credits to their electric account for their excess generation at a rate equal to the full retail rate based on their class of service. If desired, grandfathered customer-generators may elect to preemptively transition to the new structure, ahead of the April 1, 2022 deadline.

For the billing period ending in March of each year (or at the termination of service), any remaining credit balance in a customer-generator's account will be returned to the ELD's Sustainability Fund. Customer-generators will not receive any cash payments for unused credit balances remaining at the end of this annual cycle. Any customer charge or minimum charge associated with a customer-generator's class of service will still apply.

Interconnection

The customer-generator must complete and sign the ELD's *Interconnection Application & Agreement*. The customer-generator will be required to pay all applicable application fees and electrical permitting fees. Service is subject to the ELD's printed requirements and the ELD's *Electric Service Requirements and Policy Handbook*.

The customer-generator shall build, operate, and maintain the net metering facility so that it meets or exceeds all applicable safety and performance standards established by the Massachusetts State Building Codes, the Massachusetts DTE, the National Electric Code, the Institute of Electrical and Electronics Engineers, and Underwriters Laboratories.

The net metering facility must operate in parallel with the ELD's existing transmission and distribution facilities.

The customer-generator shall provide a safety disconnect device located adjacent to the ELD's metering equipment and shall be accessible to the ELD's personnel at all times. The disconnect switch must be lockable by means of a padlock in either the open or closed position. The ELD shall have the option of requiring ongoing testing of the disconnect equipment. The ELD may disconnect the customer-generator's net metering facility from the ELD's distribution system at any time if it deems the safety and stability of the system could be compromised.

The ELD will install bi-directional metering equipment that is capable of registering the flow of electricity in each direction at the sole expense of the customer-generator. The ELD will be responsible for the maintenance and service of the bi-directional metering equipment.

The ELD reserves the right to inspect net metering facilities at any time with proper notice to the customer.

Legal

The ELD shall not be liable, directly or indirectly, for permitting or continuing to allow the attachment of a net metering facility, or for the acts or omissions of the customer-generator that cause property damage, or loss, or injury, including death, to any party.

The ELD reserves the right to change this policy at any time to reflect changes in its *Schedule of Electric Rates*, or to bill the customer-generator for any costs that occur as a result of charges directly related to the customer-generator.

The ELD reserves the right to delay or reject any application if it threatens the performance or reliability of the ELD's distribution system, or the safety of the ELD's customers or employees.

Any and all aspects of this policy may be changed at any time to better serve the objectives of the ELD and the needs of its customers.

IPSWICH ELECTRIC LIGHT DEPARTMENT

NET METERING APPLICATION PROCESS

Important Notice

This document is not meant to replace or summarize the contents of the Electric Light Department's (ELD) Distributed Generation Net Metering Policy. It is a supplementary resource meant to help customers successfully navigate the application process.

Customers **MUST NOT** interconnect their generating facility with the ELD's distribution facilities until they receive written authorization from the ELD. Unauthorized interconnections may result in injury to persons and damage to equipment or property for which the customer will be liable.

Application Process & Forms

You must provide information about your specific installation in the *Interconnection Application & Agreement*. You will be required to pay the installation cost for the new bi-directional meter.

Single-Line Diagram

The Single-Line Diagram must show wire sizes, all devices for the system equipment ratings, and a visible, accessible, and lockable disconnect switch ("safety switch"). Please note that the disconnect switch must be installed in a readily accessible location normally within **10 feet** of the customer's service panel, where the ELD's personnel can operate the switch at any time.

Requirements

In order for the ELD to approve your project, you must meet the following regulatory and safety requirements:

- **Certified Inverters.** You must choose an inverter that meets the ELD's certification requirements.
- **Approved Disconnect Switches.** Your disconnect switch must be a blade-type switch ("knife switch"). The pullout switches commonly used in air-conditioning units and spas are not acceptable and will not be approved. Additionally, the customer is solely responsible for the maintenance of all fuses in fused blade-type disconnect switches.
- **Protection Equipment.** It may be necessary for the ELD to install, possibly at your expense, protection equipment necessary to ensure safe and reliable operation of the ELD's facilities. The need for protective equipment will vary, depending on a number of factors, including the location of your facility within the ELD's circuit.

Scheduling a Pre-Parallel Inspection

The following items must be completed prior to scheduling of the inspection:

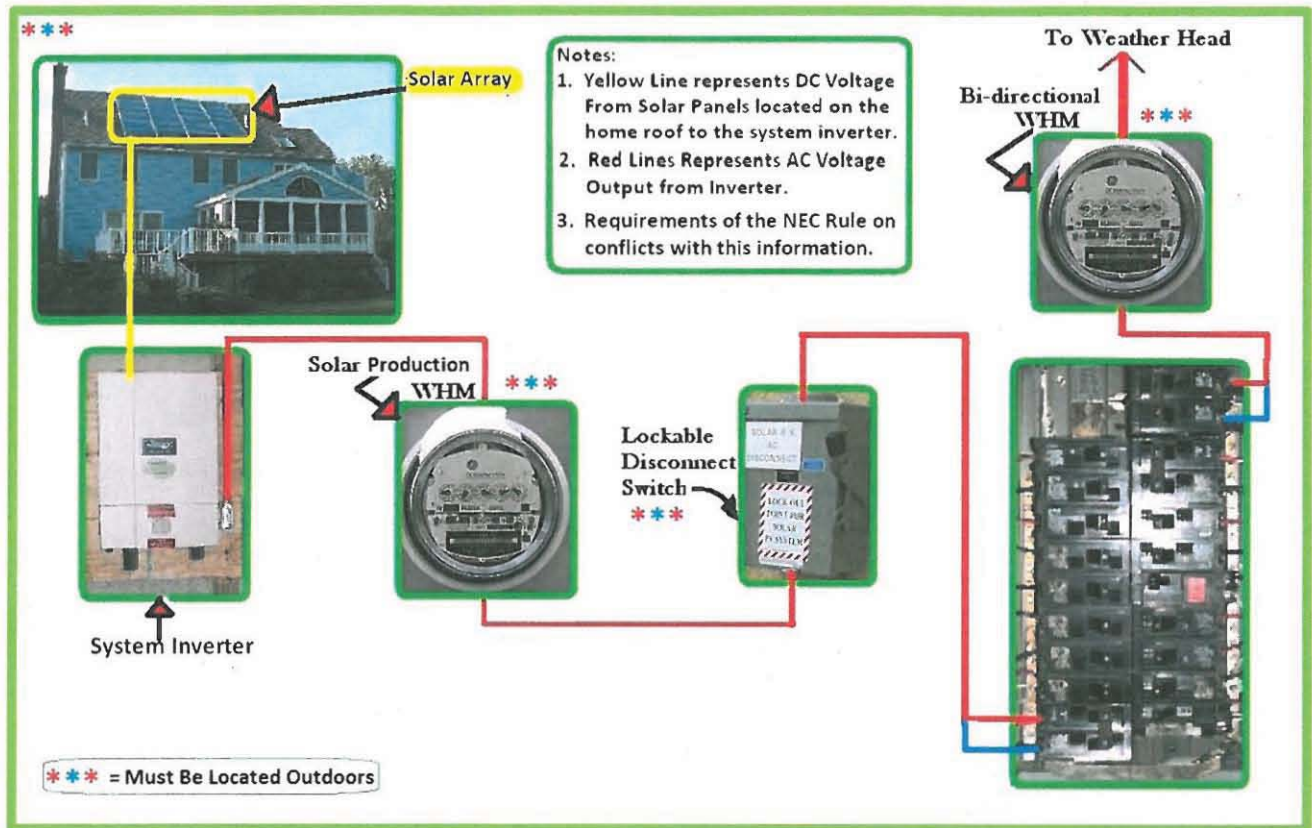
1. Execution all required agreements.
2. Installation of the net generation electric output meter (ELD owned).
3. Provision of a copy of the final signed building permit.
4. Completion of all electric work by the ELD.

Upon notification of the generator's readiness for the pre-parallel inspection, scheduling an inspection can take up to 10 days for certified generators with no external relays and up to 30 days for all other generators due to the availability of resources.

Once you have submitted the documents listed above, the ELD's engineering staff will begin to review of your project. As soon as the ELD receives the final signed application, we will contact you to schedule an onsite inspection and bi-directional meter installation. After passing the inspection, you will receive written approval from the ELD to operate your system in parallel with the ELD's electric grid.

To ensure your application package is complete, please refer to the following table:

Item	General Comments
Application	Make sure ALL sections applicable to your generator are completed.
Application Fee	Electronic applications will not be deemed complete until the check is received (unless exempt).
Site Plan	Must show the generator location with respect to the building, transformer, main switchboard, utility disconnect switch, and other pertinent electrical equipment.
Single Line Drawing	Must show the net generation meter (if required) and the utility disconnect switch (with the manufacturer and model number).
Three Line Drawing	Required if the generator is not certified or if an external relay is used.
Proposed Relay Settings	Required if the generator is not certified or if an external relay is used.
Protections Operating Description	Required if the generator is not certified or if an external relay is used.



Notes:

1. Meter Sockets are to be located outdoors and be furnished and installed by the customer's electrician.
2. Both the Solar PV Production Meter the Bi-Directional WHM shall be supplied and owned by this utility. Both of these meters **must** be located outdoors.
3. The new Bi-Directional Meter will be installed in the existing meter socket provided it is in good condition as determined by the company. If it is not in good condition it shall be replaced at the customer's expense.
4. To assure the safety of the Company's employees and its other customers, the Customer shall install equipment to prevent the flow of electricity into the Company's system when the Company's supply is out of service. This equipment shall be subject to the company's approval. In addition the PV system must have a lockable system isolation disconnect switch installed in very close proximally to the bi-directional meter. This isolation switch shall be identified by the words "PV System Isolation Disconnect Switch" on a red plastic plate with white lettering at least 1/4' in height.

Interconnection Application & Agreement for Power Systems 30 kW DC or Smaller

Section 1. Customer Information

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Street Address (if different than above): _____

Daytime Phone: _____ Evening Phone: _____

Utility Customer Account Number (from utility bill): _____

Section 2. Generating Facility Information

System Type: _____ Other: _____

Generator Size: (kW AC): _____ Class 1 Generator? (Y) (N)

Inverter Manufacturer: _____ Inverter Model: _____

Inverter Serial Number: _____ Inverter Power Rating: _____

Inverter Location: _____

Disconnect Type: _____ Disconnect Location: _____

Note about meter removal: If the Generator Owner elects not to install a manual disconnect device accessible to the Utility, the Utility shall not be liable when a service meter is removed to disconnect the generator thereby interrupting all utility electric service to the Customer site.

Section 3. Planned Installation Information

Licensed Electrician: _____ Contractor #: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Daytime Phone: _____ Planned Installation Date: _____

Section 4. Certifications

The generating facility meets the requirements of applicable IEEE standards and is listed by Underwriters Laboratories (UL) or other nationally recognized testing laboratory (NRTL).

Signed (Equipment Vendor): _____ Date: _____

Name (Printed): _____ Company: _____

Listing (UL or other NRTL): _____

Section 5. Signatures

By signing your name below, you certify you have read and agree to the terms outlined in Ipswich Electric Light Department's *Distributed Generation Net Metering Policy*. You also certify that the above application is complete and accurate to the best of your knowledge.

Signed (Customer) _____ Date: _____

TO BE COMPLETED BY THE UTILITY AFTER INSTALLATION

Application Approved: _____ Date: _____

System Inspected By: _____ Inspection Date: _____