SHREWSBURY ELECTRIC AND CABLE OPERATIONS

YOUR COMMUNITY PROVIDED ELECTRIC & CABLE SERVICES

Shrewsbury Electric & Cable Operations Interconnection Requirements for Net-Metered Facilities and Terms and Conditions for Simplified Process Interconnections

1. **Construction of the Facility.** The Interconnecting Customer may proceed to construct the distributed generating net metered Facility once the Approval to install the Facility has been granted by SELCO. Distributed generation includes solar and battery storage which can take the form of bidirectional EV chargers.

2. **Interconnection and Operation Requirements**.

The Interconnecting Customer may operate Facility and interconnect with SELCO's system once the following has occurred:

2.1. **Municipal Inspection.** Upon completing construction, the Interconnecting Customer will cause the Facility to be inspected or otherwise certified by the local electrical wiring and building inspectors with jurisdiction.

2.2. **Certificate of Completion.** SELCO will issue the Certificate of Completion to the applicant upon installation of the net and production meters.

2.3. The company has completed or waived the right to inspection.

2.4 An inter system bonding terminal shall be provided if not presently installed.

2.5 **230.85 Emergency Disconnects**. For one- and two-family dwelling units, all service conductors shall terminate in disconnecting means having a short-circuit current rating equal to or greater than the available fault current, installed in a readily accessible outdoor location. If more than one disconnect is provided, they shall be grouped. Each disconnect shall be one of the following:

(1) Service disconnects marked as follows:EMERGENCY DISCONNECT, SERVICE DISCONNECT

(2) Meter disconnects installed per 230.82(3) and marked as follows: EMERGENCY DISCONNECT, METER DISCONNECT, NOT SERVICE EQUIPMENT

(3) Other listed disconnect switches or circuit breakers on the supply side of each service disconnect that are suitable for use as service equipment and marked as follows: EMERGENCY DISCONNECT, NOT SERVICE EQUIPMENT

Markings shall comply with 110.21(B).

The disconnect switch should be located within view of the meter.

SELCO may grant exceptions for previously SELCO approved and interconnected Facilities seeking an addition of production equipment, so that an exterior whole home disconnect is not required.

2.6. SELCO requires replacing Federal Pacific electrical panels and breakers in the home or business that will connect to the solar system regardless of whether the panel is to be back-fed or a line side tap is used.

2.7. Load side taps are not acceptable within the utility meter socket.

2.8. SELCO requires that the **Solar Production meter** be wired with the line side (top) from the output of the solar system and the load side (bottom) be wired to the building load (e.g. breaker in the service panel or service panel line side tap.)

2.9. The customer 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 Department of Public Utilities, the National Electric Code, the Institute of Electrical and Electronics Engineers, Underwriters Laboratories, the Town of Shrewsbury and SELCO.

2.10. The facility must operate in parallel with SELCOs existing transmission and distribution facilities.

2.11. SELCO's distribution circuits generally operate with automatic reclosing following a breaker trip due to a fault. The Interconnecting customer is responsible for protecting their equipment from being re-connected out of synchronism when SELCO's system is re-energized manually or by an automatic re-closure operation.

2.12. The following information must be submitted by the Interconnecting Customer for review and acceptance by SELCO prior to SELCO's approving the Interconnecting Customer's request for interconnection:

- An electrical one-line diagram or sketch depicting how the equipment will be interconnected relative to the production meter, the electric revenue (net) meter, the battery (if applicable) and the service entrance panel. The diagram must show all devices for the system, including equipment ratings, wire sizes and a visible accessible and lockable disconnect switch ("safety switch").
- The make, model and manufacturer's specification sheet for the inverter, battery and/or bidirectional charger.

2.13. For Facilities that utilize photovoltaic technology, it is required that the system be installed in compliance with IEEE Standard 1547-2018. The inverter shall meet the Underwriters Laboratories Inc. Standard UL 1741 SB, Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems". Based on the information supplied by the Interconnecting Customer, if SELCO determines the inverter is in compliance with UL 1741 SA, the Interconnecting Customer's request for interconnection will be approved.

2.14. For facilities that utilize **battery energy storage** technology, including battery storage coupled with solar, stand-alone battery storage and bidirectional electric vehicle (EV) chargers, specifications must be provided to SELCO and included in all one-line diagrams. The meter socket for SELCO's production meter must be wired such that all solar output is metered through the SELCO production meter. Energy storage units such as batteries must not be wired as to draw load before reaching SELCO's PV production meter. Addition of battery storage to an existing solar system already interconnected with SELCO must be approved by SELCO through an online application.

2.15. **Plug-In Solar Generation Devices**

Small, portable photovoltaic systems designed to connect directly to a standard household electrical outlet (often referred to as plug-in or balcony solar) with a maximum aggregate output not exceeding 1,200 watts AC may be utilized by SELCO customers subject to the provisions of this section.

Provided the device meets the criteria herein, such systems are exempt from the standard interconnection application process and the requirement for a separate production meter, provided they are intended strictly for instant behind-the-meter self-consumption. Customers should notify SELCO of plug-in solar through a SELCO Work Request - Plug-In Solar; there is no fee.

All plug-in solar devices must be certified by a Nationally Recognized Testing Laboratory (NRTL) to meet UL 3700 (or equivalent) standards for photovoltaic building/balcony systems, feature built-in anti-islanding protection that automatically ceases operation upon loss of grid voltage (meeting UL 1741 SB or equivalent), and include integrated ground-fault protection.

Energy generated by plug-in solar devices is intended entirely for immediate onsite load offset. Any minor power exported back to the SELCO distribution grid through a standard meter will not be eligible for net metering.

The customer remains solely responsible for ensuring that plugging the device into a household circuit complies with the National Electrical Code (NEC) regarding branch circuit capacities (preventing overload of multi-outlet circuits) and local

structural/wind-load safety if mounted on balconies or exterior facades. SELCO retains the right to demand immediate disconnection of any uncertified or non-compliant device that threatens distribution safety.

3. **Protection Requirements.**

3.1. If, due to the interconnection of the Facility, when combined with preexisting facilities interconnected to SELCO's system, the rating of any of SELCO's equipment or the equipment of others connected to SELCO's system will be exceeded or its control function will be adversely affected, SELCO 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 SELCO, SELCO will, where possible, permit the Interconnecting Customer to choose among two or more options for meeting SELCO's requirements.

3.2 If a customer's facility damages the SELCO system, the customer shall be responsible for all costs associated with the repair and/or replacement of the damaged portion of the SELCO system and that names SELCO as an additional insured. Commercial customers shall maintain insurance coverage that would cover any damage to SELCO's system in the event of the operation or misoperation of the facility.

4. **Company Right of Inspection.** Within ten (10) business days after receipt of the Certificate of Completion, SELCO may, upon reasonable notice and at a mutually convenient time, conduct an inspection of the Facility to ensure that all equipment has been appropriately installed and that all electrical connections have been made in according to the Interconnection Policy. SELCO has the right to disconnect the Facility in the event of improper installation or failure to return Certificate of Completion. If SELCO does not inspect in 10 days or by mutual agreement of the Parties, the Witness Test is deemed waived.

5. **Safe Operations and Maintenance.** The Interconnecting Customer shall be fully responsible to operate, maintain, and repair the Facility.

6. **Access.** SELCO shall have access to the disconnect switch of the Facility at all times. Representatives of SELCO 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. SELCO will have control such that it may open or close the circuit breaker or disconnect.

7. **Disconnection.** SELCO may temporarily disconnect the Facility to facilitate planned or emergency SELCO work. The customer shall provide a safety disconnect device located adjacent to SELCO's metering equipment and shall be accessible to SELCO's personnel at all times. The disconnect switch must be lockable by means of a padlock in either the open or

closed position. SELCO shall have the option of requiring ongoing testing of the disconnect equipment. SELCO may disconnect the customer's facility from SELCO's distribution system at any time if it deems the safety and stability of the system could be compromised. SELCO will when possible notify the customer prior to disconnecting the generating facility.

8. **Metering.** All Facilities approved under this Agreement qualify for net metering, as approved by SELCO from time to time, and the following is necessary to implement the net metering provisions:

8.1. **Interconnecting Customer Provides Meter Sockets.** The Interconnecting Customer shall furnish and install, if not already in place, the necessary meter sockets, test switches, conduits, enclosures.and wiring in accordance with accepted electrical standards.

8.2. **SELCO Installs Meters.** SELCO shall furnish and install a meter capable of net metering and a production meter within ten (10) business days after receipt of the Certificate of Completion (Form B) if inspection is waived, or within 10 business days after the inspection is completed, if such meter is not already in place.

8.3 **Maintenance.** SELCO will be responsible for the maintenance and service of the bi-directional net meter and production meter.

8.4 The Interconnecting Customer will be responsible for reasonable and necessary costs incurred by SELCO 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 applicable operating requirements.

8.5 All metering equipment installed pursuant to this Policy and associated with the Facility may be routinely tested by SELCO at 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, SELCO shall cause such metering equipment to be made accurate or replaced. The cost to repair or replace the meter shall be borne by SELCO, if SELCO 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.

9. **Indemnification.** Interconnecting Customer shall indemnify, defend and hold SELCO, its directors, officers,employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of, or are in any manner connected with, the performance of this Agreement by that party, except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the party seeking indemnification.

10. **Limitation of Liability.** SELCO's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall SELCO be liable to the other party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.

11. **Termination.** This Agreement may be terminated under the following conditions:

11.1. By Mutual Agreement. The Parties agree in writing to terminate the agreement.

11.2. By the Interconnecting Customer. The Interconnecting Customer may terminate this Agreement by providing written notice to SELCO.

11.3. SELCO may terminate this Agreement (1) if the Facility fails to operate for any consecutive 12 month period, or (2) in the event that the Facility impairs the operation of the electric distribution system or service to other customers or materially impairs the local circuit and the Interconnecting Customer does not cure the impairment.

12. **Assignment/Transfer of Ownership of the Facility.** This Agreement shall survive the transfer of ownership of the Facility to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and so notifies SELCO.

13. **Interconnection Policy and Tariff.** These Terms and Conditions are pursuant to SELCO's Net Metering Policy, and as the Policy and net metered tariffs may be amended from time to time.

14. **General Provisions.**

14.1. **Notice Provisions.** If at any time, in the reasonable exercise of SELCO’s judgment, operation of the facility adversely affects the quality of service to SELCO’s customers or interferes with the safe and reliable operation of the Distribution System, SELCO 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, SELCO shall give Interconnecting Customer reasonable notice of its intention

to discontinue service and, where practical, allow suitable time for interconnecting Customer to remedy the offending condition. SELCO'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, SELCO shall immediately confer with Interconnecting Customer regarding the conditions causing such discontinuance and its recommendation concerning the timely correction thereof.

14.2 **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 SELCO 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.

Interconnecting Customer Signature

Sign _____

Name _____

Date _____

Contractor Signature

Sign _____

Name _____

Date _____