

**Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
DEPARTMENT OF ENERGY RESOURCES**

**SOLAR MASSACHUSETTS RENEWABLE TARGET PROGRAM
(225 CMR 20.00)
GUIDELINE**

Guideline Regarding Metering of Solar and Energy Storage Systems

Effective Date: May 18, 2020

1) Purpose:

This document provides technical guidance regarding acceptable metering specifications used for the purpose of recording and reporting energy generation production information for facilities that participate in the Solar Massachusetts Renewable Target Program (“SMART”), which will serve as a basis for calculating SMART incentive payments pursuant to 225 CMR 20.00. This Guideline applies to all Solar Tariff Generation Units (“STGUs”) that are co-located with an Energy Storage System and are eligible to receive an energy storage adder under 225 CMR 20.07(4)(c).

2) Technical Metering Guidance:

An STGU may use a meter that meets the following criteria to record and report energy generation production:

- The STGU production meter may report through the inverter, inverter gateway, or Data Acquisition System (“DAS”) or;
- The STGU production meter may be installed by the Distribution Company and;
- The STGU production meter must meet the accuracy requirements as established by ISO New England Operating Procedure No.18 or any successor thereto, or the Small Generator Metering Protocol Specifications as outlined in NEPOOL GIS Rule 2.1 (e).

1. Accuracy Requirements

Minimum Meter Accuracy		
Meter Accuracy: Minimum accuracy and other requirements, based on nameplate capacity, are as follows:		
Nameplate Capacity	Minimum Meter Accuracy (all values are +/-)	Other Requirements
Up to 10 kW	2% (ANSI C-12.1-2008)	Electromechanical meters may be used. Refurbished meters, if retested and certified, may be used. Allowable configurations for meters include: <ul style="list-style-type: none"> • Single-phase 120 volt - Form 1S, Class 100 • Single-phase 240 volt - Form 2S, Class 200 • Three-phase 120 - 480 volt - Form 14- 16S, Class 200 Meters used as part of a Data Acquisition System (“DAS”) must meet the "Greater than 10 kW and up to 1 MW" nameplate capacity requirements below.
Greater than 10 kW and up to 1 MW	1% (ANSI C12.16 or better)	Only new solid state meters are allowed. Current transformers (“CTs”) must conform to the 0.6% (ANSI/IEEE C57.13-2008) accuracy class, or the meter must be tested using the CT and certified to meet the minimum accuracy requirement.
Greater than 1 MW	0.5% (ANSI C12.20-2010)	Only new meters are allowed. CTs must conform to the 0.3% (ANSI/IEEE C57.13-2008) accuracy class.

2. Meter Testing and Calibration Requirements

Meters shall be tested, and as needed calibrated or replaced, in accordance with the table below:

Meter Testing Requirements		
Category (kW AC)	Minimum Frequency	Other
Up to 25 kW	None	The Independent Verifier at its discretion may require testing or replacement of a meter associated with unreasonable energy production reports
Greater than 25kW and up to 500 kW.	As required by the Distribution Company requirements and best practices	The Independent Verifier at its discretion may require testing or replacement of meter associated with unreasonable energy logged by the meter registry

Greater than 500 kW	least once every two years per NEPOOL OP18	Only new meters are allowed. CTs must conform to the 0.3% (ANSI/IEEE C57.13-2008) accuracy class.
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An Energy Storage System (“ESS”) may use a meter that meets the following criteria to meet the Data Provision Requirements of 225 CMR 20.06 (1) (e) 4.

- The ESS meter may report through the inverter, inverter gateway, or Data Acquisition System (“DAS”) or;
- The ESS meter may be installed by the Distribution Company and;
- The ESS meter must meet the accuracy requirements as established by ISO New England Operating Procedure No.18 or any successor thereto, or the Small Generator Metering Protocol Specifications per NEPOOL GIS Rule 2.5 (j) and;
- The ESS meter must meet requirements established by an Independent Verifier approved by the Department to receive and validate ESS performance.