

December 3rd, 2021

SGIP Monitoring Plan for ESS's with SolarEdge Inverters TEMPLATE

System Description:

The SGIP system is composed of a _____ kW AC PV system, inverter, storage batteries and remote monitoring. This grid-connected system is designed to meet the building load from a combination of PV energy, battery energy and grid power.

The Site name is: _____

The Address is: _____

Intended Operation: Check all that apply

- ☐ Maximize Self Consumption
- ☐ TOU Energy arbitrage
- ☐ Storage of excess renewable generation
- ☐ Back-up Power in case of grid outage

Primary equipment includes:

- Inverter(s)
 - Battery Interactive Inverter:
 - StorEdge SE7600A-USS
 - StorEdge SE3800A-USS
 - EnergyHub SE3000H-USS
 - EnergyHub SE3800H-USS
 - EnergyHub SE6000H-USS
 - EnergyHub SE7600H-USS
 - EnergyHub SE10000H-USS
 - EnergyHub SE11400H-USS
 - SolarEdge battery interactive inverters come with a revenue grade meter and cellular connection: As the brains of the system, the inverter manages and monitors battery and system energy, in addition to its traditional functionality: converting direct current electricity into alternating current used in your home
 - Model of Battery Interactive Inverter: _____
 - Quantity of Battery Interactive Inverters: _____
- Accessory Devices Listed as Part of the System
 - SolarEdge Electricity Meter (**REQUIRED**): For on-grid applications, the SolarEdge Electricity Meter measures energy consumption. The meter is factory installed in the EnergyHub inverter or in the Backup Interface, and it coordinates when to store or export energy to help lower the electricity bill. The meter supports export limitation, peak shaving, and time of use shifting.
- Battery(ies)
 - SolarEdge EnergyBank 10k: Current generation of highest efficiency, home battery charges from the solar modules or the grid and seamlessly integrates with the
 - LG Chem RESU10H battery: High-efficiency, home battery charges from the solar modules or the grid and seamlessly integrates with the StorEdge, and EnergyHub inverter(s) and monitoring
 - LG Energy Solution RESU10H Prime: Current generation of high-efficiency, home battery charges from the solar modules or the grid and seamlessly integrates with the EnergyHub inverter(s) and monitoring
 - LG Energy Solution RESU16H Prime: Current generation of high-efficiency, home battery charges from the solar modules or the grid and seamlessly integrates with the EnergyHub inverter(s) and monitoring

- EnergyHub inverter(s) and monitoring
- Model of DC Coupled Battery: _____
- Quantity of Battery(ies) per inverter: _____

Site Load:

Average electricity consumption at this residence is about _____ kWh per day with typical residential usage profiles and loads. Fuel sources are electricity and natural gas.

Description of Metering:

Two separate meters are used to monitor system production and energy export to the grid. The SolarEdge inverter monitors DC energy production from the power optimizers, monitors the

State-of-Energy (SEO) in the battery and uses a revenue grade meter to measure the AC output from the inverter.

The SolarEdge Electricity Meter includes CTs that attach to the main service panel (MSP) to measure net building power consumption and export. This data is used by the inverter to limit export of energy to the grid if required.

The inverter tracks PV rooftop production every 5 minutes and monitors DC energy to and from the battery, battery state of charge, and AC exported to the grid and transmits this data every 15 minutes to the SolarEdge monitoring platform via cellphone connection. Data is accessible from the SolarEdge server via a web browser.

Data streams being collected include:

- PV Production (DC from power optimizers) – 5 min resolution; reported every 15 min
- Inverter AC kW and kWh – 15 min resolution; reported every 15 min
- Battery state of Energy (%) – 5/15min resolution; reported every 15 min
- Battery Instantaneous Discharge – 5/15 min resolution; reported every 15 min
- Accumulated Charged Energy – 5/15 min resolution; reported every 15 min
- Home consumption – 15 min resolution; reported every 15 min

System Operation:

The system will be programed to charge and discharge, depending upon local PV production, with a minimum average discharge schedule of once per week (over the period of a year).

The system will charge the battery to meet the 75% priority requirement, by detailing the charge/discharge profile. Please check all modes of operation programmed into the battery

- ☐ Battery Off
- ☐ Maximize Self Consumption
- ☐ Charge from PV Only
- ☐ Charge from PV and Grid
- ☐ Charge from Clipped PV
- ☐ Discharge to Maximize Export
- ☐ Discharge to Minimize Import
- ☐ Back-up Power in case of grid outage

Charging the Battery; Check the box for the percentage of charging from onsite renewables

- ☐ ~0% - 25%
- ☐ 25% - 50%
- ☐ 50% - 75%
- ☐ 75% - 100%