

Application Note - Preparing a SolarEdge System for Future StorEdge™ Upgrade (North America)

StorEdge Solution Overview

StorEdge™ is SolarEdge's all-in-one solution that uses a single on-grid DC optimized inverter to manage and monitor both solar generation and energy storage. Homeowners are automatically provided with backup power in the event of grid interruption to power pre-selected loads. Solar energy can be stored in a battery for Smart Energy Management applications such as export control, offering demand response and peak shaving, and performing time of use shifting for reduced electric bills.

The following figure illustrates the StorEdge system layout and components.

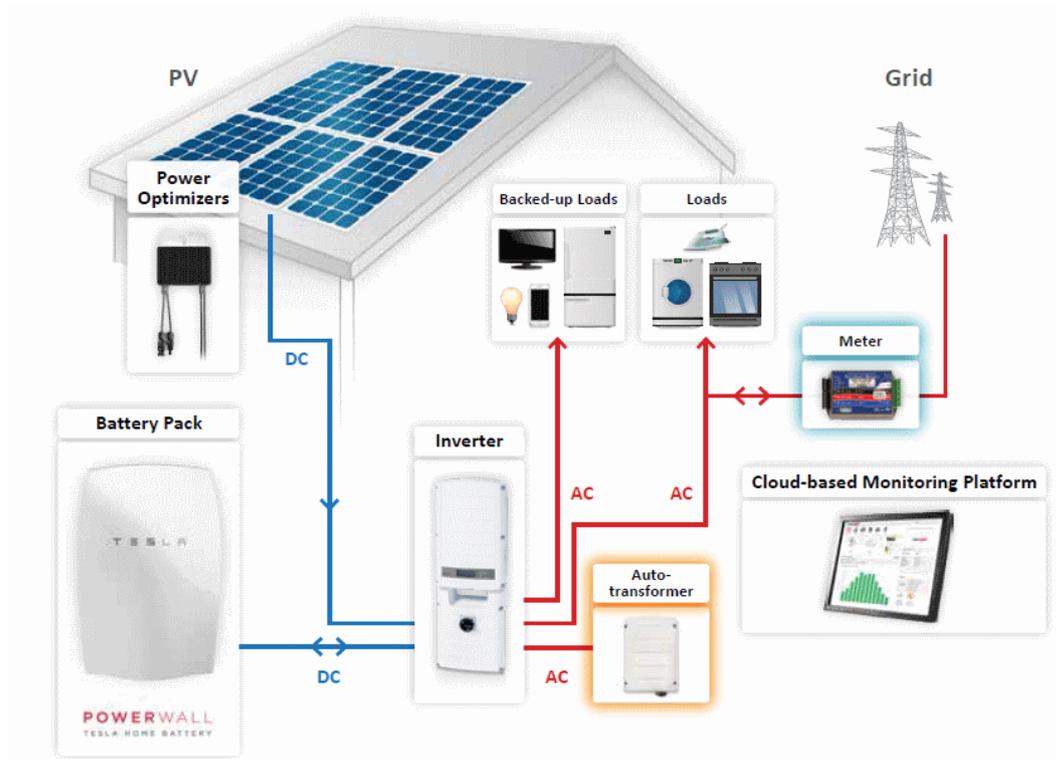


Figure 1: The StorEdge system components

The StorEdge Solution comprises the following products:

- Single Phase StorEdge-Compatible inverter with StorEdge Upgrade Unit
- [SolarEdge Auto-transformer](#)
- [SolarEdge Meter](#)
- [Tesla Powerwall Home Battery for Daily Cycle Applications](#) or [Tesla PowerWall Home Battery for Weekly Cycle Applications](#)

Installation Information

SolarEdge systems can be installed today and upgraded later with the StorEdge Upgrade Unit, auto-transformer and the battery.

Prepare Your System Today

To have a PV system ready for storage capabilities, follow these steps:

1. Install a StorEdge compatible inverter: SE7600A-USxx2xxxx
 - Keep the required inverter clearances specified in the *SolarEdge Installation Guide*.
 - Leave enough room for the StorEdge components to be installed later (battery, StorEdge Upgrade Unit and auto-transformer, see details in step 3 below). This way they can easily be added without changing installed equipment locations.
2. Install a meter at the grid connection point if required for production/consumption monitoring or for export control. The meter connects to the inverter using an RS485 cable.

3. Plan the StorEdge system layout:

- Make sure the installation can accommodate the upgrade unit:
 - The upgrade unit is attached to the bottom of the inverter and replaces the Safety Switch; it is used to connect the battery and the meter to the inverter and serves as a Safety Switch.
 - Dimensions (HxWxD): 16.5 x 12.4 x 7.2 in / 422 x 315 x 184 mm (i.e. 7 in / 187 mm longer than the Safety Switch)
 - Weight: 17 lb / 7.8 kg
 - Leave at least 8" / 200 mm to the bottom of the upgrade unit for cable entry.

- Make sure the installation can accommodate the auto-transformer:
 - The auto-transformer will connect to the AC side of the inverter. Since the inverter AC connections are on its right side, it is recommended to position the auto-transformer to the right of the inverter to simplify wiring.
 - Leave at least 8 in / 200 mm to the bottom of the auto-transformer; if conduit entry to the auto-transformer will be from the bottom, leave sufficient clearance for the conduits as well.
 - Leave at least 4in / 100 mm to the right and left of the auto-transformer.
 - Dimensions (HxWxD): 6.7 x 7.9 x 5.5 in / 170 x 200 x 140 mm
 - Weight: 30 lb / 13.5 kg

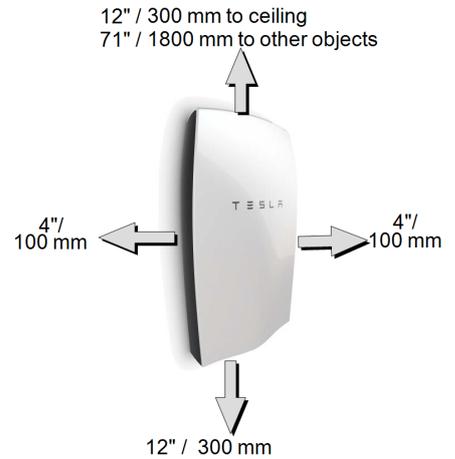
- Make sure the installation can accommodate the battery:
 - The battery will connect to the DC side of the inverter. Since the inverter DC connections are on its left side, it is recommended to position the battery to the left of the inverter to simplify wiring.
 - The maximum distance between the battery and the inverter is 33 ft / 10m.
 - Leave at least 12in / 300 mm above the battery to the ceiling, and at least 71in / 1800 mm to other objects, such as shelves or electronics.
 - Leave at least 12in / 300 mm to the bottom of the battery for cable connections.
 - Leave at least 4in / 100 mm to the sides of the battery
 - Dimensions (HxWxD): 51.2 x 34 x 7 in / 1300 x 860 x 180 mm
 - Weight: 221 lb / 100 kg. Make sure the installation surface can withstand this weight.



↓
8 in / 200 mm



↓
8 in / 200 mm



Upgrade Your System Later

1. Remove the Safety Switch as described in Appendix E of the Installation Guide (Replacing and Adding System Components).
2. Install the StorEdge Upgrade Unit as described in the manual supplied with it.
3. Install the auto-transformer as described in the manual supplied with it.
4. Install the battery as described in the manual supplied with it.



NOTE

If two strings are connected to the inverter, a combiner box (not supplied by SolarEdge) is required to connect the two strings and the battery.

5. Install a secondary AC panel for backed-up loads (not supplied by SolarEdge). Rewire the backed-up loads through this panel; they should remain wired through the main panel as well.