SUNGROW AUSTRALIA GROUP PTY LTD | 1800 SUNGROW (786 476)
service@sungrowpower.com.au | www.sungrowpower.com.au

Suggested wiring when a Shed sub-board is used

Disclaimer

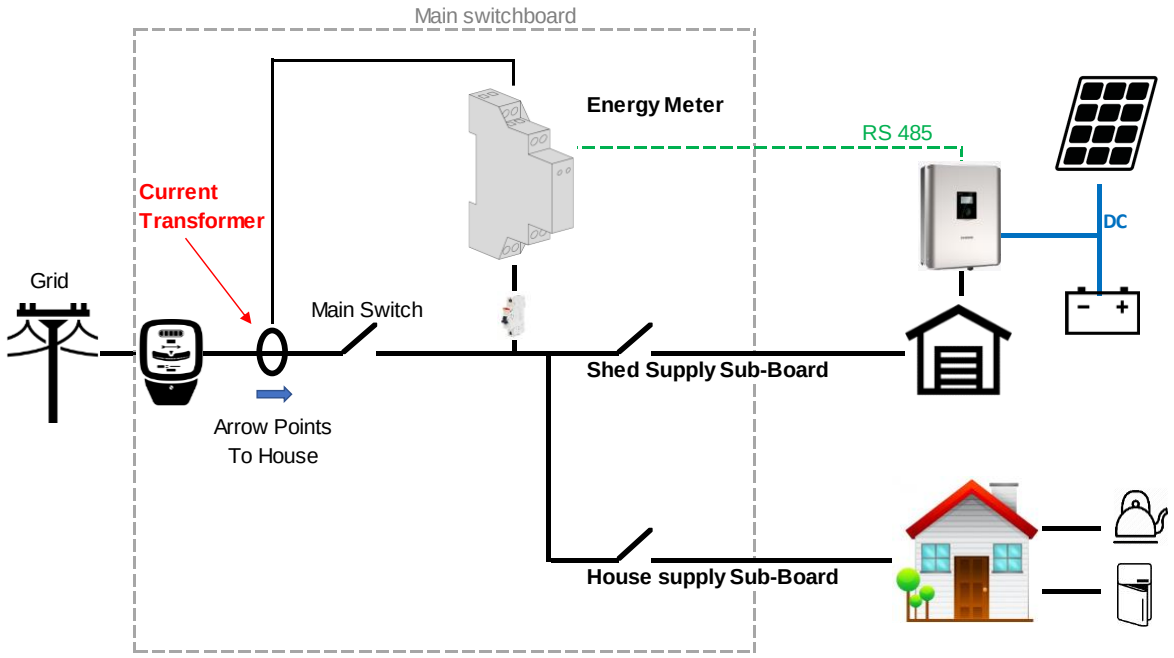
The material in this document has been prepared by Sungrow Australia Group Pty. Ltd. ABN 76 168 258 679 and is intended as a guideline to assist solar installers for troubleshooting. It is not a statement or advice on any of the Electrical or Solar Industry standards or guidelines. Please observe all OH&S regulations when working on Sungrow equipment.

There are cases where the installation of a Hybrid PV system is more suited to be installed on a shed roof on a property.

This is technically acceptable, providing some important points are considered:

- The Energy meter must be installed at the main switch
- If an EPS box is used, a new sub-circuit must be wired directly to the EPS loads in the house.

In the below diagram (Figure 1), the PV and Hybrid inverter / Battery has been installed on the shed and the energy meter installed correctly at the main switch.



The energy meter must be positioned between the grid and *EVERYTHING ELSE*

Figure 1 Overview of Hybrid inverter / Battery installation on the shed

SUNGROW AUSTRALIA GROUP PTY LTD | 1800 SUNGROW (786 476)
service@sungrowpower.com.au | www.sungrowpower.com.au

Energy Meter placement:

If the energy meter was installed incorrectly on the shed sub-board (Figure 2), it would read house consumption as export (even though it isn't). In this case the PV energy will flow to the house loads, but only after it has charged the battery.

As the house consumption is regarded by the system as export, the battery will not discharge into the house loads.

The only import the meter will read is any consumption on the shed sub-board. The system will not work correctly and data on the iSolarCloud will be incorrect.

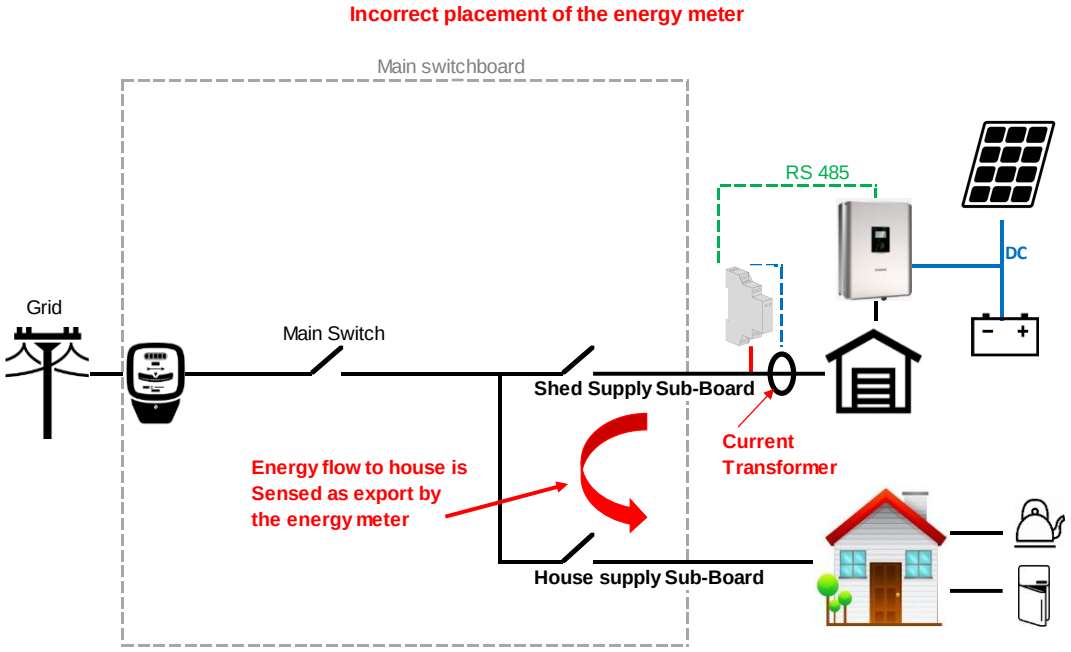


Figure 2 Incorrect placement of the energy meter

Clearly then, the energy meter must be installed at the main switch which feeds both sub-boards in order for the system to function correctly.

An easy way to remember this is:

The Energy Meter must always be installed between the grid and everything else on the property.

SUNGROW AUSTRALIA GROUP PTY LTD | 1800 SUNGROW (786 476)
service@sungrowpower.com.au | www.sungrowpower.com.au

Where an EPS box is also installed:

The maximum load on the EPS circuits when there is battery power only available is 3,000 watts (12.5 Amps at 240 Volts)

The EPS cannot supply the total house loads.

If an EPS box is installed, there must be a new sub-circuit run between the EPS box at the shed, to the house (Figure 3), which will then supply the intended EPS loads *'only'* (i.e. lighting circuit, fridge etc). These loads must be physically disconnected from the normal loads at the active in the house switchboard. (Please refer to the EPS documentation for further info on EPS wiring).

The active connection to the grid is coupled at the EPS box and will decouple in the off-grid mode.

In normal grid connected operation, all loads are connected to the grid active. When in the off-grid mode, the EPS active decouples from the grid at the EPS box and the EPS loads are electrically separate from the normal grid loads. The EPS will automatically re-couple when the grid is re-establishes.

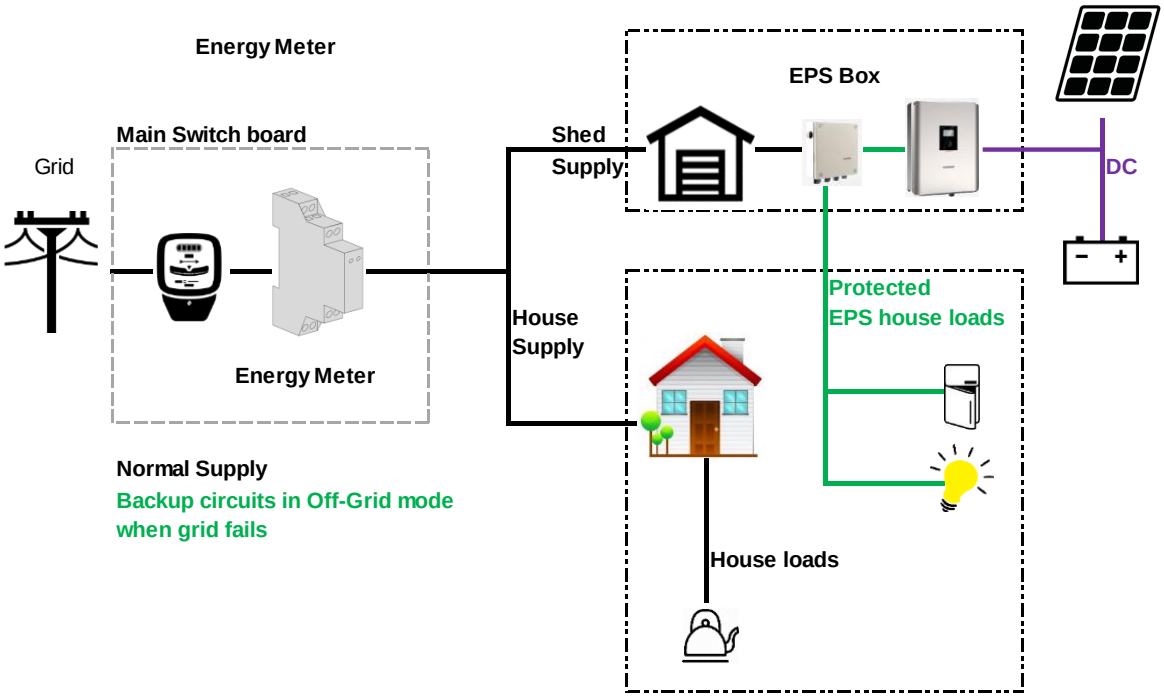


Figure 3 Correct installation for EPS box