

Why you can't connect a generator to a grid-connected Hybrid Inverter

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.

Overview:

We often get asked if it's possible to connect a backup generator to a Grid-Connected Hybrid system.

The short answer:

No.

The long answer:

Firstly, in order to be able to connect any inverter to the Australian grid, the grid settings must conform to AS/NZS 4777.

This specifies how the inverter reacts to certain grid conditions i.e. under/over voltage, under/over frequency etc.

With these settings, the inverter will trip if connected to a generator due to the wide operating voltage and frequency of the generator.

Secondly, the off-grid functions (i.e. charging the battery from generator) will only work if the hybrid inverter is set to 'Off-Grid mode', in which case, the inverter is no longer compliant to AS/NZS 4777 etc.

Thirdly, it is normally illegal to connect a generator to the grid supply unless it has been approved by the DNSP etc.

And lastly, there is little point. The Sungrow system is designed to run 24/7 in backup mode if necessary. If per chance the battery does run out during the night, adding more battery modules is a cheaper and cleaner option.

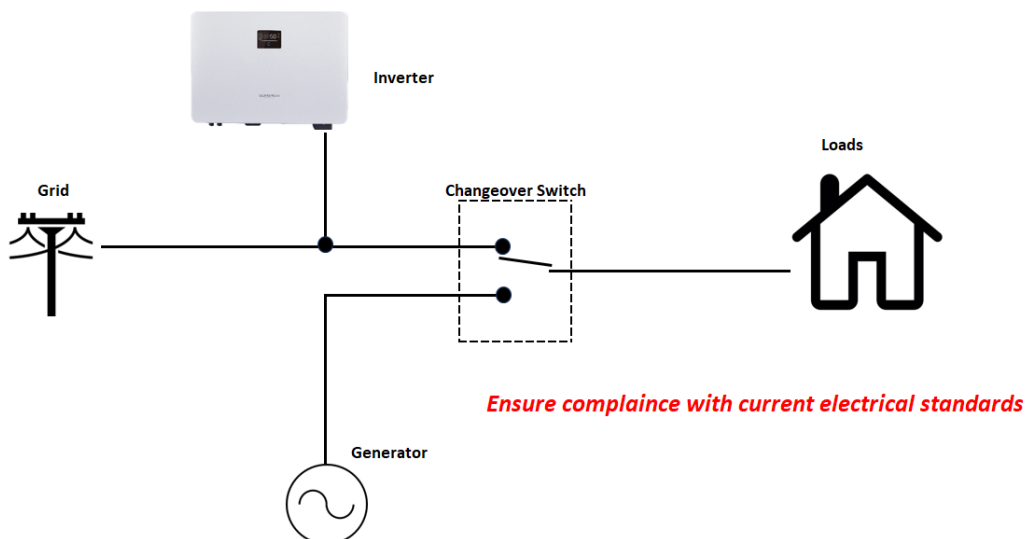
Limited use of a backup generator:

It is technically possible to supply loads only from a generator*.

However, care must be taken to ensure the following:

- Generator must not connect to the Sungrow inverter under any circumstances.
- Generator must not connect to the grid point under any circumstances.
- Generator must not connect to the Sungrow battery under any circumstances.
- Any electrical wiring must comply with all local and national standards*.

The below diagram shows possible configuration*.



***Refer to the standards in relation to generators (AS/NZS 3010:2017 etc)**

More information here: [World-leading Solar Energy Company in Australia - Sungrow AU](#)

If the issue still persists, please take photos testing on site and contact Sungrow Service Department on 1800 786 476 or email to service@sungrowpower.com.au.