

## **SolarInnovate Energy Solutions**

## Can the Bridgetown gridconnected inverter be converted to an off-grid one





#### **Overview**

Can an on-grid inverter be used as an off-grid?

Yes, an on-grid inverter can be used as off-grid to give you power when the grid goes off. You can do this by feeding the system with a pure sine wave so it thinks the grid is up. If you have one of the latest PV installations, you will have a hybrid inverter that works even when the grid is off.

How does a grid tie inverter work?

The grid-tie inverter works in large-scale solar power stations. The main difference between these systems and off-grid inverters is that they do not store any energy into batteries. All the solar power generated is converted to AC and synchronized with the grid. The off-grid inverter does not connect to the public power grid.

How does a grid based battery based inverter work?

The grid tie is passed through the inverter transfer switch, it has to be disconnected from the grid when in off grid mode. The grid interactive battery based inverter has to cover the loss of power from the array at any time during operation or it will fault. Also, again.

Can a GT inverter be attached to a grid?

While the grid is attached you have a large sink to push current into, so generally not a problem (Hawaii and California disagree and have formalized frequency shifting rules so they can control GT inverters). The problem is when the grid goes out your backup system disconnects from the grid so it doesn't backfeed into the grid.

Does an off-grid inverter need a battery bank?

One of the features though of an off-grid inverter is it must be installed with a battery bank. You can prioritize the settings such that the inverter feeds power to the grid, or uses the grid to charge the batteries.



Will a grid tie inverter work with an Offgrid inverters?

The grid tie inverter will happily co-exist with the offgrid inverter (proven by myself and others) and backfeeding excess power to the batteries can be prevented by the use of in-line rectifier diodes: Rectifier diodes will only conduct electrical current in one direction.



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