

The solar panel power is lower than the inverter

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What is the difference between a solar panel and an inverter?

First, let's clarify the roles: solar panels and inverters both have wattage ratings. For instance, a 315W solar panel generates 315 watts, and a 290W micro-inverter can output a maximum of 290 watts of power if it's available. When a solar panel produces more power than the inverter can handle, the excess power is "clipped". This means that the inverter only utilizes the power it can process, while the solar panel continues to produce the excess power.

Why do solar panels have more capacity than inverters?

And the extra panel capacity can help the inverter to run at a higher average efficiency which can almost entirely make up for what is lost. When the total capacity of the solar panels is greater than that of the inverter the panels are usually said to be "oversized" or the inverter "overclocked".

Can solar inverters function like a regular inverter?

Yes, solar inverters can function like standard inverters, as they both have the same function: convert DC power to AC. However, solar inverters have additional features, such as battery management, and are integrated with solar panels and charge controllers.

Should a solar inverter be sized below the theoretical peak?

Wrong. It is quite normal and good practice to size an inverter at or below the theoretical peak of the solar array. There are sound reasons for this: The rating of a solar panel as quoted on its manufacturer's data sheet is determined using Standard Test Conditions (STC).

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