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Disadvantages of over-capacity configuration of solar inverters





Overview

What happens if inverter capacity exceeds rated capacity?

If the power demand exceeds the inverter's rated capacity, the system may experience issues such as overheating, shutdowns, or even permanent damage to the inverter. Inverter capacity overload happens when the electrical load (the total amount of power drawn by connected appliances) exceeds the power rating of the inverter.

What is inverter capacity overload?

Inverter capacity overload is one of the most common issues in solar energy systems. It occurs when the power demand from connected appliances exceeds the inverter's maximum rated capacity. This can lead to inefficiencies, inverter failures, and potential damage to the inverter or other components.

What is the efficiency of a solar inverter?

The efficiency of the solar inverter is not constant, there are power switching device losses and magnetic losses. The efficiency is relatively low at low power. When the power is 40% to 60%, the efficiency is the highest, and when the efficiency is more than 60%, the efficiency decreases gradually.

What is the maximum output capacity of a solar inverter?

That is to say, under the condition that the module capacity is equal to the solar inverter capacity, due to the objective existence of various losses, the actual maximum output capacity of the inverter is only about 90% of the rated capacity of the inverter, even when the light is the best, the inverter does not work at full load.



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