

Battery volume for 100 degrees of energy storage





Overview

What is battery energy storage capacity?

Battery energy storage capacity is the total amount of energy the battery can store, measured in kilowatt-hours (kWh) or megawatt-hours (MWh). Think of this as like the size of a water tank where you measure the water capacity in litres.

How do you calculate battery storage capacity?

Battery storage capacity is measured in kilowatt-hours (kWh) and can be calculated using the following formula: $\text{Battery Capacity (kWh)} = \text{Battery Voltage (V)} \times \text{Battery Capacity (Ah)} \div 1000$ For example, a Blue Carbon 48V 200Ah LiFePO4 battery has a total capacity of 9.6kWh, which can support a household's nighttime and backup power needs. 2.

What is battery storage duration?

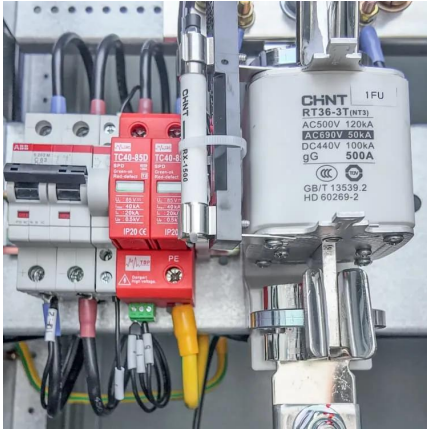
Battery storage duration describes how long the battery can discharge at its rated power. It's calculated: $\text{Energy Capacity (MWh)} \div \text{Power Rating (MW)}$. A 4 MWh battery with a 1 MW power rating has a 4-hour duration. A 1 MWh battery with a 2 MW power rating has a 0.5-hour duration. We've written about storage duration in more detail [here](#).

What is a battery size?

Battery "size" also needs to be understood over time—how much energy the battery can deliver across its usable life. This is often described as lifetime energy throughput, measured in total MWh, or in terms of some number of full charge and discharge cycles.



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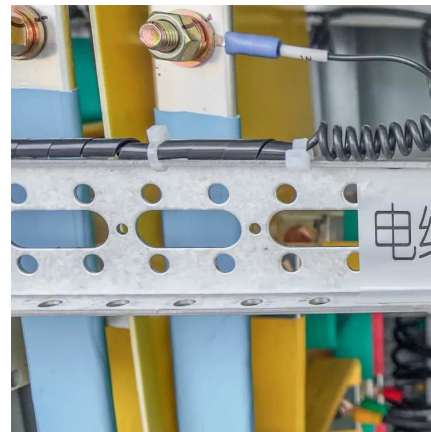


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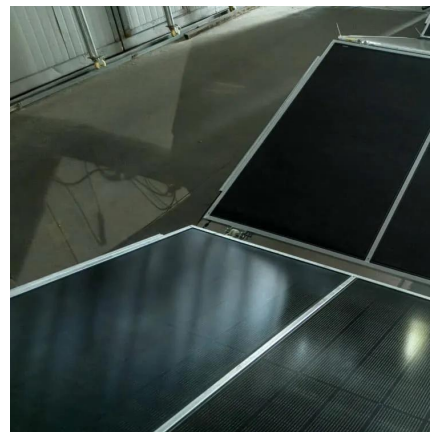


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