



MODERNIZATION SOLAR

# How big is the future of energy storage batteries





## Overview

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What is the future of battery storage?

Batteries account for 90% of the increase in storage in the Net Zero Emissions by 2050 (NZE) Scenario, rising 14-fold to 1 200 GW by 2030. This includes both utility-scale and behind-the-meter battery storage. Other storage technologies include pumped hydro, compressed air, flywheels and thermal storage.

What is the future of energy storage?

Global installed energy storage is on a steep upward trajectory. From just under 0.5 terawatts (TW) in 2024, total capacity is expected to rise ninefold to over 4 TW by 2040, driven by battery energy storage systems (BESS). Last year saw a record-breaking 200 gigawatt-hours (GWh) of new BESS projects coming online, a growth rate of 80%.

What is the future of lithium-ion battery storage?

Key Point No. 4: Recycling batteries and mining for their raw materials present interrelated challenges — and opportunities. Meng projects that a future version of the world that relies on clean energy will require between 200 TWh and 300 TWh of lithium-ion battery storage.

How much battery storage do we need to meet climate targets?

According to the International Energy Agency, we need to increase global battery storage capacity six-fold by 2030 to meet our climate targets. That's approximately 1,500 GW of energy storage, with batteries expected to provide about 1,200 GW of that total. Looking further into the future, the picture gets even more ambitious.



## How big is the future of energy storage batteries

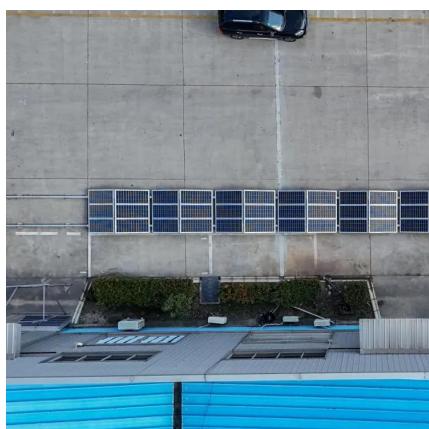


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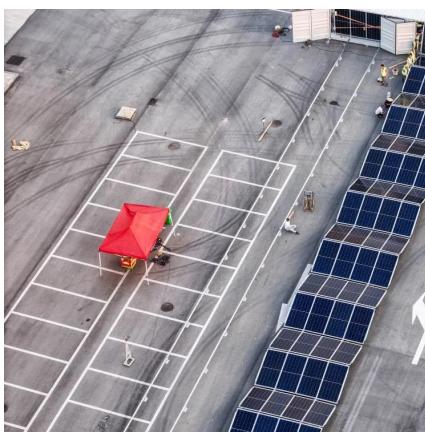
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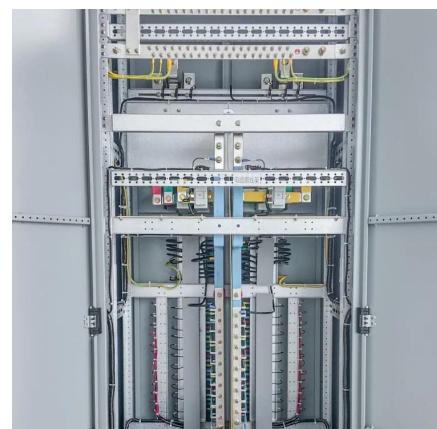
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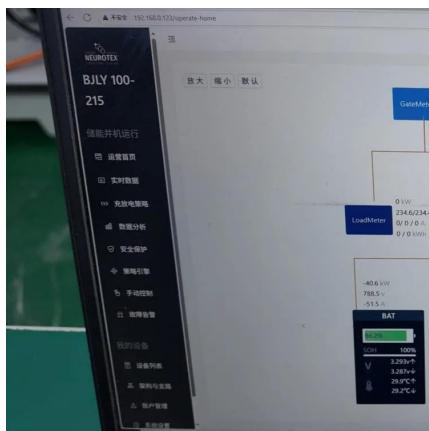
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