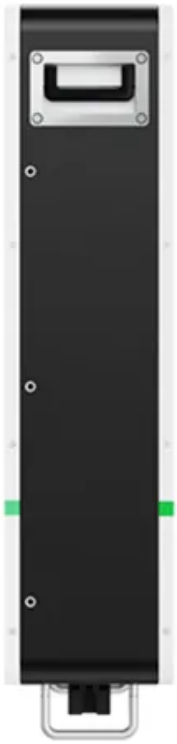
Sodium battery energy storage time



Overview

Battery energy storage is now a major market. In the first ten months of 2025, China battery exports were valued at $65 billion. Up until recently, EVs almost entirely used NMC batteries, while the energy storage market moved to lithium-iron-phosphate (LFP) batteries. CATL introduced its Naxtra line of batteries earlier in 2025 and has now announced plans for volume production of sodium-ion batteries this year, with integration into production electric vehicles by July. Technology. Recent announcements indicate rapid progress: in April 2025, CATL unveiled its production-ready Naxtra range of low- and high-voltage SIBs for EVs with an energy density of 175 Wh/kg and enabling up to 500 km range per charge. If innovation continues to drive the rapid development of this. In a study recently published in ECS Advances, Lin Ma, senior author and assistant professor in the Department of Applied Physical Sciences, with Ph. students Michael Chak and Vadim Shipitsyn, investigated why sodium-ion batteries lose capacity and efficiency over time, especially when operated. Sodium-ion batteries are emerging as low-cost, sustainable alternatives to lithium-ion systems, particularly for applications where energy density can be traded for safety, raw material abundance, and manufacturing simplicity. The new Naxtra battery will be installed in Changan EVs this week for winter testing in northern China's Inner Mongolia region. CATL Chinese battery giant CATL and automaker.

Sodium battery energy storage time

Sodium-ion batteries: Should we believe the hype?

Here, sodium ion's emergence is timely. The consulting firm BloombergNEF says the need for stationary energy storage around the world will grow 20-fold in the decade through 2030 and be worth more ...

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Why Sodium-Ion Batteries Are Happening Now

While some applications like energy storage have switched to LFP, until now sodium-ion batteries have not been produced at the same volume levels. The question is, why?

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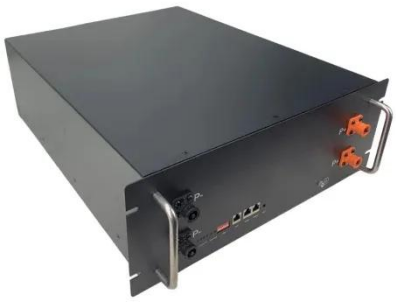

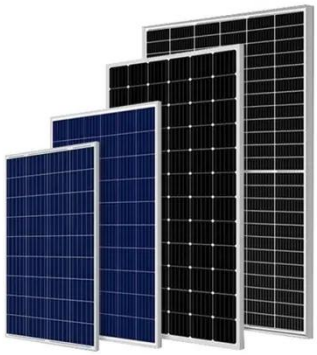

Sodium-ion battery

Unlike lithium, sodium is abundant, [2] particularly in saltwater. Further, cobalt, copper, and nickel are not required for many types of sodium-ion batteries, and abundant iron -based materials (such as ...

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Next-generation anodes for high-

energy and low-cost sodium-ion

Sodium-ion batteries are promising low-cost alternatives to lithium-ion systems yet limited by underperforming anodes. This Review highlights advances and challenges in hard carbon and ...

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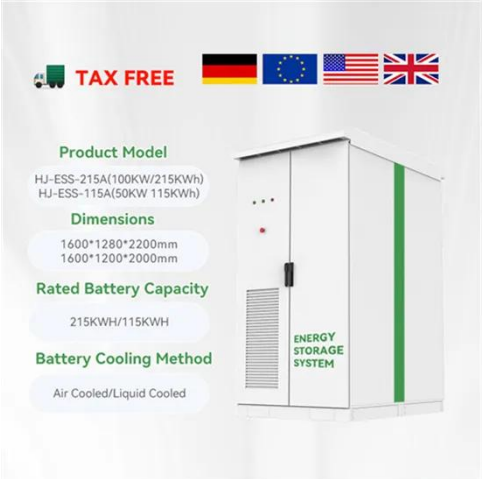

APS Researchers Probe Why High-Energy Sodium Batteries Lose ...

Traditional sodium-ion batteries use a "hard carbon" anode. While reliable, it doesn't store much energy. The UNC team replaced it with a tin alloy anode, which can hold much more sodium, ...

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Sodium-ion battery development since 2020 with future perspectives

1. Introduction Within the world's current energy storage landscape, sodium-ion batteries (SIBs) stand out as a promising candidate for next-generation energy storage. Natural abundance of ...

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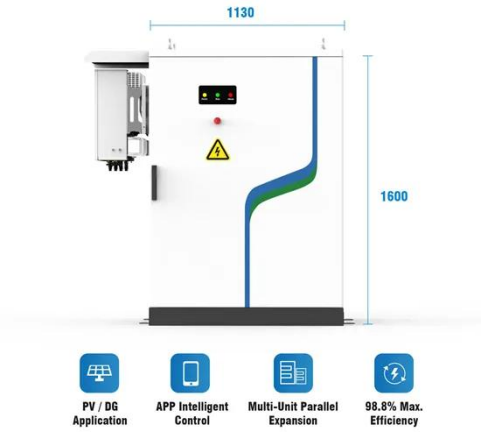
CATL unveil world's first sodium-ion EV with about 248-mile range

China unveils world's first sodium-ion battery-powered EV with 248-mile range CATL says the battery delivers triple LFP power at -30°C, keeps over 90% range



at -40°C, and stays ...

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Sodium-Ion Batteries Will Gain Ground This 2026 , IMI

Sodium-Ion batteries: Powering the next energy shift Sodium-ion batteries offer clear advantages over lithium-ion technology, making them a strong contender in the future of energy ...

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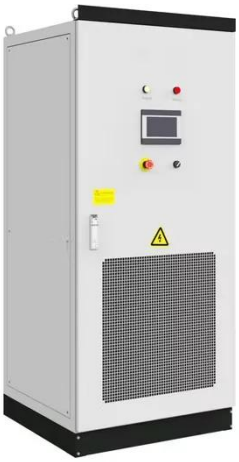

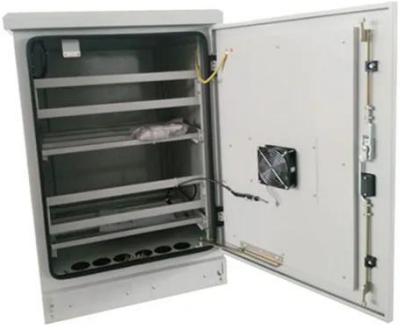

Comprehensive review of Sodium-Ion Batteries: Principles, Materials

The widespread availability of sodium resources can potentially lead to more stable and lower-cost battery production, making SIBs an attractive option for large-scale energy storage ...

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Sodium-ion batteries: A technology brief

Energy storage technologies, including batteries, are crucial for improving the flexibility of power systems while maintaining grid stability. Their

importance will continue to grow as the share of renewables in ...

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