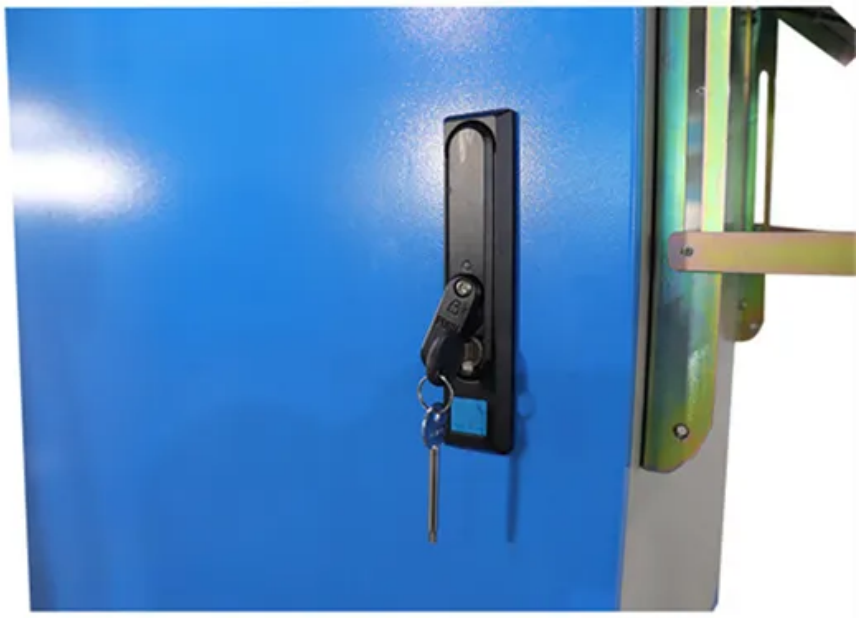
Expected ROI of sodium ion battery storage project in China 2025



Overview

Sodium-ion batteries, developed with China’s proprietary technology, offer higher thermal adaptability and greater raw material security. Their maximum output and response speed are reportedly three and six times greater, respectively, than traditional sodium-ion batteries.

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China Southern Power Grid (CSG) announced on May 26 the commissioning of the Baochi Energy Storage Station in Wenshan, Yunnan province — a national pilot project and the first large-scale hybrid lithium-sodium battery energy storage facility in China. The plant is also the world’s first to deploy a.

China has officially launched the world’s first grid-forming Sodium-ion Battery energy storage facility. The Baochi Energy Storage Station, located in Yunnan province, comes as a national pilot project and serves as a milestone in the global energy storage industry. Announced by China Southern.

In a groundbreaking shift, SNE Research forecasts China's sodium-ion batteries to enter mass production by 2025, targeting two-wheelers, small EVs, and energy storage. By 2035, their cost is expected to undercut lithium iron phosphate batteries by 11% to 24%, creating a colossal $14 billion annual.

The first phase of the world’s largest sodium-ion battery energy storage system (BESS), in China, has come online. The first 50MW/100MWh portion of the project in Qianjiang, Hubei province has been completed and put into operation, state-owned media outlet Yicai Global and technology provider HiNa.

The energy storage sodium ion battery market is projected to grow from USD 307.4 million in 2025 to USD 2,932.0 million by 2035, at a CAGR of 25.3%. Sodium sulfur battery will dominate with a 48.0% market share, while aqueous

will lead the technology segment with a 65.0% share. The energy storage.

The innovative project located in a suburban district in the south of Shanghai will integrate five different energy storage technologies, including sodium-ion batteries. Its first phase will have a cumulative capacity of 40 MW/160 MWh. From ESS News An energy storage project integrating five. What is the cost of sodium ion batteries in China?

According to Chinese media reports, the cost of sodium-ion cells starts at 500 CNY ($77) per kWh at a small scale, and can be halved to 200-300 CNY ($31-$47) per kWh at a volume scale, making them potentially very competitive.

Why is China investing so much on sodium ion technology?

Energy-Storage.news has been told anecdotally that one reason China is investing so heavily on sodium-ion technology is because of fears that, long-term, it could start to be cut out of the lithium supply chain.

Are sodium ion batteries better than traditional batteries?

Sodium-ion batteries, developed with China’s proprietary technology, offer higher thermal adaptability and greater raw material security. Their maximum output and response speed are reportedly three and six times greater, respectively, than traditional sodium-ion batteries.

Where will lithium-sodium hybrid systems be deployed in China?

As standardization frameworks develop, lithium-sodium hybrid systems could see broader deployment across China’s renewable-rich regions such as Tibet, Xinjiang, and Gansu. Grid-forming storage is projected to account for up to 40% of China’s new energy storage market by 2030.

What is the difference between lithium and sodium ion batteries?

Lithium batteries, known for their maturity and fast response, handle high-frequency grid regulations. Sodium-ion batteries, developed with China’s proprietary technology, offer higher thermal adaptability and greater raw material security.

Is sodium ion cheaper than lithium?

Sodium-ion has a lower energy density and, because of lower scale, generally

a higher cost than lithium-ion, although by 2025 it could already be 15-30% cheaper than lithium-ion according to BYD. However, commercialisation and cost reductions have come slower than expected, Yicai Global said.

Expected ROI of sodium ion battery storage project in China 2025

New sodium-ion developments from CATL, BYD, Huawei

A company source told ESS News that this product will be available for delivery in China in Q3 2025 and will have a price per kWh similar to that of lithium iron phosphate batteries - which aligns with BYD's earlier ...

2.1GWh! Two Companies Sign Major Energy Storage Deals, ...

The collaborations span commercial and industrial (C& I) energy storage sectors. China's First Hybrid Grid-Forming Energy Storage Project Goes Live On March 6, the ...

European Market Outlook for Battery Storage 2025-2029

The European Market Outlook for Battery Storage 2025-2029 analyses the state of battery energy storage systems (BESS) across Europe, based on data up to 2024 and ...

Sodium-ion battery fleet to grow to 10 GWh by 2025

Global demand for sodium-ion batteries is

expected to grow to just under 70 GWh in 2033, from 10 GWh in 2025, at a compound annual growth rate (CAGR) of 27%, according to UK-based market research

These new batteries are finding a niche

The Baochi Energy Storage Station that just opened in Yunnan province, China, is a hybrid system that uses both lithium-ion and sodium-ion batteries and has a capacity of 400 megawatt-hours.

Key trends in battery energy storage in China

China has been an undisputed leader in the battery energy storage system deployment by a far margin. The nation more than quadrupled its battery fleet last year, which helped it surpass its 2025 target of 30 GW of ...

These new batteries are finding a niche

The Baochi Energy Storage Station that just opened in Yunnan province, China, is a hybrid system that uses both lithium-ion and sodium-ion batteries and has a capacity of ...

China's sodium battery revolution sparks global EV ...

Sodium-ion technology could democratize EV access, diversify supply chains and accelerate the energy transition -- though scalability hurdles remain. CATL's move signals a strategic shift, challenging lithium's dominance ...

Sodium-ion batteries need breakthroughs to compete

A thorough analysis of market and supply chain outcomes for sodium-ion batteries and their lithium-ion competitors is the first by STEER, a new Stanford and SLAC energy technology analysis program.

Exclusive: sodium batteries to disrupt energy storage ...

With costs fast declining, sodium-ion batteries look set to dominate the future of long duration energy storage, finds an AI-based analysis that predicts technological breakthroughs based on global patent data.

China's first large-scale sodium-ion battery charges to ...

China's first major sodium-ion battery energy storage station is now online, according to China Southern Power Grid Energy Storage.

Sodium-Ion Batteries Programme and Their

Sodium-ion battery (SIB) technology can potentially address the concerns surrounding LIBs and emerge as an alternative BESS technology. SIBs benefit from limited reliance on critical ...

Sodium Batteries Reach Industrial Explosion Point in ...

Sodium batteries are hitting their industrial explosion point in 2025! Discover the breakthroughs driving mass adoption in EVs, energy storage & beyond.

Sodium Ion Battery Companies: Top 8 to Watch in 2025

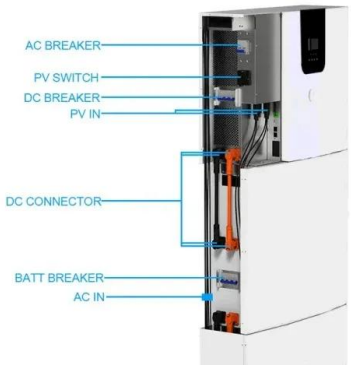
Explore the top 8 sodium battery manufacturers and sodium-ion battery companies to find advanced sodium-ion battery technology in the market.

SMM Insights: H1 2025 Sodium Battery Industry Recap: Material ...

In the first half of 2025, all segments of the sodium-ion battery industry chain demonstrated significant growth. However, the industry also faced concurrent challenges of ...

Sodium-ion Batteries 2025-2035: Technology, ...

Sodium-ion Batteries 2025-2035 provides a comprehensive overview of the sodium-ion battery market, players, and technology trends. Battery benchmarking, material and cost analysis, key player patents, and 10 year ...



China launches world's first grid-forming sodium-ion ...

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[SMM Sodium-Ion Battery Analysis] 2024 Sodium-Ion ...

[Review and Outlook of Sodium-Ion Batteries in 2024: Overseas Progress of Sodium-Ion Batteries - Stepping Onto the Starting Line] Sodium-ion batteries, as an emerging energy storage technology, have rapidly ...

China's battery storage capacity doubles in 2024

New battery types and long-duration storage - more than four hours - remain rare, with less than 1% market share. In the future, policy support is expected to drive further growth. The CEC forecasts total capacity will ...

Sodium-ion battery

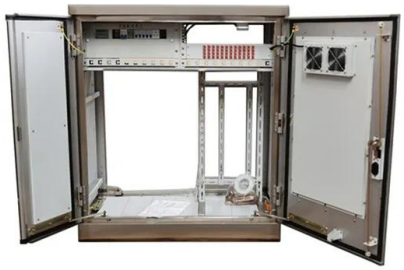
A Sodium-ion battery (NIB, SIB, or Na-ion battery) is a rechargeable battery that uses sodium ions (Na +) as charge carriers. In some cases, its working principle and cell construction are similar ...

CATL unveils new sodium battery - Batteries ...

Sodium batteries have a lower incidence of battery fires than conventional lithium batteries. The official energy density of the new sodium-ion battery has not been reported -- however, CATL said it aims to exceed ...

Energy Storage Sodium Ion Battery Market

1 ??· The energy storage sodium ion battery market is projected to expand globally at a CAGR of 25.3% from 2025 to 2035, supported by its affordability, raw material abundance, and suitability for large-scale storage applications. China ...



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U.S. Solar and Battery Storage Boom in 2025 , Shale ...

While the U.S. battery storage capacity is expected to increase this year, the industry could suffer from the imposition of tariffs on imports by the Trump administration, as the U.S. is still heavily reliant on China for its lithium ...

Energy Storage Rides a Wave of Growth but Uncertainty Looms: ...

This report comes to you at the turning of the tide for energy storage: after two years of rising prices and supply chain disruptions, the energy storage industry is starting to see price ...

Future of EV Batteries: China's Dominance and ...

EV Battery Technology and Supply Chain Management Industry Research 2025-2035: China Leads with Over 70% of Global Production, Europe and North America Play Catch-up Electric vehicles (EVs) are rapidly advancing ...

Comprehensive review of Sodium-Ion Batteries: Principles, ...

Sodium-ion batteries (SIBs) are emerging as a potential alternative to lithium-ion batteries (LIBs) in the quest for sustainable and low-cost energy storage solutions [1], [2]. The ...

Top 10 sodium battery manufacturers in China

This article will introduce the top 10 sodium battery manufacturers in China in detail, and present a panoramic view of China's sodium battery industry to readers by showing their achievements in ...

China Launches Grid-Forming Sodium-Ion Battery Storage Plant

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