

SolarInvert Energy Solutions

Sodium battery energy storage unit price



Overview

How much would a sodium ion battery cost in the future?

Based on material costs of \$4 per kWh there could be \$8 to \$10 per kWh sodium ion batteries in the future. This would be ten times cheaper than energy storage batteries today. Soda Ash Mine in Wyoming.

Can sodium-ion batteries help power a sustainable future?

After all, the race to power a sustainable future is as much about bold ideas as it is about overcoming the obstacles in their path. CATL has introduced sodium-ion batteries with a potential cost reduction to \$10/kWh, using sodium's abundance and safety to address energy storage challenges.

Will CATL's sodium-ion batteries reshape the energy storage landscape?

In this breakdown, Matt Ferrell explains how CATL's sodium-ion batteries are poised to reshape the energy storage landscape.

What are sodium ion batteries?

Sodium-ion batteries represent a notable shift from traditional lithium-ion technology. Unlike lithium, which is relatively scarce and expensive, sodium is derived from common salt, making it both widely available and cost-effective. This abundance positions sodium-ion batteries as a more sustainable alternative to lithium-based counterparts.

Are sodium ion batteries a viable alternative to lithium-ion?

CATL has introduced sodium-ion batteries with a potential cost reduction to \$10/kWh, using sodium's abundance and safety to address energy storage challenges. Sodium-ion batteries are a sustainable alternative to lithium-ion technology, offering lower costs, inherent safety, and suitability for EVs and renewable energy systems.

How much power does a sodium battery produce?

The first factory has about a 40 GWH per year capacity. China has 16 out of 20 globally planned or built sodium battery factories according to Benchmark Minerals. CATL's first-generation sodium battery generates 160-watt-hours per kilogram. This is 10% less energy than iron LFP batteries and 40% less than mass produced nickel batteries.

Sodium battery energy storage unit price



New sodium-ion developments from CATL, BYD, ...

Nov 28, 2024 · Sodium-ion batteries are undergoing a critical period of commercialization with Chinese cleantech juggernauts actively working on ...

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CATL Introduces First Mass-Produced Sodium-Ion Battery

Apr 25, 2025 · The passenger EV unit boasts an energy density of 175 Wh/kg, putting it on par with lithium iron phosphate (LFP) batteries and making it the highest energy density among ...

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How does the cost of sodium-ion batteries compare to ...

Nov 7, 2024 · Grid-Scale Energy Storage:
The ability of sodium-ion batteries to provide longer storage durations at a lower cost makes them attractive for grid-scale energy storage.

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

May 18, 2024 · China's first major sodium-ion battery energy storage station is now online, according to China Southern Power Grid Energy Storage.

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Critically assessing sodium-ion technology ...

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Sodium Ion Energy Storage Price: The \$100 Billion Game ...

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China's latest mega-project bids [1], making industry veterans do double-takes. But is this rock-bottom ...

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Sodium-Ion Batteries Enter Mass Production, Could Help ...

Apr 2, 2025 · Sodium carbonate, a key raw material, costs just ¥3,000 per ton, making it significantly more stable in price. According to Hu Yongsheng, director of the Clean Energy ...

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Hithium unveils 6.25 MWh BESS, sodium-ion ...

Dec 13, 2024 · Chinese energy storage specialist Hithium has used its annual Eco Day event to unveil a trio of innovative products: a 6.25MWh lithium-ion ...

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Future Sodium Ion Batteries Could Be Ten Times ...

Sep 1, 2023 · The first generation sodium ion are a bit cheaper than LFP

but the volumes will not be worldchanging. However, the second generation sodium ...

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Technology Strategy Assessment

Jul 19, 2023 · About Storage Innovations 2030 This technology strategy assessment on sodium batteries, released as part of the Long-Duration Storage Shot, contains the findings from the ...

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Energy storage costs

Wider deployment and the commercialisation of new battery storage technologies has led to rapid cost reductions, notably for lithium-ion batteries, but also for high-temperature sodium-sulphur ...

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China announces procurement of sodium-ion ...

Mar 24, 2025 · On March 17, it issued a



tender notice for the procurement of 5 MW/20 MWh of sodium-ion batteries, setting the price limit at CNY 1.1/Wh ...

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Can sodium electric commercial energy storage solve the ...

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Sodium-Ion Batteries: Affordable Energy Storage ...

Apr 18, 2025 · Discover how sodium-ion batteries offer a low-cost, eco-friendly alternative to lithium-ion, paving the way for efficient renewable energy storage.

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Sodium-ion batteries face uphill struggle to beat lithium-ion ...

Jan 14, 2025 · A new Stanford University study finds that there are several several key routes that sodium-ion battery developers can take to compete on price, specifically against a low-cost ...

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Estonia's Freen launches 10 kWh residential ...

Mar 18, 2025 · The new home energy storage solution from Estonia's Freen is based on sodium-ion battery chemistry and can be coupled with both rooftop ...

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China's first large-scale lithium-sodium hybrid ...

May 25, 2025 · China's first large-scale lithium-sodium hybrid energy storage station began operations on Sunday in Southwest China's Yunnan Province. ...

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Sodium-ion batteries need breakthroughs to ...

Jan 13, 2025 · A thorough analysis of market and supply chain outcomes for



sodium-ion batteries and their lithium-ion competitors is the first by STEER, a ...

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Exclusive: sodium batteries to disrupt energy ...

Jul 1, 2024 · With costs fast declining, sodium-ion batteries look set to dominate the future of long duration energy storage, finds an AI-based analysis that ...

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Energy Storage Cost and Performance Database

The U.S. Department of Energy's (DOE) Energy Storage Grand Challenge is a comprehensive program that seeks to accelerate the development, ...

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Sodium-Ion Battery Price Trends: A Comprehensive Guide ...

May 23, 2025 · The Ultimate Guide to Sodium-Ion Battery Pricing and Technology As the demand for sustainable energy solutions grows, sodium-ion batteries are emerging as a viable ...

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China Announces Sodium-Ion Battery Procurement at ...

Apr 1, 2025 · China has officially announced the procurement of sodium-ion batteries, setting a price ceiling at \$150/kWh. This exciting development comes alongside the construction of a ...

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BESS costs could fall 47% by 2030, says NREL

Jun 20, 2023 · The US National Renewable Energy Laboratory (NREL) has updated its long-term battery energy storage system (BESS) costs through to ...

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Sodium and sodium-ion energy storage batteries

Aug 1, 2012 · These range from high-temperature air electrodes to new



layered oxides, polyanion-based materials, carbons and other insertion materials for sodium-ion batteries, many of which ...

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The Ultimate Guide to Battery Energy Storage ...

Apr 6, 2024 · Maximize your energy potential with advanced battery energy storage systems. Elevate operational efficiency, reduce expenses, and amplify ...

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Enabling renewable energy with battery energy ...

Aug 2, 2023 · The market for battery energy storage systems is growing rapidly. Here are the key questions for those who want to lead the way.

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NAS batteries: long-duration energy storage ...

Jun 8, 2023 · NAS batteries are among the most mature long-duration

technologies today, proven by more than 20 years of deployment in the field.

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BYD launches sodium-ion grid-scale BESS ...

Nov 27, 2024 · BYD has launched what it claimed is the 'world's first high-performance' sodium-ion BESS product, using its Long Blade Battery cell.

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CATL Sodium-Ion Batteries Cuts Costs By 90% : \$10/kWh Energy ...

Aug 15, 2025 · CATL's sodium-ion batteries promise \$10/kWh storage and 90% lower costs. See how they could transform EVs and grid energy worldwide fast.

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The Race To Replace Lithium: Is Sodium the ...

Jan 18, 2025 · So, possible lower



materials prices aside, the cost per unit of energy stored remains higher for sodium-ion batteries. This likely would limit ...

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World's largest sodium-ion project comes online ...

Jul 4, 2024 · The first phase of the world's largest sodium-ion battery energy storage system (BESS), in China, has come online.

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