Global Sodium-Ion Battery Industry Set for Strong Growth | USD 4,005.2M Market Size by 2031

The Global Sodium-ion Battery Market is projected to grow from USD 860.2M in 2023 to USD 4,005.2M by 2031, driven by cost-effective energy storage solutions.

Sodium-Ion Battery Market

AUSTIN, TX, UNITED STATES, July 4, 2025 /EINPresswire.com/ -- Sodium-Ion Battery Market Overview

The Global Sodium-ion Battery Market Size was valued at approximately USD 860.2 Million in 2023 and is anticipated to grow to nearly USD 4,005.2 Million by 2031, expanding at a CAGR of 21.2% between 2024 and 2031.

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> The Global Sodium-ion Battery Market is set to surpass $4,005.2 Million by 2031, fueled by rising demand for affordable, sustainable energy storage, especially across the U.S. grid sector.
>
> *DataM Intelligence*

Market Drivers and Growth Factors

The sodium-ion battery's appeal lies in its ability to provide safe, efficient energy storage without the high costs and ethical concerns associated with lithium mining. Sodium, being abundantly available and geographically diversified, presents a more accessible resource base, especially for countries lacking lithium reserves.

Key advantages include excellent thermal stability, longer cycle life, and the ability to function effectively in extreme temperatures making sodium-ion batteries suitable for

grid-scale energy storage and large-scale renewable energy integration. As nations commit to net-zero targets, the demand for stationary storage is growing, and sodium-ion technology is well positioned to meet that demand.

Regional Outlook

Asia-Pacific dominates the market with strong research and manufacturing infrastructure in countries like China, Japan, and South Korea. China, in particular, has made rapid advancements in developing commercial-grade sodium-ion batteries for both grid and mobility applications.

Europe follows closely, driven by aggressive clean energy policies, investments in battery gigafactories, and a growing interest in diversifying beyond lithium. Countries such as Germany and the UK are integrating sodium-ion batteries into renewable energy storage projects.

Meanwhile, North America, especially the United States, is stepping up R&D efforts with support from both public and private sectors. The U.S. sees sodium-ion as a potential hedge against lithium price volatility and a solution for domestic battery production.

Key Companies and Competitive Landscape

The sodium-ion battery market is attracting a mix of established energy giants, tech startups, and academic institutions. Some companies are scaling up pilot plants and demonstrating early-stage commercial applications.

Firms working on next-generation cathode and anode materials are entering licensing partnerships, while several players have announced expansion plans into sodium-based EV packs and home energy storage systems.

The competitive landscape is dynamic, with a sharp focus on increasing energy density, improving charge/discharge cycles, and reducing production costs.

Market Segmentation

By Battery: Sodium-Sulfur Batteries, Sodium-Salt Batteries, Sodium-Air Batteries, Others

By Technology: Aqueous, Non-Aqueous, Others

By End-User: Automotive, Industrial, Energy Storage, Others

By Region: North America, Europe, South America, Asia Pacific, Middle East, and Africa

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Latest Developments

In January 2024, Chinese automaker JAC Group introduced the nation’s first electric vehicle powered entirely by sodium-ion batteries, developed by HiNa Battery Technology Co. Ltd.

In February 2024, Sodion Energy, a multinational startup founded in India, rolled out the country’s first commercial sodium-ion batteries, primarily targeting electric two-wheelers and household appliances.

In March 2024, Contemporary Amperex Technology Co. Ltd (CATL) announced the launch of a new R&D center in Hong Kong to advance innovation in battery technology..

Latest News of USA

In the United States, several energy startups and research labs are actively pushing sodium-ion technology toward commercialization. A leading battery firm recently unveiled its first prototype of a sodium-ion battery designed for residential solar energy storage. This move is significant for American homeowners looking for alternatives to lithium-based storage systems amid fluctuating material costs.

The U.S. Department of Energy has also allocated new funding under its advanced energy initiative to accelerate sodium-ion R&D. These funds aim to boost domestic supply chains, reduce reliance on overseas battery components, and bring sodium-ion batteries to market at scale.

Additionally, American automakers are exploring sodium-ion battery packs for small urban electric vehicles (EVs) and hybrids. While not yet mass-adopted, sodium-ion’s safer chemistry and lower cost make it attractive for low-range city vehicles and two-wheelers.

Latest News of Japan

In Japan, innovation around sodium-ion technology is gathering pace as companies align with the government’s broader carbon neutrality strategy. A major Japanese electronics manufacturer announced the development of a compact sodium-ion battery tailored for consumer devices and wearable tech, with pilot production slated for late 2025.

At the same time, a leading university in Japan has partnered with a battery startup to create high-energy-density sodium-ion cells, intended for use in electric buses and commercial transport vehicles. The focus is on achieving high performance under varying climatic conditions, particularly useful for rural and urban transit systems.

Japan's government is also encouraging private sector participation by offering grants and tax

incentives for clean battery development. These policies are not only fostering domestic innovation but also positioning Japan as a leader in sustainable energy technologies for export.

Experts Outlook

The sodium-ion battery market is poised for a major leap in the coming years. With its lower environmental footprint, cost-effective materials, and reliable performance, sodium-ion technology is no longer seen as a distant alternative but as a practical solution for the world's evolving energy needs.

As governments look to decarbonize their economies and reduce strategic reliance on imported lithium and cobalt, sodium-ion batteries will continue to gain ground particularly in stationary storage, e-mobility, and emerging energy applications.

The next decade will be defined by how fast and effectively the industry can scale up production, improve efficiency, and build robust supply chains for this game-changing technology.

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