

Comprehensive Report on the Grid-scale Battery Storage Market: Opportunities and Challenges

The Business Research Company's Grid-scale Battery Storage Global Market Report 2025 – Market Size, Trends, And Global Forecast 2025-2034

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[/EINPresswire.com/](#) -- What Is The Expected Cagr For The Grid-scale Battery Storage Market Through 2025?

There has been an impressive surge in the size of the grid-scale battery storage market in the last few years. The market is projected to expand from a value of \$7.51 billion in 2024 to an astonishing \$9.8 billion in 2025 with a compound annual growth rate (CAGR) of 30.5%. This



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remarkable growth during the historical period is largely driven by factors such as rising energy needs, the phasing out of fossil fuel plants, a heightened emphasis on energy autonomy and resilience, the pursuit of corporate sustainability goals, and regulatory backing for ancillary services.

The market size of grid-scale battery storage is anticipated to experience significant expansion in the coming years. It is estimated to reach \$28.73 billion by 2029, demonstrating a compound annual growth rate (CAGR) of 30.9%. This

growth during the projected period can be linked to the advancement of hydrogen energy storage, the progression of alternative battery technologies, the integration of electric vehicles, decarbonization policies, and an increase in renewable energy penetration. Prime trends for the forecast period encompass a concentration on sustainability and recycling, a growing interest in virtual power plants, enhanced usage of artificial intelligence, hybrid renewable energy systems, and development in long-duration energy storage.

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What Are The Driving Factors Impacting The Grid-scale Battery Storage Market?

The escalating demand for renewable energy is projected to fuel the expansion of the grid-scale battery storage market. Renewable energy is energy obtained from perpetually self-replenishing natural resources, like sunlight, wind, and geothermal heat. This surge in demand for renewable energy springs from the urge to address climate change, mitigate environmental harm, and bolster energy security and sustainability. The implementation of grid-scale battery storage in renewable energy entails storing excess energy produced from sources like solar or wind, ensuring a steady flow of power when production dips or demand peaks. For example, per the European Environmental Agency, a Denmark-based government association, in 2022, renewable sources made up 23% of the energy consumption in the EU, marking an increase from 21.9% in 2021. Therefore, the rising demand for renewable energy is steering the expansion of the grid-scale battery storage market.

Which Players Dominate The Grid-scale Battery Storage Industry Landscape?

Major players in the Grid-scale Battery Storage include:

- E.ON SE
- The General Electric Company
- BYD Company Ltd.
- Mitsubishi Electric
- ABB Ltd.
- Johnson Controls International PLC
- Pacific Gas and Electric
- NextEra Energy
- Samsung SDI Co. Ltd.
- Xcel Energy Inc.

What Are The [Future Trends Of The Grid-scale Battery Storage Market](#)?

Significant corporations in the grid-scale battery storage market are prioritizing creating innovative answers like energy storage systems. This is in order to boost energy density, efficiency, as well as accomplish zero degradation for power and capacity. Energy storage systems are technologies that trap and hold energy to be used later, thereby balancing the demand and supply to boost efficiency and reliability. For example, Contemporary Amperex Technology Co. (CATL), a battery production enterprise based in China, introduced their new product, TENER, to the market in April 2024. This product is specifically designed for large-scale applications and features benefits such as high energy density and a prolonged cycle life. Taking advantage of progressive lithium-ion technology, TENER guarantees enhanced safety and efficiency. Its modular design gives it the flexibility to scale to meet diverse grid needs. On top of that, TENER operates efficiently under severe temperatures, guaranteeing trustworthy operation across various environmental conditions.

Global [Grid-scale Battery Storage Market Segmentation](#) By Type, Application, And Region

The grid-scale battery storage market covered in this report is segmented –

- 1) By Type: Lithium-Ion Batteries, Sodium-Based Batteries, Flow Batteries, Advanced Lead Acid Batteries, Solid State Batteries, Nickel-based Batteries, Fuel Cells, Other Types
- 2) By Capacity: Small, Medium, Large
- 3) By Ownership Model: Public, Private
- 4) By Application: Industrial, Residential, Commercial, Utility, Renewable Integration, Microgrids, Electric Vehicles

Subsegments:

- 1) By Lithium-Ion Batteries: Lithium Iron Phosphate (LFP), Nickel Manganese Cobalt (NMC), Lithium Nickel Cobalt Aluminum Oxide (NCA)
- 2) By Sodium-Based Batteries: Sodium-Sulfur, Sodium-Ion Batteries, Sodium-Nickel Chloride Batteries
- 3) By Flow Batteries: Vanadium Redox Flow Batteries, Zinc-Bromine Flow Batteries, All-Vanadium Flow Batteries
- 4) By Advanced Lead Acid Batteries: Absorbent Glass Mat (AGM) Batteries, Gel Lead Acid Batteries
- 5) By Solid State Batteries: Polymer Electrolyte Batteries, Ceramic Electrolyte Batteries
- 6) By Nickel-Based Batteries: Nickel-Cadmium (NiCd) Batteries, Nickel-Metal Hydride (NiMH) Batteries
- 7) By Fuel Cells: Proton Exchange Membrane Fuel Cells (PEMFC), Solid Oxide Fuel Cells (SOFC), Alkaline Fuel Cells (AFC)
- 8) By Other Types: Lithium Titanate Batteries, Supercapacitors, Organic Flow Batteries

View the full grid-scale battery storage market report:

<https://www.thebusinessresearchcompany.com/report/grid-scale-battery-storage-global-market-report>

Which Region Holds The Largest Market [Share In The Grid-scale Battery Storage Market?](#)

In 2024, North America dominated the market for grid-scale battery storage. The market report covers several regions including Asia-Pacific, Western Europe, Eastern Europe, North America, South America, Middle East, and Africa.

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