

# **Current status and forecast of energy storage development**





## Overview

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The global power mix has reached a critical point, and Rystad Energy expects a peak in fossil fuels in the power sector to be imminent, with a structural shift ahead of the industry. While power demand is expected to continue to see strong growth in 2025 and beyond, the growth rate of low-carbon.

HOUSTON/WASHINGTON, D.C. June 25, 2025 — According to the new U.S. Energy Storage Monitor developed by Wood Mackenzie and the American Clean Power Association (ACP), the American energy storage market experienced record growth in Q1 2025—amidst current policy uncertainty. The U.S. energy storage.

Global electricity output is set to grow by 50 percent by mid-century, relative to 2022 levels. With renewable sources expected to account for the largest share of electricity generation worldwide in the coming decades, energy storage will play a significant role in maintaining the balance between.

The global energy storage market is poised to hit new heights yet again in 2025. Despite policy changes and uncertainty in the world's two largest markets, the US and China, the sector continues to grow as developers push forward with larger and larger utility-scale projects. Since 2024.

This paper systematically reviews the basic principles and research progress of current mainstream energy-storage technologies, providing an in-depth analysis of the characteristics and differences of various technologies. Additionally, a comprehensive summary of the economic characteristics of.

The Energy Storage Market size is estimated at USD 295 billion in 2025, and is



expected to reach USD 465 billion by 2030, at a CAGR of 9.53% during the forecast period (2025-2030). This scale-up rests on falling battery pack prices, policy incentives that reward standalone storage, and a rising. Will utility-scale energy storage grow 22% yy in 2025?

The utility-scale segment is expected to grow 22% YoY in 2025. As the market evolves, continued innovation, supportive policies, and strategic planning will be crucial to navigate the changing landscape and capitalize on the immense potential of energy storage in the U.S. energy transformation.

Will energy storage growth continue through 2025?

With developers continuing to add new capacity, including 9.2 GW of new lithium-ion battery storage capacity in 2024 through November 2024 and comparable levels of growth expected through the fourth quarter of 2024, energy storage investments and M&A activity are expected to continue this trajectory through 2025.

What is the future of energy storage?

Global installed energy storage is on a steep upward trajectory. From just under 0.5 terawatts (TW) in 2024, total capacity is expected to rise ninefold to over 4 TW by 2040, driven by battery energy storage systems (BESS). Last year saw a record-breaking 200 gigawatt-hours (GWh) of new BESS projects coming online, a growth rate of 80%.

How much energy storage capacity will be installed in 2025?

In the near term, the report projects that 15 GW/49 GWh of energy storage capacity will be installed across all segments in 2025. The utility-scale segment is expected to grow 22% YoY in 2025.

Is China entering a new era of energy storage demand?

Mainland China accounts for most of the global energy storage demand, driven in the near term by regional requirements for new utility-scale wind and solar projects to include energy storage capacity. However, the Chinese market is entering an era of change.

Will energy storage grow in 2024?

The energy storage sector maintained its upward trajectory in 2024, with estimates indicating that global energy storage installations rose by more



than 75%, measured by megawatt-hours (MWh), year-over-year in 2024 and are expected to go beyond the terawatt-hour mark before 2030.



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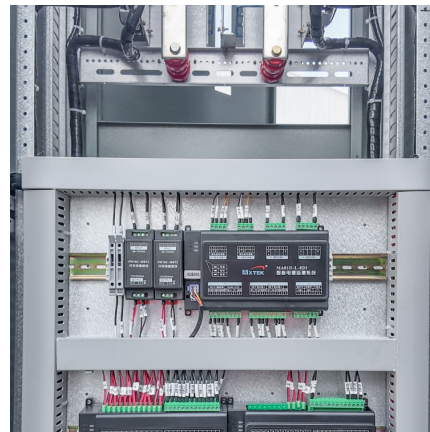


### [Energy storage safety and growth outlook in 2025](#)

The energy storage industry's trajectory in recent years has been nothing short of remarkable, driven by increased customer recognition of ...

### The State of the Solar Industry

State-by-State Electricity from Solar (2023)  
Sources: U.S. Energy Information Administration, "Electric Power Monthly," forms EIA-023, EIA-826, and EIA-861. U.S. Energy Information ...



### Storage across the NEM

To ensure the accuracy of its reliability outlook, AEMO now applies delays to reflect observed development and delivery risks of new projects in the reliability forecast." This ...

### 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 ...



[Energy storage technologies: An integrated survey of ...](#)

The development of energy storage technology has been classified into electromechanical, mechanical, electromagnetic, thermodynamics, chemical, and hybrid ...



**REPORT: Energy Storage Market Continues Strong Growth in Q1 ...**

The utility-scale segment is expected to grow 22% YoY in 2025. As the market evolves, continued innovation, supportive policies, and strategic planning will be crucial to ...



[REPORT: Energy Storage's Meteoric Rise Breaks ...](#)

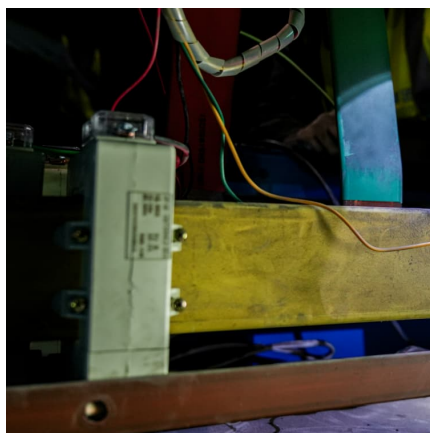
The American Clean Power Association (ACP) is the leading voice of today's multi-tech clean energy industry, representing energy storage, ...





### Comprehensive review of energy storage systems technologies, ...

The applications of energy storage systems have been reviewed in the last section of this paper including general applications, energy utility applications, renewable ...

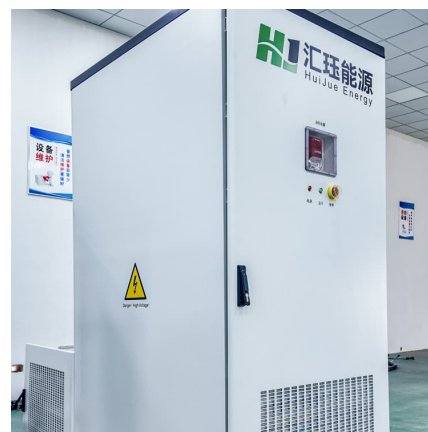


### Energy Storage Systems (ESS) Overview

4 ???· The challenge with Renewable Energy sources arises due to their varying nature with time, climate, season or geographic location. Energy ...

### Battery Energy Storage System (BESS) Market: Current Analysis ...

Battery Energy Storage System (BESS) Market: Current Analysis and Forecast (2024-2032) - The market for battery energy storage systems (BESS) has seen rapid ...



### [The Future of Energy Storage . MIT Energy Initiative](#)

Storage enables electricity systems to remain in balance despite variations in wind and solar availability, allowing for cost-effective deep decarbonization ...



### Global Energy Perspective 2023: Hydrogen outlook , McKinsey

The Global Energy Perspective 2023 models the outlook for demand and supply of energy commodities across a 1.5°C pathway, aligned with the Paris Agreement, and four ...



### Massive growth potential for battery storage in UK and ...

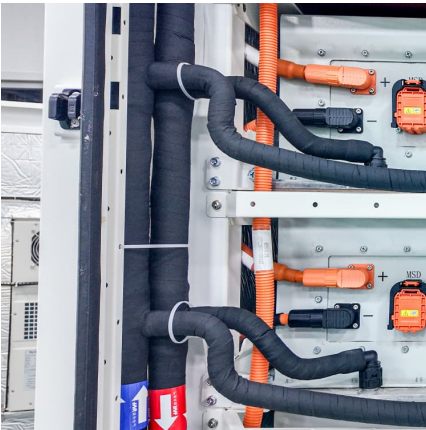
UK and Ireland's energy storage pipeline is growing rapidly, with co-located solar PV and storage comprising around 20% of planned capacity.



### [Future Trends of Home Energy Storage Batteries in ...](#)

In recent years, the home energy storage battery market has grown rapidly, driven by the increasing adoption of renewable energy, advancements in ...





### [Battery Energy Storage Systems Report](#)

This information was prepared as an account of work sponsored by an agency of the U.S. Government. Neither the U.S. Government nor any agency thereof, nor any of their employees, ...

### [U.S. battery capacity increased 66% in 2024](#)

In the United States, cumulative utility-scale battery storage capacity exceeded 26 gigawatts (GW) in 2024, according to our January 2025 Preliminary Monthly Electric ...



### **Australia: The 2025 NEM Battery Energy Storage Pipeline Report**

Australia has a massive pipeline of grid-scale battery energy storage projects. 16.5 GW of new battery projects could arrive in the NEM in the next 3 years.

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

The European Union and United Kingdom in recent years have taken action to develop energy storage, with measures aimed at incentivizing development and fostering more sustainable, ...



### India set for 12-fold increase in energy storage capacity to 60

India's energy storage capacity is set to grow 12-fold to 60 GW by FY32, driven by rising renewable energy integration, addressing grid stability concerns as VRE generation ...



### State by State: An Updated Roadmap Through the Current US Energy

Energy storage resources have become an increasingly important component of the energy mix as traditional fossil fuel baseload energy resources transition to renewable ...



### China Hydrogen Industry Outlook

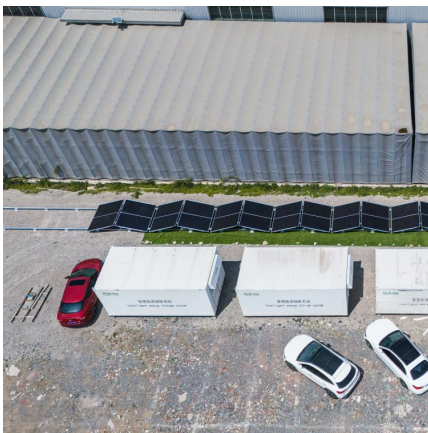
Hydrogen as an energy carrier is the most promising application. When used for long-term energy storage, hydrogen can enable the application of renewable energy, and significantly improve ...





## Solid-state batteries, their future in the energy storage and electric

The factors that affect which energy storage system is suitable among these storage systems include: energy and power density, capacity, scalability, safety, life cycles and ...



### [Batteries for Stationary Energy Storage 2025-2035: ...](#)

Batteries for Stationary Energy Storage 2025-2035: Markets, Forecasts, Players, and Technologies 10-year forecasts on Li-ion BESS. Analyses on players, ...

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