

# Installed capacity of lithium battery energy storage projects





### **Overview**

According to the U.S. Energy Information Administration (EIA), installed utility-scale battery storage capacity surpassed 15 GW in 2024 and is projected to more than double by 2026, with significant contributions from California, Texas, and Arizona. Several macro trends are propelling this growth: How big is lithium ion battery storage in 2024?

Large-scale lithium -ion battery storage installations in the U.S. reached new heights in 2024, surpassing the previous year's record of 8.4 GW, according to S&P Global data. By November 25, developers had added 9.2 GW of new capacity, setting a new benchmark for the industry.

How big is the utility-scale battery storage market?

The utility-scale storage market in the U.S. is experiencing unprecedented momentum. According to the U.S. Energy Information Administration (EIA), installed utility-scale battery storage capacity surpassed 15 GW in 2024 and is projected to more than double by 2026, with significant contributions from California, Texas, and Arizona.

How many GW of battery storage capacity are there in the world?

Strong growth occurred for utility-scale battery projects, behind-the-meter batteries, mini-grids and solar home systems for electricity access, adding a total of 42 GW of battery storage capacity globally.

How many GW of battery storage capacity did developers add?

By November 25, developers had added 9.2 GW of new capacity, setting a new benchmark for the industry. The third quarter alone accounted for 3.6 GW of these additions, representing a 52.5% increase compared to the same period in 2023. This remarkable growth pushed the nation's cumulative battery storage capacity to 26.3 GW.

What percentage of lithium-ion batteries are used in the energy sector?



Despite the continuing use of lithium-ion batteries in billions of personal devices in the world, the energy sector now accounts for over 90% of annual lithium-ion battery demand. This is up from 50% for the energy sector in 2016, when the total lithium-ion battery market was 10-times smaller.

Which solar energy centers use lithium-ion batteries?

The Wilmot Energy Center uses lithium-ion batteries to store energy from the nearby Wilmot Solar Energy Center. The solar array has a capacity of 100 MW and generates enough electricity to power approximately 26,000 homes. The battery storage system can store up to 30 MW. 9. Blythe II Solar Energy Center, California



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# Utility-Scale Battery Storage in the U.S.: Market Outlook, Drivers, ...

According to the U.S. Energy Information Administration (EIA), installed utility-scale battery storage capacity surpassed 15 GW in 2024 and is projected to more than double by ...

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### Biggest projects in the energy storage industry in 2024

Energy-Storage.news has reported on larger projects as part of Premium -access exclusive pieces, based on local permitting and development filings in the US, including 4GWh ...

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# U.S. battery storage capacity expected to nearly double in 2024

Developers expect to bring more than 300 utilityscale battery storage projects on line in the United States by 2025, and around 50% of the planned capacity installations will be ...

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## Top 10: US Battery Energy Storage Facilities , Energy Magazine

Top 10 energy storage facilities in the US. As the demand for renewable energy remains crucial, battery energy storage systems have emerged to stabilise power grids and ...







# Executive summary - Batteries and Secure Energy ...

Strong growth occurred for utility-scale battery projects, behind-the-meter batteries, mini-grids and solar home systems for electricity access, adding a ...

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### U.S. Battery Storage Hits a New Record Growth in 2024

Large-scale lithium -ion battery storage installations in the U.S. reached new heights in 2024, surpassing the previous year's record. By November, developers had added ...

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# **Executive summary - Batteries and Secure Energy Transitions - ...**

Strong growth occurred for utility-scale battery projects, behind-the-meter batteries, mini-grids and solar home systems for electricity access, adding a total of 42 GW of battery storage capacity ...

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### Lithium-Ion Energy Storage Installed Capacity: Trends, Data, and ...

By 2025, lithium-ion is projected to power over 300 GW of cumulative installed capacity worldwide, with China leading the charge at 65-70 GW [2]. But why this dominance, ...

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# Tables 1

### New York's first state-owned energy storage project now operational

The 20 MW Northern New York Energy Storage project installed and operated by the New York Power Authority connects into the state's electric grid in Chateaugay, NY. It is ...

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### Battery Energy Storage Growing on U.S. Grid, But Facing Some ...

Historic amounts of energy storage, primarily lithium-ion battery systems, are being added to the U.S. grid, driven by a need to balance renewable generation and to meet load ...

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# **Top 10: US Battery Energy Storage Facilities , Energy Magazine**

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### Utility-Scale Battery Storage, Electricity, 2024, ATB, NREL

Three projections for 2022 to 2050 are developed for scenario modeling based on this literature. In all three scenarios of the scenarios described below, costs of battery storage are anticipated ...

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### EIA: Updated Forecasts on U.S. Installed Capacity of Energy Storage

According to EIA statistics, as of the end of July 2023, planned installations of energy storage projects with a capacity of 1MW and above batteries are set to reach 18.6GW ...

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### Market and Technology Assessment of Grid-Scale Energy ...

Battery energy storage systems (BESS) are expected to dominate the flexible ESS market, capturing 81% and 64% of installed capacity by 2030 and 2050 respectively (Figure 1). With ...

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### **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 ...

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### THE CHINA BATTERY ENERGY STORAGE SYSTEM

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EXECUTIVE SUMMARY A Battery Energy Storage System (BESS) secures electrical energy from renewable and non-renewable sources and collects and saves it in rechargeable ...

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<u>Cost Projections for Utility-Scale Battery Storage:</u> 2023 ...

Executive Summary In this work we describe the development of cost and performance projections for utility-scale lithium-ion battery systems, with a focus on 4-hour duration ...

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