

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.

What is the global battery supply chain?

While the global battery supply chain is complex, every step in it - from the extraction of mineral ores to the use of high-grade chemicals for the manufacture of battery components in the final battery pack - has a high degree of geographic concentration.

How will energy storage affect global electricity demand?

Global electricity demand is set to more than double by mid-century, relative to 2020 levels. With renewable sources - particularly wind and solar - expected to account for the largest share of power output in the coming decades, energy storage will play a significant role in maintaining the balance between supply and demand.

How will battery technology impact the global car market?

The global car market is valued at USD 4 trillion today, and leadership in it will depend on battery technology. Batteries also support more wind and solar PV, which capture USD 6 trillion in investment in the NZE Scenario from 2024 to 2030, by balancing out their variations and stabilising the grid. IEA. Licence: CC BY 4.0

Can battery storage be built in a year?

To deliver this, battery storage deployment must continue to increase by an average of 25% per year to 2030, which will require action from policy makers and industry, taking advantage of the fact that battery storage can be built in a matter of months and in most locations. IEA. Licence: CC BY 4.0

Why is battery storage important?

In the power sector, battery storage supports transitions away from unabated coal and natural gas, while increasing the efficiency of power systems by reducing losses and congestion in electricity grids. In other sectors, clean electrification enabled by batteries is critical to reduce the use of oil, natural gas and coal. IEA. Licence: CC BY 4.0

This treemap chart uses data from Statistical Review of World Energy to show the top 10 countries with the most battery storage capacity in 2023. This voronoi depicts the countries that capture the most carbon globally in 2023, with data from Rystad Energy.

The Energy Institute's annual Statistical Review of World Energy reveals the grid storage battery capacity of every country in 2023. This treemap, created in partnership with the National Public Utilities Council,

visualizes which countries had the most grid-scale battery energy storage systems (BESS) in 2023. The U.S. and China's Acceleration

To triple global renewable energy capacity by 2030 while maintaining electricity security, energy storage needs to increase six-times. To facilitate the rapid uptake of new solar PV and wind, global energy storage capacity increases to 1 500 GW by 2030 in the NZE Scenario, which meets the Paris Agreement target of limiting global average ...

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65% of growth comes from utility scale systems, 35% from behind the meter battery storage China, EU and US account for nearly 90% of new capacity Strong growth attributed to declining prices for lithi

The United States was the leading country for battery-based energy storage projects in 2022, with approximately eight gigawatts of installed capacity as of that year. Skip to main content...

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