

## ContainerPower Energy Solutions

# Energy storage capacity and lithium battery demand



## Overview

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In the past five years, over 2 000 GWh of lithium-ion battery capacity has been added worldwide, powering 40 million electric vehicles and thousands of battery storage projects. EVs accounted for over 90% of battery use in the energy sector, with annual volumes hitting a record of more than 750 GWh.

But a 2022 analysis by the McKinsey Battery Insights team projects that the entire lithium-ion (Li-ion) battery chain, from mining through recycling, could grow by over 30 percent annually from 2022 to 2030, when it would reach a value of more than \$400 billion and a market size of 4.7 TWh. 1.

The ultra-long life battery being used in this project employs lithium-ion cycle supplement technology, which can extend the cycle of the energy storage battery cell to up to 10,000 times, and the battery life can exceed 15 years. This is the first electrochemical energy storage project in Shandong.

S&P Global Commodity Insights reports on investments and growth in lithium-ion battery capacity, specifically for the plug-in electric vehicle sector. The article leverages the Battery Cell Manufacturer Database provided by the Global Clean Energy Technology team, which tracks announcements of.

In 2023, vehicles accounted for 80% of lithium-ion battery demand, a figure expected to rise significantly as EV adoption accelerates worldwide. With EV battery sizes increasing—offering longer driving ranges—lithium demand is set to quadruple by 2030. Annual requirements could exceed 622 kilotons. Are lithium-ion batteries the future of energy storage?

While lithium-ion batteries have dominated the energy storage landscape, there is a growing interest in exploring alternative battery technologies that offer improved performance, safety, and sustainability .

How much lithium-ion battery capacity will India need by 2030?

The Indian government estimates it will need 120 GWh of lithium-ion battery capacity by 2030 to power EVs and for stationary energy storage — an achievable target if projects advance as announced.

Will a lithium-ion battery supply increase?

Rare cases of sponsored projects are clearly indicated. An increased supply of lithium will be needed to meet future expected demand growth for lithium-ion batteries for transportation and energy storage.

What is the market share of lithium-ion batteries in 2030?

While energy storage and portable electronics are the other two key applications of lithium-ion batteries, the automotive and transport segment will have a market share of 93% in 2030. As of the end of the March quarter, global lithium-ion battery capacity stands at 2.8 TWh.

Will lithium-ion battery demand increase in 2025?

In 2020, global sales of EVs reached 1.5 million units, with a corresponding lithium-ion battery demand of 65 GWh. Projections indicate a substantial increase to 137 GWh in 2025 and 245 GWh in 2030, emphasizing the pivotal role of lithium-ion batteries in the automotive industry.

What does S&P Global commodity insights say about lithium-ion battery capacity?

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