

## European Solar Energy Storage

# Demand for lithium in the energy storage industry



## Overview

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Global demand for Li-ion batteries is expected to soar over the next decade, with the number of GWh required increasing from about 700 GWh in 2022 to around 4.7 TWh by 2030 (Exhibit 1). Batteries for mobility applications, such as electric vehicles (EVs), will account for the vast bulk of demand in 2030—about 4,300 GWh;

The global battery value chain, like others within industrial manufacturing, faces significant environmental, social, and governance (ESG).

Some recent advances in battery technologies include increased cell energy density, new active material chemistries such as solid-state batteries, and cell and packaging production.

Battery manufacturers may find new opportunities in recycling as the market matures. Companies could create a closed-loop, domestic supply chain that involves the collection.

The 2030 outlook for the battery value chain depends on three interdependent elements (Exhibit 12): 1. Supply-chain resilience. A resilient battery value chain is one that is regionalized and diversified. We envision that each region will cover over 90 percent of local.

The global market for lithium-ion battery (LIB) is expected to grow from \$117.8 billion in 2024 and is projected to reach \$221.7 billion by the end of 2029, at a compound annual growth rate (CAGR) of 13.5% during the forecast period of 2024 to 2029.

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Global demand for batteries is increasing, driven largely by the imperative to reduce climate change through electrification of mobility and the broader energy transition. Just as analysts tend to underestimate the amount of energy generated from renewable sources, battery demand forecasts.

An increased supply of lithium will be needed to meet future expected demand growth for lithium-ion batteries for transportation and energy storage. Lithium demand has tripled since 2017 [1] and is set to grow tenfold by 2050 under the International Energy Agency's (IEA) Net Zero Emissions by 2050.

The demand for lithium—a crucial component in battery technologies—is surging alongside the rapid growth of EV adoption. A recent report by the International Council on Clean Transportation (ICCT), “ A Global and Regional Battery Material Outlook ”, captured this trend. The report further.

This report analyzes different components in the global lithium-ion battery (LIB) market, including cathode, anode, electrolyte, separator and others (packaging materials, Au/Cu foil, etc.). It also examines different types of LIBs, including lithium nickel manganese cobalt (NMC), lithium iron.

CHICAGO and PUNE, India, June 27, 2025 /PRNewswire/ -- The Global Lithium-ion Battery Market size is projected to be valued at USD 60.3 billion in 2024 and reach USD 182.5 billion by 2030, growing at a CAGR of 20.3% according to a new report by The Research Insights. The lithium-ion battery market.

As the global energy transition accelerates, lithium-ion batteries have become the cornerstone of both electric mobility and stationary energy storage. Yet, this massive growth in demand has brought a critical issue into sharp focus: the lithium bottleneck. With limited extraction capacity, long.

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### Global lithium-ion battery supply and demand update Q4 2024

This report analyzes the increasing demand of lithium-ion battery in electric vehicles and energy stationary storage systems and forecasts global supply from 2023 to 2033 based on over 600 battery manufacturing facilities.

### Fact Sheet: Lithium Supply in the Energy Transition

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### Lithium-ion Battery Market Report 2025: Growing Demand

## for Energy

This report analyzes different components in the global lithium-ion battery (LIB) market, including cathode, anode, electrolyte, separator and others (packaging materials, Au/Cu foil, etc.).



## Lithium-ion Battery Market , A \$182.5B Industry by 2030 , How EV

The landscape of lithium-ion battery technology is being fundamentally redefined by rapid advancements and a burgeoning demand for energy storage solutions across multiple domains.

## The Lithium Bottleneck: Challenges in Energy Storage

As the global energy transition accelerates, lithium-ion batteries have become the cornerstone of both electric mobility and stationary energy storage. Yet, this massive growth in demand has brought a critical issue into sharp focus: the lithium bottleneck.



## Advancing energy storage: The future trajectory of lithium-ion

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Lithium-ion batteries have become the dominant energy storage technology due to their high energy density, long cycle life, and suitability for a wide range of applications.



## Global lithium demand?

This data-file estimates global lithium demand under our roadmap to net zero, and integrates with our oil market models. The data are disaggregated across electric vehicles, new vehicle types, consumer electronics, grid-scale batteries and conventional material uses.



## Status of battery demand and supply - Batteries and Secure Energy

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.

## Lithium is Driving the EV Boom: Demand to Quadruple by 2030

With governments globally pushing for greener grids, the need for reliable, efficient energy storage has surged, further solidifying lithium's critical role in the energy transition.

114KWh ESS





## Lithium-ion battery demand forecast for 2030 , McKinsey

Lithium reserves are well distributed and theoretically sufficient to cover battery demand, but high-grade deposits are mainly limited to Argentina, Australia, Chile, and China. With technological shifts toward more lithium-heavy batteries, lithium mining will ...

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