

India Battery Market, By Type (Lead Acid, Lithium Ion, Nickel Metal Hydride, Others), By Application (Residential, Industrial, Commercial), By Region, Competition, Forecast & Opportunities, 2021-2031F

<https://marketpublishers.com/r/I346B33DD4ABEN.html>

Date: May 2025

Pages: 85

Price: US\$ 3,500.00 (Single User License)

ID: I346B33DD4ABEN

Abstracts

Market Overview

India Battery Market was valued at USD 10.45 Billion in 2025 and is projected to reach USD 20.24 Billion by 2031, growing at a CAGR of 11.48% during the forecast period. Batteries are electrochemical devices that convert stored chemical energy into electrical energy, essential for powering applications ranging from portable electronics to electric vehicles and renewable energy storage systems. They typically consist of electrochemical cells with an anode, cathode, and electrolyte. As technological advancements continue to improve battery performance, efficiency, and environmental impact, the demand for energy storage solutions is rapidly increasing across various sectors. In India, this surge is driven by the expanding electric vehicle market, rising energy consumption, and the transition toward cleaner energy sources, positioning batteries as a central component of the nation's energy ecosystem.

Key Market Drivers

Rising Adoption of Electric Vehicles (EVs)

A primary driver of the India battery market is the growing adoption of electric vehicles (EVs). Government initiatives such as the FAME scheme have promoted the adoption of EVs through subsidies and infrastructure development, significantly boosting demand for batteries, especially lithium-ion types. Factors such as rising fuel prices, increasing urban air pollution, and heightened environmental awareness are pushing both

consumers and industries toward sustainable mobility. EV adoption is not limited to personal vehicles but extends to logistics and delivery services, with major companies electrifying their fleets. The growing number of startups and manufacturers investing in battery R&D is improving local production capabilities, reducing reliance on imports. Infrastructure enhancements such as battery-swapping stations and charging networks are creating an integrated ecosystem that accelerates EV adoption. India witnessed over 2 million EV sales in 2024, reflecting a strong upward trend in battery demand linked to the electric mobility boom.

Key Market Challenges

Supply Chain Constraints and Raw Material Dependency

A significant challenge in the Indian battery market is its dependence on imported raw materials, particularly for lithium-ion batteries. India lacks domestic reserves of essential elements such as lithium, cobalt, and nickel, making it reliant on imports from countries like China, Chile, and Australia. This dependency exposes the market to geopolitical risks, supply disruptions, and price volatility. Additionally, India's limited refining and processing capacity further hampers efforts to localize battery production. These factors can lead to production delays and higher costs, affecting the affordability and availability of batteries for key sectors like EVs, consumer electronics, and renewable energy. Without a robust domestic supply chain and processing infrastructure, India's battery industry remains vulnerable to external fluctuations.

Key Market Trends

Shift Toward Lithium-Ion and Advanced Battery Chemistries

India is experiencing a clear transition from traditional lead-acid batteries to lithium-ion and other advanced battery chemistries. Lithium-ion batteries are preferred due to their superior energy density, faster charging, and longer life, making them ideal for applications in EVs, consumer electronics, and energy storage systems. The adoption of lithium iron phosphate (LFP) batteries is increasing, particularly for their thermal stability and cost-effectiveness, making them suitable for Indian climatic conditions. Nickel manganese cobalt (NMC) batteries are gaining traction in premium vehicle segments. Research into next-generation technologies such as solid-state and sodium-ion batteries is also underway, with the aim of enhancing safety, performance, and sustainability. Government initiatives under the PLI scheme are encouraging local production and innovation in battery technology. As production scales up and costs

decline, advanced chemistries are expected to become mainstream across multiple applications.

Key Market Players

Panasonic Corporation

LG Energy Solution Ltd.

Samsung SDI Co., Ltd.

BYD Company Limited

Tesla, Inc.

SK Innovation Co., Ltd.

GS Yuasa Corporation

Envision AESC Group Ltd.

Report Scope:

In this report, the India Battery Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

India Battery Market, By Type:

Lead Acid

Lithium Ion

Nickel Metal Hydride

Others

India Battery Market, By Application:

Residential

Industrial

Commercial

India Battery Market, By Region:

South India

North India

West India

East India

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the India Battery Market.

Available Customizations:

India Battery Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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