

## **Lithium-Ion Battery Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)**

Market Report | 2023-01-23 | 110 pages | Mordor Intelligence

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### **Report description:**

The market for lithium-ion batteries is expected to register a CAGR of around 20% during the forecast period 2022-2027 and reach a market size of USD 200 billion in 2027 from USD 57 billion in 2020. Due to the COVID-19 outbreak, companies like BYD and CATL reduced their manufacturing capacities in 2020. Moreover, decreased sales of electric vehicles amid the pandemic also resulted in the slow growth of lithium-ion batteries. Major factors driving the market studied are the emergence of new markets via electric vehicles and energy storage systems (ESS) for both commercial and residential applications, declining lithium-ion battery prices, and the increasing sale of consumer electronics. However, the rising demand-supply mismatch of raw materials is likely to hinder the market's growth.

### **Key Highlights**

The automobile segment held the largest market share in 2021 and is expected to dominate the market during the forecast period.

Recycling of li-ion batteries is expected to secure the supply of raw materials, such as lithium and cobalt, and reduce the reliance on extracting and refining materials from mineral resources. Recycling lithium-ion batteries currently being used in electric vehicles offer an excellent opportunity for companies to utilize the refined constituent materials for manufacturing lithium-ion batteries for use in Energy Storage Systems (ESS).

Asia-Pacific dominated the market worldwide, with the most significant contribution from countries such as China and India. With the large-scale acceptance of EVs, the market is further expected to grow in the region.

### **Lithium-ion Battery Market Trends**

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## Automobile Segment Expected to Dominate the Market

In the early years of the lithium-ion battery industry, the consumer electronics sector was the major consumer of batteries. But in recent years, electric vehicle (EV) manufacturers have become the biggest consumers of lithium-ion batteries, owing to the growing sales of EVs. ?

EVs do not emit CO<sub>2</sub>, NO<sub>x</sub>, or any other greenhouse gases and hence, have a lower environmental impact compared to conventional internal combustion engine (ICE) vehicles. Due to this advantage, many countries are encouraging the use of EVs by introducing subsidies and government programs.?

Several countries have announced plans to ban the sales of ICE vehicles in the future. Norway announced plans to ban the sales of ICE vehicles by 2025, France by 2040, and the United Kingdom by 2050. India also has plans to phase out ICE engines by 2030, while China's similar plan is currently under the relevant research phase.?

At the end of 2021, the global electric car stock reached 16.49 million units from 1.24 million units in 2015.

However, as of 2021, conventional fuel-fired cars cannot be banned in any country, as the EV technology and the EV industry may not be ready for such a move, which can cause significant disruptions in the market. Nonetheless, announcements for the future have encouraged EV manufacturers to invest heavily in R&D activities. ?

The EVs mainly use lithium-ion batteries. The declining lithium-ion battery costs have brought down the cost of EV manufacturing, owing to which EVs are expected to reach price parity with gasoline-fired vehicles during the forecast period.

Therefore, owing to the above factors, the automobile segment is expected to dominate the market during the forecast period.

## Asia-Pacific to Dominate the Market

The Asia-Pacific region dominated the market in 2021. With the increasing deployment of electric vehicles in countries such as China and India and the high demand for electronics with urbanization and increasing power purchase parity, the usage of lithium-ion batteries is expected to witness significant growth in the region.

A significant fraction of Asia-Pacific's population is estimated to be living without access to electricity and is dependent on conventional fuels, such as kerosene and diesel, for their lighting and mobile phone charging needs. Lithium-ion battery integrated energy storage solutions are likely to witness an increasing adoption rate due to the technical benefits associated with it and declining lithium-ion battery prices. This, in turn, is expected to create a significant number of opportunities for li-ion battery manufacturers in the near future.

China is one of the largest markets for electric vehicles, and the increasing adoption of electric vehicles in the country has been in line with the clean energy policy. Moreover, the Government of China has been providing both financial and non-financial incentives to promote the adoption of electric vehicles.

In February 2021, Contemporary Amperex Technology (CATL), an energy storage company headquartered in China, announced plans to build a li-ion battery production base in Guangdong, investing USD 1.9B/25 GWh in the first phase and 150 GWh by the end of 2030.

India is one of the fastest-growing countries globally for lithium-ion batteries. The country does not have reserves of the required raw materials for the production of the lithium-ion batteries on its own, and the cells and batteries are being imported from other countries (China, Vietnam, and Thailand). They are then either assembled or directly sold in the domestic market.

In order to counter the manufacturing issue, the National Institution for Transforming India (NITI) Aayog rolled out proposals in February 2020 to provide subsidies for investors setting up giga-scale lithium-ion manufacturing facilities in India. Between 2020-2030, the NITI Aayog is likely to invite bids for establishing production lines with 50 GWh of annual output capacity.

Therefore, the indigenous manufacturing of lithium-ion batteries is expected to grow over the forecast period.

Therefore, owing to the above factors, Asia-Pacific is expected to dominate the lithium-ion battery market during the forecast period.

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## Lithium-ion Battery Market Competitor Analysis

The lithium-ion battery market is fragmented. The major companies in the market include Panasonic Corporation, Tesla Inc., Samsung SDI, LG Chem Ltd, and Contemporary Amperex Technology Co. Ltd (CATL), among others.

Additional Benefits:

The market estimate (ME) sheet in Excel format  
3 months of analyst support

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