

Lithium Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The global lithium market is estimated to reach more than 490 LCE kilotons by the end of this year. It is estimated to register a CAGR greater than 19% during the forecast period.

The market was negatively impacted by COVID-19 in 2020, as the first half of the year was affected by the lockdowns, causing unprecedented declines in monthly vehicle sales from February. Presently the market has reached pre-pandemic levels.

Key Highlights

Over the short term, the major factors driving the market studied are the accelerating demand for electric vehicles? and increasing usage and demand for portable consumer electronics?.

However, rising concern over the demand-supply gap in the lithium market may hamper the market growth. ?

Nevertheless, the growing adoption of smart grid electricity is likely to be a major opportunity in the global lithium market over the forecast period.?

Asia-Pacific dominates the market across the world, with the most substantial consumption from countries like China, South Korea, and Japan.

Lithium Market Trends

The Battery Application Segment to Dominate the Market

Lithium is majorly used for the production of lithium batteries. The battery application segment accounted for the largest share of the global lithium market.

Lithium batteries can be categorized into two segments, namely, disposable and rechargeable. Disposable lithium batteries use

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lithium in the metallic form as an anode. These batteries have a longer life and higher charge density when compared to other standard batteries. These batteries find applications in critical devices, such as pacemakers and other electronic medical devices intended for long-term use.

Rechargeable lithium batteries are of two types, i.e., lithium-ion batteries and lithium-ion polymer batteries. Li-ion battery is packed in a rigid case, whereas the Li-po battery comes in a flexible polymer casing. Also, a Li-po battery has a slightly higher specific energy when compared to a Li-ion battery. The Li-po battery uses a polymer as an electrolyte instead of the standard liquid electrolyte used in a Li-ion battery.

In the case of a Li-ion battery, the metal lithium forms the cathode, and it is the chemical reactions of lithium upon contact with the electrolyte that makes these batteries characteristic. However, elemental lithium is highly unstable when used inside a battery's apparatus. Hence, a combination of lithium and oxygen together, called lithium oxide, is used as the cathode for practical purposes. Thereby, lithium oxide is a much more stable compound as opposed to elemental lithium.

Lithium-ion batteries are employed in several applications, including telecommunication devices and consumer electronics. The light weight of lithium-ion batteries, coupled with their high energy density and rechargeability, makes them a good fit for portable electronics. Due to their energy density and lack of "memory effect," lithium-ion and lithium-polymer rechargeable batteries are the most efficient power sources for cell phones, laptops, and other portable electronic devices.

These batteries are in great demand in products such as electric vehicles (EVs), cell phones, laptops, power backups/UPS, tablets, power tools, video games, toys, and e-bikes. Apart from these, lithium-based batteries find one of their applications in energy storage systems, and the demand for lithium-ion battery-based energy storage systems is growing at a significant pace, considering the growth in various renewable energy sectors, including wind and others.

Li-ion batteries are gaining more popularity compared to other battery types, majorly due to their favorable capacity-to-weight ratio. The other factors that contribute to its adoption include its better performance (long life and low maintenance) and decreasing price.

Some of the key global lithium-ion battery manufacturers include LG Chem, Contemporary Amperex Technology Co., Limited (CATL), Panasonic, Samsung SDI, and BYD, among other companies.

All the above-said factors are expected to increase the demand for lithium in the battery application segment.

Asia-Pacific Region to Dominate the Market

Asia-Pacific was found to be the major market for the consumption of lithium, owing to increasing consumption from countries such as China, South Korea, and Japan.

The automobile industry in the country is witnessing switching trends as the consumer inclination toward battery-operated vehicles is on the higher side. Electric vehicles, including scooters, passenger cars, and light commercial vehicles like buses, are gaining popularity in the country. According to the China Passenger Car Association (CPCA), the country sold over 3.3 million units in 2021, indicating an increase of about 169% compared to 2020.

The government of China estimates a 20% penetration rate of electric vehicle production over the next five years. Hence, this is anticipated to increase the production and consumption of batteries for vehicles. Chinese battery maker CATL controls over 30% of the world's EV battery market. The cobalt specialist supplier, Darton Commodities, estimated that Chinese refineries supplied 85% of the world's battery-ready cobalt, a mineral that helps in improving the stability of lithium-ion batteries.

According to the National Blueprint for Lithium Batteries, China is projected to have 1,811 GWh of lithium cell production by 2025. China is the largest global EV market and dominates the supply chain for the manufacture of lithium-ion batteries, including the processing of minerals and raw materials.

South Korea's largest industries are electronics, automobiles, telecommunications, shipbuilding, chemicals, and steel. The country is among the largest manufacturers of electronic goods as well as semiconductors, with globally popular brands, such as Samsung Electronics Co. Ltd and Hynix Semiconductor.

According to the data collected by the Korea Automotive Technology Institute (KATl), the sales of electric vehicles in the country

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surged by 96% to 71,006 units in the first nine months of 2021.

Electric vehicle sales in Japan are likely to ascend in the future with rising consumer demand for alternate fuel technology. However, ICE-based automobile sales in the country dropped by over 3% to 4,448,340 units in 2021. The Japan Automobile Dealers Association reported that sales of new vehicles larger than 660 CC slipped by 2.9% to 2,795,818 units. The Japan Light Motor Vehicle and Motorcycle Association reported that sales of mini-vehicles fell by 3.8% to 1,652,522 units in the same year. All these factors are expected to facilitate the growth of the lithium market over the forecast years.

Lithium Market Competitor Analysis

The global lithium market is consolidated in nature, with the top five players holding more than 80% share of the global production outputs. Some of the major players in the market include (not in any particular order) Albemarle Corporation, SQM SA, Tianqi Lithium, Livent, and Allkem Limited, among other companies.

Additional Benefits:

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

Table of Contents:

1 INTRODUCTION

- 1.1 Study Assumptions
- 1.2 Scope of the Study

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

4 MARKET DYNAMICS

- 4.1 Drivers
 - 4.1.1 Accelerating Demand for Electric Vehicles
 - 4.1.2 Increasing Usage and Demand by Portable Consumer Electronics
 - 4.1.3 Other Drivers
- 4.2 Restraints
 - 4.2.1 Demand-supply Gap in the Lithium Market
 - 4.2.2 Other Restraints
- 4.3 Industry Value Chain Analysis
- 4.4 Porter's Five Forces Analysis
 - 4.4.1 Bargaining Power of Suppliers
 - 4.4.2 Bargaining Power of Buyers
 - 4.4.3 Threat of New Entrants
 - 4.4.4 Threat of Substitute Products and Services
 - 4.4.5 Degree of Competition
- 4.5 Pricing Analysis
- 4.6 Technological Snapshot

5 MARKET SEGMENTATION

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- 5.1 Type
 - 5.1.1 Metal
 - 5.1.2 Compound
 - 5.1.2.1 Carbonate
 - 5.1.2.2 Chloride
 - 5.1.2.3 Hydroxide
 - 5.1.3 Alloy
- 5.2 Application
 - 5.2.1 Battery
 - 5.2.2 Grease
 - 5.2.3 Air Treatment
 - 5.2.4 Pharmaceuticals
 - 5.2.5 Glass/Ceramic (Including Frits)
 - 5.2.6 Polymer
 - 5.2.7 Other Applications
- 5.3 End-user Industry
 - 5.3.1 Industrial
 - 5.3.2 Consumer Electronics
 - 5.3.3 Energy Storage
 - 5.3.4 Medical
 - 5.3.5 Automotive
 - 5.3.6 Other End-user Industries
- 5.4 Geography
 - 5.4.1 Production and Reserve Analysis
 - 5.4.1.1 Australia
 - 5.4.1.2 Chile
 - 5.4.1.3 China
 - 5.4.1.4 Argentina
 - 5.4.1.5 Zimbabwe
 - 5.4.1.6 United States
 - 5.4.1.7 Other Regions
 - 5.4.2 Consumption Analysis
 - 5.4.2.1 Asia-Pacific
 - 5.4.2.1.1 China
 - 5.4.2.1.2 India
 - 5.4.2.1.3 Japan
 - 5.4.2.1.4 South Korea
 - 5.4.2.1.5 Australia & New Zealand
 - 5.4.2.1.6 Rest of Asia-Pacific
 - 5.4.2.2 North America
 - 5.4.2.2.1 United States
 - 5.4.2.2.2 Canada
 - 5.4.2.2.3 Mexico
 - 5.4.2.3 Europe
 - 5.4.2.3.1 Germany
 - 5.4.2.3.2 United Kingdom
 - 5.4.2.3.3 France

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- 5.4.2.3.4 Italy
- 5.4.2.3.5 Nordic Countries
- 5.4.2.3.6 Rest of Europe
- 5.4.2.4 South America
 - 5.4.2.4.1 Brazil
 - 5.4.2.4.2 Argentina
 - 5.4.2.4.3 Rest of South America
- 5.4.2.5 Middle East
 - 5.4.2.5.1 Saudi Arabia
 - 5.4.2.5.2 South Africa
 - 5.4.2.5.3 Rest of Middle East

6 COMPETITIVE LANDSCAPE

- 6.1 Mergers and Acquisitions, Joint Ventures, Collaborations, and Agreements
- 6.2 Market Share (%) Analysis
- 6.3 Strategies Adopted by Leading Players
- 6.4 Company Profiles (Overview, Financials, Products and Services, and Recent Developments)
 - 6.4.1 Albemarle Corporation
 - 6.4.2 Allkem Limited
 - 6.4.3 Ganfeng Lithium Co. Ltd
 - 6.4.4 Lithium Australia NL
 - 6.4.5 Livent
 - 6.4.6 Mineral Resources
 - 6.4.7 Morella Corporation Limited
 - 6.4.8 Sichuan Yahua Industrial Group Co. Ltd
 - 6.4.9 SQM SA
 - 6.4.10 Tianqi Lithium
 - 6.4.11 Avalon Advanced Materials Inc.
 - 6.4.12 Pilbara Minerals

7 MARKET OPPORTUNITIES AND FUTURE TRENDS

- 7.1 Growing Adoption in Smart Grid Electricity
- 7.2 Other Opportunities

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