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EV Battery Recycling & Reuse Market Forecasts to 2032 – Global Analysis By Battery Chemistry (On Lithium-Ion Batteries, Nickel-Metal Hydride Batteries, Lead-Acid Batteries and Other Battery Chemistries), Recycling Process, Application, End User and By Geography

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Abstracts

According to Stratistics MRC, the Global EV Battery Recycling & Reuse Market is accounted for $9.48 billion in 2025 and is expected to reach $117.06 billion by 2032 growing at a CAGR of 43.2% during the forecast period. Electric Vehicle (EV) battery recycling and reuse refers to the process of recovering, repurposing, and reintroducing used or end-of-life batteries into the value chain to maximize resource efficiency and sustainability. Recycling involves extracting valuable materials such as lithium, cobalt, nickel, and manganese from spent batteries for use in new battery production, thereby reducing dependence on mining and minimizing environmental impact. Reuse, or second-life applications, repurposes partially degraded batteries for less demanding uses like energy storage systems, grid stabilization, or backup power. Together, recycling and reuse support circular economy goals, lower waste, conserve resources, and enhance EV industry sustainability worldwide.

Market Dynamics:

Driver:

Growing EV Adoption

Surging EV adoption is catalyzing robust growth in the EV battery recycling and reuse

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market. As battery demand accelerates, end-of-life volumes rise, unlocking vast opportunities for material recovery, second-life applications, and circular supply chains. This momentum drives innovation in recycling tech, reduces reliance on virgin minerals, and enhances sustainability across the EV ecosystem. Regulatory support and OEM partnerships further amplify market expansion, positioning battery reuse as a strategic lever for cost efficiency, resource security, and environmental impact.

Restraint:

High cost of advanced systems

High costs of advanced recycling systems hinder widespread adoption in the EV battery reuse market by inflating operational expenses and deterring investment from smaller players. This limits scalability, slows infrastructure development, and restricts access to cutting-edge technologies. As a result, regional disparities widen, innovation stalls, and circular economy goals face setbacks. Without cost-effective solutions, market growth remains constrained, delaying environmental and economic benefits tied to sustainable battery lifecycle management.

Opportunity:

Technological Improvements

Technological advancements are revolutionizing the market by enhancing material recovery efficiency, reducing processing costs, and enabling closed-loop systems. Innovations in hydrometallurgy, AI-driven sorting, and second-life battery applications are driving scalability and environmental impact reduction. These improvements attract investment, support regulatory compliance, and foster circular economy models, making battery reuse commercially viable. As tech evolves, it unlocks new value chains, boosts resource security, and accelerates sustainable growth across automotive and energy storage sectors.

Threat:

Battery Chemistry & Design Complexity

The complexity of battery chemistry and design poses a significant hindrance to the EV battery recycling and reuse market. Variations in cell formats, chemistries, and packaging make standardized recycling processes difficult and costly. Dismantling

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intricate designs requires specialized equipment, expertise, and time, which increases operational expenses and lowers efficiency. Such challenges slow down material recovery, reduce profitability, and limit large-scale adoption, restraining the overall growth and effectiveness of recycling and reuse initiatives.

Covid-19 Impact:

The COVID-19 pandemic disrupted global supply chains, delaying EV production and battery recycling initiatives. Lockdowns and labor shortages slowed facility operations, while reduced mobility dampened battery collection rates. However, the crisis also accelerated digitalization and policy momentum for green recovery, prompting renewed investment in sustainable infrastructure. As economies rebound, the EV battery recycling and reuse market is poised for rapid growth, driven by pent-up demand, stimulus packages, and heightened awareness of resource security.

The direct recycling segment is expected to be the largest during the forecast period

The direct recycling segment is expected to account for the largest market share during the forecast period because of its ability to retain the structural integrity of battery materials. Unlike conventional methods, direct recycling preserves cathode architecture, enabling cost-effective recovery with minimal chemical processing. This approach reduces energy consumption and supports closed-loop manufacturing. As OEMs prioritize sustainability and circularity, direct recycling emerges as a preferred solution for large-scale battery recovery, offering economic and environmental advantages that align with global decarbonization goals.

The hydrometallurgical segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the hydrometallurgical segment is predicted to witness the highest growth rate due to its superior recovery rates and environmental benefits. This method uses aqueous solutions to extract lithium, cobalt, and nickel with high purity, making it suitable for diverse battery chemistries. Compared to pyrometallurgy, it offers lower emissions and greater scalability. Regulatory support and rising demand for critical minerals are accelerating adoption. As sustainability becomes central to industrial strategy, hydrometallurgical processes will play a pivotal role in securing supply chains.

Region with largest share:

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During the forecast period, the Asia Pacific region is expected to hold the largest market share due to robust battery supply chain, and proactive government policies. Countries like China, Japan, and South Korea lead in battery production and recycling infrastructure, supported by aggressive electrification targets and circular economy initiatives. The region benefits from high consumer adoption, strategic investments, and technological leadership. These factors collectively position Asia Pacific as the epicenter of EV battery recycling and reuse, driving global momentum and innovation.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR owing to rapid EV adoption, favorable regulatory frameworks, and growing investment in domestic recycling capabilities. The U.S. and Canada are scaling infrastructure to reduce reliance on imported critical minerals and enhance energy security. Federal incentives, public-private partnerships, and innovation in second-life applications are accelerating market expansion. As sustainability becomes a strategic priority, North America is emerging as a key growth frontier for EV battery recycling and reuses technologies.

Key players in the market

Some of the key players in EV Battery Recycling & Reuse Market include Umicore, American Battery Technology Company (ABTC), Li-Cycle Corporation, Ecobat, Gravita India Ltd., Glencore plc, Cirba Solutions, East Penn Manufacturing, Gopher Resource, RecycLiCo Battery Materials Inc., Aqua Metals, Ganfeng Lithium Group Co., Ltd, LOHUM, Exide Industries Limited, Hosokawa Micron Group, EnerSys, Attero Recycling Pvt. Ltd., and Call2Recycle.

Key Developments:

In August 2025, Lithium Argentina and Ganfeng plan to merge their adjacent brine lithium assets (Pozuelos-Pastos Grandes, Pastos Grandes, Sal de la Puna) into a joint venture (JV) with Ganfeng owning 67% and Lithium Argentina 33%. The JV aims for up to 150,000 tonnes per annum of lithium carbonate equivalent using a mix of direct lithium extraction and solar evaporation, with financing and a feasibility study underway.

In December 2024, Hyundai Motor and Kia have signed a MoU with Exide Energy Solutions to localize EV battery production in India, focusing on lithium-iron-phosphate

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(LFP) cells. This strategic move aims to cut costs, strengthen the EV supply chain, and enhance competitiveness in India’s booming EV market.

Battery Chemistries Covered:

- Lithium-Ion Batteries
- Nickel-Metal Hydride Batteries
- Lead-Acid Batteries
- Other Battery Chemistries

Recycling Processes Covered:

- Pyrometallurgical
- Hydrometallurgical
- Direct Recycling
- Other Recycling Processes

Applications Covered:

- Second-Life Energy Storage
- Low-Speed Electric Vehicles
- Industrial Applications
- Other Applications

End Users Covered:

- Automotive OEMs

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- Recycling Companies
- Energy Utilities
- Government & Regulatory Bodies
- Other End Users

Regions Covered:

- North America
  - US
  - Canada
  - Mexico
- Europe
  - Germany
  - UK
  - Italy
  - France
  - Spain
  - Rest of Europe
- Asia Pacific
  - Japan
  - China

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India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:
- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment

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Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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