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Battery Recycling Market Forecasts to 2032 – Global Analysis By Battery Chemistry (Lead-Acid Batteries, Lithium-Ion Batteries (LIBs), Nickel-Based Batteries, and Other Battery Chemistries), Material Recovered (Metals, Plastics, Electrolytes, and Other Materials), Source, Recycling Process, and By Geography

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Abstracts

According to Stratistics MRC, the Global Battery Recycling Market is accounted for $29.1 billion in 2025 and is expected to reach $65.3 billion by 2032, growing at a CAGR of 12.2% during the forecast period. Battery recycling involves the collection, disassembly, processing, and material recovery of used batteries from consumer electronics, electric vehicles, and industrial systems. It aims to recover important metals like lithium, cobalt, nickel, and copper using different methods, which helps create a sustainable system, decreases the need for mined materials, lessens environmental harm, and provides a steady supply of essential materials for the expanding energy-storage and transportation industries.

Market Dynamics:

Driver:

Rapid growth in electric vehicles (EVs) and consumer electronics

The exponential adoption of electric vehicles and the relentless consumer demand for electronics like smartphones and laptops are primary engines for the battery recycling market. This surge directly translates into a growing stream of end-of-life lithium-ion batteries, creating a critical and expanding supply of recyclable materials. Furthermore,

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stringent government regulations and corporate sustainability goals are pressuring manufacturers to secure a responsible end-of-life for these products, thereby formalizing and accelerating the need for robust recycling infrastructure and services on a global scale.

Restraint:

Complex disassembly processes and safety hazards

The intricate and varied designs of modern battery packs, particularly for EVs, pose a significant barrier to efficient recycling. Disassembling these units is highly labor-intensive and requires specialized equipment to mitigate serious risks, including thermal runaway, fires, and exposure to toxic chemicals. These safety hazards necessitate substantial investment in advanced facilities and worker training, which increases operational expenses. Consequently, this economic and technical challenge can hinder market profitability and slow down the scaling of recycling operations for newer battery chemistries.

Opportunity:

Development of advanced hydrometallurgical and direct recycling technologies

Significant opportunity lies in the innovation of next-generation recycling technologies, such as hydrometallurgical processes and direct recycling methods. These advanced techniques promise higher recovery rates of valuable cathode materials like lithium, cobalt, and nickel compared to traditional pyrometallurgy. Moreover, they are often more energy-efficient and generate fewer emissions. This technological leap enhances the economic viability of recycling and supports the creation of a circular economy, making it a key area for strategic investment and competitive differentiation within the market.

Threat:

Volatility in raw material prices

A major threat to the battery recycling market's stability is the inherent volatility in the prices of key raw materials, such as lithium and cobalt. Sharp declines in virgin material prices can suddenly make recycled alternatives less economically attractive, undermining the business case for recyclers. This price uncertainty complicates long-

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term investment planning and can deter the financing needed for new recycling facilities. Therefore, the unpredictable dynamics of the global commodity markets partially tether the market's profitability, creating a persistent financial risk.

Covid-19 Impact:

The COVID-19 pandemic initially disrupted the battery recycling market through nationwide lockdowns, which caused temporary collection center closures and severe bottlenecks in supply chains and logistics. This led to a constricted supply of end-of-life batteries and delayed recycling operations. However, the market demonstrated resilience and began recovering as restrictions eased. The period also reinforced the strategic importance of establishing localized and secure supply chains for critical battery materials, potentially accelerating long-term policy support for the recycling industry in a post-pandemic era.

The lead-acid batteries segment is expected to be the largest during the forecast period

The lead-acid batteries segment is expected to account for the largest market share during the forecast period, attributed to its well-established, decades-old recycling infrastructure and its ubiquitous use in automotive starter batteries and uninterruptible power supplies. Due to the high value of recovered lead, the recycling process for lead-acid is mature, highly efficient, and economically compelling. Additionally, stringent global regulations mandating the recycling of these batteries ensure a consistent and high-volume feedstock, securing its position as the largest segment for the foreseeable future.

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

Over the forecast period, the metals segment is predicted to witness the highest growth rate, driven by the urgent need to recover high-value materials like lithium, cobalt, and nickel from spent lithium-ion batteries. These metals are critical for manufacturing new EV batteries, and their procurement from recycled sources is becoming a strategic imperative to mitigate supply chain risks and price volatility. Also, new recycling technologies are making it easier to get more and cleaner metals from old batteries, making it more attractive to invest in metal recovery.

Region with largest share:

During the forecast period, the Europe region is expected to hold the largest market

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share due to the European Union's proactive and stringent regulatory framework. Policies like the Battery Directive and the ambitious European Green Deal impose extended producer responsibility, setting high collection and recycling targets. This pressure from regulations, along with strong government backing for recycling and advanced recycling facilities, creates a well-organized system that forces companies to follow the rules and helps Europe lead in battery recycling worldwide.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, fueled by a massive and rapidly expanding consumer electronics market and the world's fastest-growing EV fleet, particularly in China, Japan, and South Korea. This generates an immense and growing volume of battery waste. Moreover, governments in the region are increasingly implementing policies to manage this waste stream and secure domestic supplies of critical raw materials, attracting substantial investments in new recycling capacity and driving remarkable market expansion.

Key players in the market

Some of the key players in Battery Recycling Market include Umicore N.V., Li-Cycle Holdings Corp., Redwood Materials, Inc., Glencore plc, Stena Metall AB, Ecobat Limited, Accurec Recycling GmbH, American Battery Technology Company, Inc., RecycLiCo Battery Materials Inc., Neometals Ltd, Duesenfeld GmbH, Retriev Technologies, Inc., Cirba Solutions, LLC, Fortum Corporation, Ganfeng Lithium Group Co., Ltd., LG Energy Solution, Ltd., Call2Recycle, Inc., Aqua Metals, Inc., and East Penn Manufacturing Co.

Key Developments:

In June 2025, Redwood Materials announced a $350M Series E to accelerate critical-materials recovery and published multiple 2025 site expansions and R&D centre openings.

In April 2025, LG Energy Solution announced a battery-recycling joint venture in Europe with Derichebourg (pre-processing facility) and additional US/partner recycling ventures.

In April 2025, Umicore announced new battery-recycling service agreements and continues to publish battery-recycling updates on its Battery Recycling Solutions pages.

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Battery Chemistries Covered:

- Lead-Acid Batteries
- Lithium-Ion Batteries (LIBs)
- Nickel-Based Batteries
- Other Battery Chemistries

Material Recovered Covered:

- Metals
- Plastics
- Electrolytes
- Other Materials

Sources Covered:

- Automotive/Transportation Batteries
- Industrial Batteries
- Consumer Electronics Batteries
- Other Sources

Recycling Process Covered:

- Pyrometallurgical Process
- Hydrometallurgical Process

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- Direct Physical Recycling
- Mechanical Pre-Treatment
- Other Recycling Process

Regions Covered:

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

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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 Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations

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- 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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