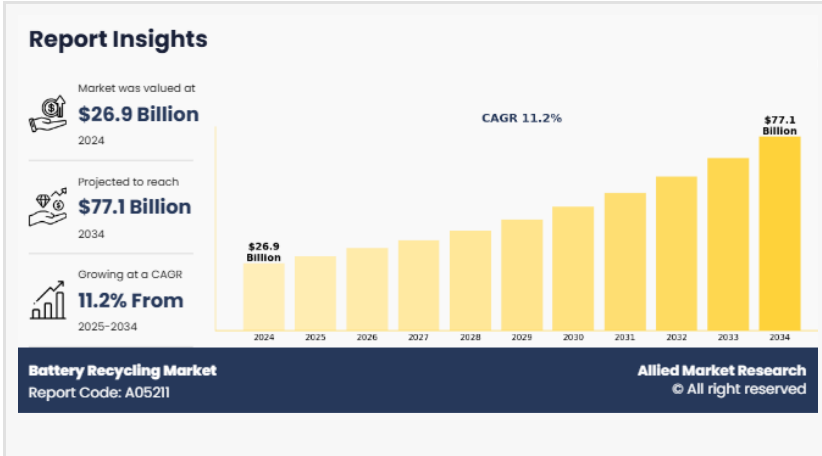
Battery Recycling Market Statistics to Hit $77.1 Billion by 2034 Driven by EV Adoption & Sustainability Push

Global Battery Recycling Market Surges as EV Demand Rises and Circular Economy Strengthens



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According to a new report published by Allied Market Research, the battery recycling market size was valued at $26.9 billion in 2024 and is projected to reach $77.1 billion by 2034, registering a CAGR of 11.2% from 2025 to 2034. The increasing global focus on sustainability, rising electric vehicle (EV) adoption, and stringent regulations for safe battery disposal are driving significant growth across the industry.

> "The battery recycling market will reach $77.1B by 2034, driven by EV growth, sustainability policies, and rising demand for critical metal recovery."
>
> *Allied Market Research*

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 Introduction: Why Battery Recycling Matters

Battery recycling is the process of recovering valuable materials such as lithium, nickel, cobalt, and lead from used or end-of-life batteries. With growing dependence on portable electronics, renewable energy storage, and electric mobility, the consumption of batteries has risen sharply. Improper disposal can lead to soil pollution, groundwater contamination, and toxic chemical leakage, making safe recycling not only an environmental responsibility but also an economic necessity.

Recycling supports the circular economy, reduces the strain on mining resources, stabilizes raw material supply, and helps battery manufacturers lower production costs. The battery recycling market share is increasing as governments and industries adopt eco-friendly solutions to support decarbonization goals.

 Market Dynamics

Demand Surge from Electric Vehicles (EVs)

The rapid expansion of the EV industry is one of the primary drivers of the battery recycling market. Lithium-ion batteries used in EVs typically last 8–15 years. As early-generation EVs reach end-of-life, the volume of spent batteries is increasing significantly.

Initiatives such as:

PM E-DRIVE Scheme (2024) promoting electric two- and three-wheelers

PM e-Bus Sewa Scheme (2024) for electric public transport

are accelerating EV adoption and shifting demand toward efficient battery recycling solutions.

Environmental Regulations Encouraging Sustainable Practices

Governments worldwide are imposing strict rules on battery disposal and waste management. Regulatory frameworks require manufacturers to take responsibility for used batteries, further boosting the recycling ecosystem.

Challenges: Complex & Hazardous Recycling Processes

However, [lithium-ion battery recycling](#) involves complex chemical recovery, requiring advanced processes such as:

Pyrometallurgy

Hydrometallurgy

Supercritical CO_2 extraction

These processes are capital-intensive, technologically demanding, and require strict safety standards, which may restrain market growth in developing regions.

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 Segments Overview

The battery recycling market is segmented by chemistry, recycling process, material, source, application, and region.

By Chemistry

Lithium-ion batteries are expected to grow at the highest CAGR of 11.7% due to EV expansion and energy storage installations.

Lead-acid batteries continue to represent a significant share due to widespread automotive and industrial usage.

By Recycling Process

Pyrometallurgy is projected to grow rapidly with a CAGR of 11.0%, widely used for extracting metals from spent batteries.

Hydrometallurgy is gaining momentum for its higher recovery efficiency and lower emissions.

By Material

Electrolyte recovery is the fastest-growing segment due to advancements in solvent purification and lithium salt extraction technologies.

By Source

Automotive batteries lead the market and are projected to grow at 11.4% CAGR, driven by global EV sales and hybrid vehicle expansion.

By Application

The transportation sector is the fastest-growing application segment, with rising deployment of electric buses, trucks, and commercial fleets.

Regional Outlook

The Asia-Pacific region is expected to grow at the highest CAGR of 11.7%, led by:

Large EV production capabilities

Strong government recycling mandates

Leadership of countries like China, Japan, and South Korea

Companies such as CATL, GEM Co., Ltd., and Li-Cycle are expanding large-scale recycling facilities and material recovery hubs across the region.

 Competitive Landscape

Key players in the battery recycling market include:

Cirba Solutions

Contemporary Amperex Technology Co., Limited (CATL)

Aqua Metals, Inc.

EnerSys

Ecobat

American Battery Technology Company

East Penn Manufacturing

ACCUREC Recycling GmbH

These companies are investing heavily in closed-loop recycling, innovative extraction methods, and capacity expansion.

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 Conclusion

The battery recycling market is positioned for strong growth due to the global shift toward clean energy, rising EV penetration, and the urgent need to recover valuable critical minerals. As recycling technologies advance and circular economy initiatives expand, battery recycling will play a central role in building a sustainable and resilient energy future.

Trending Reports in Energy and Power Industry:

Lithium-Ion Battery Recycling Market

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Battery Recycling Market

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Cylindrical Li-ion Battery Market

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David Correa
Allied Market Research
+ + + + + +1 800-792-5285
email us here
Visit us on social media:
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X
