

Saudi Arabia Battery Recycling Market Forecast 2026-2034

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Report description:**KEY FINDINGS**

The Saudi Arabia battery recycling market size is set to be valued at \$172.51 million as of 2026 and is expected to reach \$460.12 million by 2034, progressing with a CAGR of 13.05% during the forecast years, 2026-2034.

MARKET INSIGHTS

The Saudi Arabia battery recycling market experiences accelerated development driven by Vision 2030 initiatives emphasizing circular economy principles and sustainable industrial transformation. Under Vision 2030's circular-economy framework, Saudi Arabia is rapidly scaling battery-recycling capabilities through aggressive policy mandates and strategic state-backed investments. The Kingdom positions itself as a regional recycling hub serving Gulf Cooperation Council nations through strategic industrial zone development.

Additionally, rapid industrialization across manufacturing, telecommunications, and energy sectors generates substantial lead-acid battery demand requiring systematic recycling solutions. The Kingdom's extensive use of backup power systems, uninterruptible power supplies, and automotive batteries creates established collection networks. Furthermore, electric vehicle adoption initiatives accelerate future lithium-ion battery waste generation. Under Vision 2030, the Kingdom made a promise to have 30% of all vehicles in Riyadh be electric by 2030 and has backed that promise with substantial investments totaling over \$50 billion in EV manufacturing and infrastructure development. Consequently, recyclers prepare capacity expansions anticipating growing lithium-ion volumes from transportation electrification programs.

Strategic regulatory frameworks promote private sector participation through attractive financial incentives and preferential financing arrangements. To attract private-sector participation, Saudi Arabia has introduced incentives such as accelerated depreciation on recycling equipment and preferential PIF-backed financing. These mechanisms reduce capital barriers, enabling domestic and international recyclers to establish operations within the Kingdom.

Government policies align with GCC-wide sustainability mandates, creating harmonized regional standards and facilitating cross-border material flows. However, the market currently faces technological challenges limiting advanced lithium-ion battery processing capabilities. On the other hand, the deployment of utility-scale battery energy storage systems surged dramatically, driven by major solar grid stabilization projects led by international partners, including Sungrow and BYD, collaborating with local entities.

Joint ventures between local industrial players and international recycling specialists accelerate capability development throughout the Kingdom. These partnerships transfer advanced processing technologies while training the Saudi workforce in

complex recycling operations. Lead-acid recycling plants undergo extensive modernization programs, improving safety standards and reducing environmental emissions significantly. Older smelting operations adopt closed-loop air handling systems, preventing hazardous fume releases while implementing wastewater treatment infrastructure.

Moreover, government-backed pilot programs explore second-life applications for industrial lithium-ion batteries, extending useful lifecycles before final recycling. Retired energy storage batteries suitable for lower-demand applications provide value while delaying material recovery requirements. Digital tracking and waste management systems emerge, enhancing collection efficiency and regulatory monitoring capabilities.

Furthermore, the Saudi EV battery market is also witnessing significant advancements in battery technology, particularly in solid-state batteries and recycling innovations. These technological developments enhance sustainability throughout the EV market ecosystem by improving battery performance while addressing environmental concerns associated with disposal practices.

Saudi Arabia's evolving regulatory landscape also supports transitions toward sustainable energy solutions, impacting battery recycling market dynamics. New regulations and incentives encourage the adoption of green technologies, with fiscal measures including tax breaks and subsidies playing crucial roles in reducing barriers to entry and fostering comprehensive market growth across all segments.

SEGMENTATION ANALYSIS

The Saudi Arabia battery recycling market is segmented into chemistry, application, recycling process, and source. The chemistry segment is further categorized into lead-acid, nickel-based, lithium-based, and others.

Lead-acid batteries power traditional internal combustion engine vehicles, telecommunications networks, uninterruptible power supply systems, and industrial equipment throughout the Kingdom. These applications create consistent recycling feedstock volumes as batteries reach end-of-life stages after 3-5 years of service, typically. Saudi Arabia's harsh climate conditions accelerate battery degradation, reducing operational lifespans below global averages.

Consequently, replacement cycles occur more frequently, generating higher recycling volumes relative to vehicle populations. Moreover, the Kingdom possesses a mature lead-acid recycling infrastructure developed over decades, serving regional automotive and industrial markets. Smelting facilities process spent batteries, recovering lead metal with efficiency rates exceeding 98% routinely. These operations generate refined lead suitable for new battery manufacturing, construction applications, and ammunition production sectors.

Economic incentives drive high collection rates since recovered lead maintains significant commodity value, offsetting processing costs. Additionally, Saudi regulations require proper disposal of lead-acid batteries, preventing environmental contamination from improper handling. Authorized recycling facilities operate under environmental permits, ensuring compliance with hazardous waste management standards. However, modernization efforts address legacy environmental concerns from older smelting operations.

Investments in pollution control equipment, worker safety systems, and process automation improve operational standards, aligning with international best practices. The segment benefits from established supply chains connecting battery retailers, automotive service centers, and industrial maintenance providers with recycling facilities. Collection networks operate efficiently, capturing substantial percentages of spent batteries before they enter informal disposal channels.

COMPETITIVE INSIGHTS

Some of the top players operating in the Saudi Arabia battery recycling market include Exide Technologies, Saudi Investment Recycling Company (SIRC), Enviroserve, Haudi Daz Electronic, Solid Waste Recycling Factory, etc.

Saudi Investment Recycling Company (SIRC) operates as the Kingdom's flagship circular economy enterprise, established by the Public Investment Fund to transform waste management and materials recovery sectors nationwide. The organization was founded specifically to achieve Vision 2030 objectives, emphasizing environmental sustainability, resource efficiency, and economic diversification beyond the petroleum industries.

The company's comprehensive mandate encompasses multiple waste streams, including organic, industrial, hazardous, and battery materials, creating integrated processing ecosystems. SIRC develops large-scale recycling infrastructure through strategic partnerships with international technology leaders, bringing world-class expertise to Saudi operations. The company focuses on attracting private sector investments through structured public-private partnership frameworks. SIRC provides land access,

regulatory coordination, and offtake agreements enabling commercial recyclers to operate profitably within the Kingdom.

COMPANY PROFILES

1. EXIDE TECHNOLOGIES
2. RETRIEV TECHNOLOGIES INC
3. ENVIROSERVE
4. HOLOUL ELECTRONIC RECYCLING TREATMENT COMPANY
5. HAUDI DAZ ELECTRONIC AND SOLID WASTE RECYCLING FACTORY
6. SAUDI INVESTMENT RECYCLING COMPANY (SIRC)

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