

# Rare Earth Element (REE) Recovery Market Forecasts to 2032 – Global Analysis By Source (Mining Waste, Industrial Waste, End-of-Life Products and Other Sources), Element Type, Technology, Application and By Geography

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## Abstracts

According to Statistics MRC, the Global Rare Earth Element (REE) Recovery Market is accounted for \$428.6 million in 2025 and is expected to reach \$995.9 million by 2032 growing at a CAGR of 12.8% during the forecast period. Rare earth element recovery refers to the process of extracting, separating, and purifying rare earth elements (REEs) from primary ores, industrial residues, electronic waste, and other secondary sources to ensure their sustainable supply. These elements, such as neodymium, dysprosium, and cerium, are critical for advanced technologies including renewable energy, electric vehicles, defense systems, and consumer electronics. Recovery involves various techniques like hydrometallurgy, pyrometallurgy, and bioleaching to reclaim valuable materials while minimizing environmental impact. As global demand for clean energy and high-tech devices rises, rare earth element recovery plays a vital role in resource security, waste reduction, and circular economy development.

Market Dynamics:

Driver:

Rising demand from clean-energy and EV sectors

High-performance magnets in motors and turbines require consistent access to neodymium and praseodymium. Recycling is being prioritized to reduce reliance on mined sources and mitigate supply chain risks. Circular economy frameworks are

promoting recovery from industrial waste and obsolete electronics. Government-backed initiatives are supporting domestic recycling infrastructure. These shifts are reinforcing the role of REE recovery in sustainable manufacturing.

#### Restraint:

##### Environmental and permitting challenges

Multi-tiered approvals for emissions, waste handling, and land use slow development timelines. Ecological concerns and community resistance complicate facility siting. Smaller firms may lack resources to navigate regulatory landscapes. Uncertainty around policy enforcement deters private investment. These factors are constraining market expansion in sensitive regions.

#### Opportunity:

##### Stricter environmental regulations encouraging recycling

National targets for resource recovery are being embedded in circular economy policies. Incentives for low-impact processing and waste utilization are driving technology adoption. OEM partnerships are improving collection logistics and material traceability. Public concern over resource depletion is reinforcing policy support. These conditions are fostering growth in the REE recovery market.

#### Threat:

##### Immature recycling infrastructure and collection systems

Lack of standardized dismantling procedures reduces recovery rates from end-of-life products. Informal channels compromise material quality and traceability. High setup costs and technical barriers deter new market entrants. Advanced processing facilities are concentrated in select geographies, limiting global access. These challenges threaten scalability and supply chain resilience.

#### Covid-19 Impact:

The Covid-19 pandemic significantly disrupted the Rare Earth Element (REE) recovery market, causing supply chain interruptions, reduced mining activities, and delays in recycling projects. Restrictions on transportation and labor shortages hampered

collection and processing of REEs from end-of-life products. Demand fluctuations from key sectors like automotive, electronics, and renewable energy also created uncertainty. However, the crisis highlighted the importance of localized supply chains and sustainable recovery, encouraging investments in recycling technologies to reduce dependency on primary mining sources.

The light rare earth elements (LREEs) segment is expected to be the largest during the forecast period

The light rare earth elements (LREEs) segment is expected to account for the largest market share during the forecast period due to their extensive use in magnets, catalysts, and polishing agents. Elements like neodymium and cerium are critical for EVs, electronics, and glass manufacturing. Recovery technologies are improving yield and purity from industrial waste streams. Regulatory support and process innovation are boosting efficiency. Abundant availability and lower geopolitical risk favor LREE prioritization. This segment will continue to lead in recovered REE volumes.

The batteries & energy storage segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the batteries & energy storage segment is predicted to witness the highest growth rate owing to rising demand for clean energy infrastructure. Rare earths are vital for battery alloys and energy-efficient storage platforms. Recycling from spent EV batteries and grid systems is gaining traction. Automation and smart sorting are enhancing recovery rates. Strategic collaborations and policy incentives are accelerating market entry. This segment is set for rapid growth as energy storage becomes central to global decarbonization.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share is shaped by strong emphasis on circular economy practices and technological innovation in recycling processes. Governments and private firms are focusing on reducing reliance on imports through advanced recovery solutions from end-of-life products and industrial waste streams. Strategic collaborations with research institutions and clean energy companies are enhancing recovery efficiency. Increasing demand from electric vehicles, defense applications, and renewable energy sectors further accelerates regional initiatives, with robust policy frameworks supporting sustainable supply chain development.

### Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR by extensive industrial activity, growing manufacturing capacities, and supportive government programs encouraging localized recovery systems. Countries in the region are investing in large-scale facilities to process mining waste and electronic waste, strengthening domestic reserves. Expanding electronics, renewable power, and automotive industries create significant demand for recovered elements. Regional players emphasize low-cost, high-yield recovery technologies, while strategic cross-border partnerships are common to ensure resource security. Rapid urbanization and infrastructure development continue to drive advancements in recovery ecosystems.

### Key players in the market

Some of the key players in Rare Earth Element (REE) Recovery Market include Lynas Rare Earths Ltd., Iluka Resources Limited, MP Materials Corp., Aluminum Corporation of China Ltd. (Chinalco), China Northern Rare Earth Group, Arafura Rare Earths Ltd., Rare Element Resources Ltd., Texas Mineral Resources Corp., Neo Performance Materials Inc., Ucore Rare Metals Inc., Medallion Resources Ltd., REEtec AS, Eramet S.A., Minmetals Rare Earth Co., Ltd. and Rainbow Rare Earths Ltd.

### Key Developments:

In August 2025, Iluka signed a binding 15-year offtake agreement with Lindian Resources for up to 6,000 tonnes per annum of monazite concentrate from the Kangankunde project in Malawi. The deal includes a \$32 million infrastructure loan and strategic veto rights, securing feedstock for Iluka's Eneabba refinery and strengthening Australia's domestic REE supply chain.

In July 2025, Lynas signed a non-binding MoU with Korea's JS Link to develop a 3,000-tonne NdFeB permanent magnet facility near its Kuantan, Malaysia plant. The partnership creates a vertically integrated supply chain for rare earth magnets, reducing dependence on Chinese sources and supporting clean energy technologies.

### Sources Covered:

Mining Waste

Industrial Waste

End-of-Life Products

Other Sources

Element Types Covered:

Light Rare Earth Elements (LREEs)

Heavy Rare Earth Elements (HREEs)

Technologies Covered:

Hydrometallurgical Recovery

Pyrometallurgical Recovery

Solvent Extraction

Ion Exchange

Bioleaching & Biotechnology

Other Technologies

Applications Covered:

Permanent Magnets

Catalysts

Glass & Ceramics

Batteries & Energy Storage

Electronics & Semiconductors

Defense & Aerospace

Other Industrial Applications

#### Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

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 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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