

4. Incentive Scheme for Critical Mineral Recycling – Economy

The Indian government has launched a ₹1,500 crore scheme under the National Critical Mineral Mission to boost domestic supply. The scheme incentivizes the recycling of e-waste, lithium-ion batteries, and catalytic converters to secure materials for strategic sectors.

Introduction – A Strategic Push for 'Urban Mining'

The Union Cabinet has approved a significant ₹1,500 crore incentive scheme to promote the recycling of electronic waste (e-waste), used lithium-ion batteries, and end-of-life catalytic converters. This initiative, launched under the National Critical Mineral Mission (NCMM) by the Ministry of Mines, aims to establish a robust domestic ecosystem for recovering critical minerals, a practice often referred to as 'urban mining'.

About Critical Minerals – The Bedrock of Modern Technology

Critical minerals are elements that are essential for high-tech manufacturing and national security, but whose supply chains are vulnerable to disruption due to limited availability or geopolitical concentration.

Significance for India –

Industrial Raw Materials – They are the fundamental building blocks for high-growth sectors like electronics, automotive, aerospace, and renewable energy.

Advanced Manufacturing – Production of key modern components is entirely dependent on these minerals. This includes semiconductors, high-capacity batteries for electric vehicles (EVs), and powerful magnets used in wind turbines and consumer electronics.

National Security and Defense – Critical minerals are indispensable for manufacturing sophisticated defense equipment, including missile guidance systems, advanced radar, and secure communication and surveillance technologies.

Reducing Import Dependence – Developing domestic sources, including a circular economy through recycling, is crucial for reducing India's reliance on imports from a few select countries. This enhances India's strategic autonomy and insulates it from global supply chain shocks.

The National Critical Mineral Mission (NCMM) – An Overview

The new recycling scheme is a key component of the broader National Critical Mineral Mission, which aims to create a self-reliant and resilient supply chain for these vital resources.

Primary Objective – To ensure the availability of critical minerals for India's economic and strategic needs by developing both **domestic sources (mining and recycling)** and securing access from **foreign sources** through diplomatic and trade partnerships.

Mission Tenure – The mission is active from the fiscal year **2024-25 to 2030-31**.

Comprehensive Value Chain Coverage – The NCMM adopts a holistic approach, addressing every stage of the mineral lifecycle –

1. **Mineral Exploration** – Identifying and mapping potential domestic reserves of critical minerals.
2. **Mining** – Facilitating the extraction of minerals from these domestic mines.
3. **Beneficiation and Processing** – Developing technologies to upgrade and process raw ores into high-purity, industry-ready materials.
4. **Recovery from Scrap** – Creating a circular economy by promoting the recycling of critical minerals from end-of-life products like e-waste and batteries.

Deep Dive – The Incentive Scheme for Critical Mineral Recycling

This scheme is designed to serve as a **near-term solution** to bolster India's supply chain, providing a faster source of raw materials while longer-term mining and exploration projects are developed.

Scheme Duration – The program will run for six years, from the fiscal year **2025-26 to 2030-31**.

Eligible Feedstock (Sources for Recycling) –

1. **E-waste** – Discarded electronic devices containing valuable minerals like gold, silver, copper, and rare earth elements.
2. **Lithium-ion Battery Scrap** – Used batteries from EVs and electronics, which are rich in lithium, cobalt, nickel, and manganese.
3. **Catalytic Converters** – Components from end-of-life vehicles that contain platinum-group metals like platinum, palladium, and rhodium.

Target Beneficiaries – The scheme is open to both established large-scale recyclers and emerging startups. To encourage new entrants, **one-third of the total funds** are specifically reserved for small and new recycling units.

Incentive Structure

The financial support is designed to de-risk investment and reward performance.

Capital Subsidy (for CAPEX) – A **20% subsidy** will be provided on the investment made in new **plant, machinery, and essential utilities**. This lowers the initial setup cost for recycling facilities.

Operating Expense Subsidy (for OPEX) – An additional subsidy will be provided for operational costs, directly **linked to the incremental sales** achieved by the unit over a base year. This encourages higher production and efficiency.

Disbursal Mechanism – The total incentive will be released in two installments to ensure project completion and sustained operations –

1. 40% of the subsidy will be disbursed in the 2nd year.
2. The remaining 60% will be disbursed in the 5th year.

Incentive Caps –

1. **Large Units** – A maximum of ₹50 crore (with ₹10 crore of that capped for the OPEX subsidy).
2. **Small/New Units** – A maximum of ₹25 crore (with ₹5 crore of that capped for the OPEX subsidy).

Scope of Support – The scheme supports the establishment of entirely new (greenfield) units as well as the expansion, modernization, and diversification of existing (brownfield) facilities.

Source – <https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/cabinet-clears-rs-1500-crore-scheme-for-critical-mineral-recycling/articleshow/123679938.cms?from=mdr>