
BHARAT GAIN

Bharat Growth And Inclusion Network

Insights on EV Battery Recycling: **Regulatory and Industry Update**

August 2024 - December 2024



This document serves as an addendum to our previous report titled *Assessing Gaps in India's Electric Vehicle Battery Recycling Ecosystem*. Please refer to it [here](#).

Regulatory and Policy Updates

BWMR Update

The Battery Waste Management Rules (BWMR), 2022, provide the key framework for battery recycling in the country. This year, the BWMR saw significant developments, with three separate amendments introduced, compared to just one amendment last year. This shift reflects the authorities' growing attention and evolving priorities toward this critical sector. It highlights a clear intent to address operational gaps, align regulations with broader legislative reforms, and foster a more streamlined and business-friendly approach to compliance.

The third amendment¹, in particular, demonstrates this focus by aligning the rules with the Jan Vishwas (**Amendment of Provisions**) Act, 2023², which aims to decriminalize minor offences. Sub-rule (2), which previously permitted violations to be penalized under Section 15 of the Environment (Protection) Act, 1986, has been entirely removed, signalling a move away from criminal liability. Sub-rule (9) has been revised to explicitly link non-compliance with penalties under Section 15, introducing a clearer and more focused civil penalty framework. In simpler terms, this means that minor violations under BWMR will no longer lead to criminal charges but will instead result in monetary fines, making it easier for producers to comply without fear of harsh penalties. This aligns with the Jan Vishwas Act's goal to foster ease of doing business by reducing criminal liabilities for minor infractions.

State Update

Andhra Pradesh has introduced the Andhra Pradesh Sustainable Electric Mobility Policy 2024-29³, with one of its primary objectives being the promotion of sustainable end-of-life practices and e-waste recycling. While the policy emphasizes these areas, it falls short of offering incentives for establishing or enhancing battery recycling plants. Furthermore, the removal of provisions that would incentivize the extraction of valuable compounds from used batteries represents a step backwards, especially since such provisions were included in the previous policy.

A significant component of the 2024 policy is the Decarbonisation Subsidy, which supports manufacturers investing in projects such as e-waste recycling, vehicle scrapping facilities, and automated testing stations. Subsidies are provided based on the project size and its environmental impact, categorized as follows:

- Sub-large Projects: 10% (Non-Red) or 15% (Red)
- Large Projects: 20% (Non-Red) or 25% (Red)
- Mega Projects: 20% (Non-Red) or 25% (Red)

In addition, the policy offers incentives for Registered Vehicle Scrapping Facility (RVSF) and Automated Testing Station (ATS) operators, encouraging them to adopt sustainable practices and efficiently manage unfit vehicles. The incentives include:



- 45% investment subsidy (capped at INR 7 Cr for ATS and INR 10 Cr for RVSF)
- 50% land cost rebate (up to INR 20 Lakh)
- Power tariff reimbursement of INR 2/unit for six years
- 100% reimbursement for Net SGST, stamp duty, and land conversion fees
- Support for quality certification costs

Though crucial, RVSFs and ATS offer a limited scope as they primarily focus on vehicle dismantling and fitness testing, without addressing the broader recycling process. Similar incentives, as provided to RVSF and ATS operators, could have been extended even to recycling units as well. However, the Decarbonisation Subsidy could play a key role in creating a market for battery recycling units, offering the necessary support to stimulate growth in this sector.

Industry Recommendations

GST Rationalisation

The industry has been advocating for reducing the GST rate on lithium-ion batteries (currently taxed at 18%) to align with the 5% GST on electric vehicles (EVs). There is also a demand to classify lithium-ion batteries under Chapter 85 of GST, similar to lead-acid batteries, which are taxed at 5% as e-waste. Sulajja Firodia Motwani, Chair of FICCI's Electric Vehicle Committee, emphasized the need for such tax reforms to accelerate EV adoption.⁴ In the post-election budget session, Finance Minister Nirmala Sitharaman announced a complete customs duty exemption on 25 critical minerals, including cobalt, lithium, and copper. By reducing the cost of importing these materials, industries that use these minerals—like electronics and EVs—might be more inclined to invest in recycling these materials from used products. This could increase demand for recycled materials, motivating the recycling sector to improve its processes and recover more valuable resources from waste.

Strengthening Lithium-Ion Battery (LIB) Regulations

India should continue to update and strengthen regulations around LIBs to streamline the entire ecosystem, ensuring improvements in performance, sustainability, and recycling. India could implement a system similar to the U.S. model, where recyclers are incentivized through government support, including loans and tax credits. In line with the EU, India should mandate battery manufacturers to provide a carbon footprint declaration for their products, particularly EV batteries. This would prevent greenwashing, promote transparency, and ensure that sustainability claims are backed by concrete data, leading to more informed decision-making for consumers and regulators alike.⁵

Additionally, introducing a Productivity-Linked Incentive (PLI) for efficient LIB recyclers would encourage greater recovery of critical minerals. However, reports suggesting the implementation of a PLI have remained mere rumours, and the industry continues to advocate for its introduction to support and incentivize recycling efforts.



Critical Minerals

In her 2024 Budget speech, the Finance Minister announced the ambitious Critical Mineral Mission, to ensure India's self-sufficiency in crucial minerals like cobalt, copper, lithium, and rare earths. The mission is expected to drive domestic production, facilitate recycling, and enable overseas acquisitions while focusing on technological innovation, workforce development, and a robust financing framework. In August 2024, Mines Secretary V L Kantha Rao indicated that the mission would be launched later that year. However, despite these reports, there has been no subsequent update on its progress or official rollout.⁶

Coherence between e-waste management policies and those encouraging the recycling of spent technologies is needed. There is also a need to formalise the reuse and recycling sector, which remains unorganised and thus afflicted by major inefficiencies.⁷

EPR Floor Price

Environmental Compensation (EC) is a penalty imposed on producers who fail to meet their recycling targets as mandated under the Extended Producer Responsibility (EPR) framework. To avoid paying the full EC penalty, producers can purchase EPR credits from authorized recyclers who have recycled more batteries than their targets. The EPR credit cost is directly tied to the EC value, ranging between 30% and 100% of the EC. This allows producers to meet their obligations at a cost lower than the full environmental compensation while incentivizing recyclers to exceed their recycling targets.

The EPR floor price sets the minimum price for EPR credits. It ensures that EPR credits are not undervalued and legitimate recyclers are protected by providing sufficient returns to cover recycling costs, logistics, health, and safety measures. For lead-acid batteries, the floor price reduces competition from the informal sector, which often causes environmental damage. For LIBs, the floor price addresses high processing costs and supports investments in infrastructure, research, and development.

Issues with EPR Floor Price

Recyclers struggle with the low EPR floor price, which fails to cover the high costs of sustainable operations. This underpricing also encourages fraudulent recyclers who mismanage waste. For example, the UK charges producers ₹586/kg for recycling EV batteries, while India's proposed floor price is only ₹120/kg.⁸ This disparity makes it challenging for Indian recyclers to operate sustainably, particularly when dealing with battery types like LFP, which yield low recoverable value.

The Material Recycling Association of India (MRAI) emphasizes the need for a higher EPR floor price to ensure recycling remains financially viable. According to MRAI, increasing the EPR floor price would have a minimal economic impact on consumers. For instance, a ₹4,000 power bank would see only a 0.6% price increase. The organization has urged the Central Pollution Control Board (CPCB) to revise the EPR floor price upward and conduct a detailed study on the economics of battery recycling. This study will help analyze technologies and business models to establish fair pricing.⁹



While recyclers argue that the current EPR floor price is too low to sustain operations, manufacturers contend that it is already high, increasing compliance costs and potentially raising consumer prices. Experts also recommend a periodic review of the EPR floor price to reflect advancements in recycling technologies and improved collection efficiencies, ensuring the system remains dynamic and equitable.

Summing it Up

The battery recycling sector is at a crossroads, awaiting a decisive policy push to unlock its potential. With the increasing demand for critical minerals, it's crucial to implement effective recycling policies that reduce reliance on mined resources. Without incentives for battery recycling plants, the sector struggles to grow. Targeted policy reforms are needed to strengthen the recycling ecosystem, ensuring a sustainable supply chain for EVs and renewable energy. A comprehensive national framework is necessary, as it could provide guidance to states on introducing specific provisions or policy incentives to enable a recycling ecosystem for secondary materials. Given that a majority of state policies are yet to adopt specific measures in enabling new battery recycling plants, a national-level impetus could spur the ecosystem. Similarly, assessments of the industry's needs must take into account the impact of global mining trends, international market disruptions, and supply chain risks, to ensure the growth trajectory aligns with India's 2030 ambitions.



END NOTES

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