GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**RAJYA SABHA**
**UNSTARRED QUESTION NO. 3727**
TO BE ANSWERED ON 03.04.2025

**Recycling of lithium-ion batteries**

3727. SMT. RENUKA CHOWDHURY:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

(a) the total battery waste generated from lithium-ion batteries used in Electric Vehicles (EVs) across the country;
(b) the manner in which the battery waste is being utilised across the country;
(c) the details of schemes, programmes and incentives currently operational for the establishment of recycling facility for the same; and
(d) whether Government has assessed the environmental impacts of the waste generated from lithium-ion batteries, if so, the steps taken in this regard?

**ANSWER**

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI KIRTI VARDHAN SINGH)

**(a) to (d):** Improper disposal of waste batteries can lead to contamination of soil and water. To ensure environmentally sound management of waste batteries, the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India has published the Battery Waste Management Rules, 2022 on 24th August, 2022. The rules cover all types of batteries viz. Electric Vehicle batteries, portable batteries, automotive batteries and industrial batteries. The rules are based on the concept of Extended Producer Responsibility (EPR) where the producers, including importers, of batteries have been obligated for collection and recycling or refurbishment of waste batteries. EPR mandates that all waste batteries are to be collected and recycled or refurbished, and it prohibits disposal in landfills and incineration. The rules mandate producers to use minimum percentage of domestically recycled materials in manufacturing of new batteries. Centralized online EPR portal has been developed for registration of producers and recyclers/ refurbishers, exchange of EPR certificates between producers and recyclers/ refurbishers and filing returns by producers and recyclers/ refurbishers.

An amount of 2570.26 Metric Tonnes of lithium-ion waste batteries generated from electric vehicles (EVs) have been procured by recyclers from the year 2022 till date across the country. Different materials and metals recovered through recycling of waste batteries are used in various industries including manufacture of battery precursor materials.

Ministry of Electronics and Information Technology (MeitY) has notified the Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS) vide Gazette Notification No. dated 01.04.2020 which provides financial incentive of 25% on

capital expenditure for the identified list of electronic goods that comprise the downstream value chain of electronic products which includes E-waste recycling facility for extraction of precious metals from electronic components. The detailed information about the scheme is available at weblink https://www.meity.gov.in/esdm/SPECS. Also, to upgrade informal sector into formal value chain a project on "Informal Sector Capacity Building Upgradation with formation of recycling clusters under MSME CDP scheme" has been initiated by MeitY.

MeitY transferred cost effective Li-ion battery recycling technology indigenously developed by Centre for Material for Electronics Technology (C-MET) to several recycling industries and start-ups as part of Mission LiFE under "Promote circularity campaign".

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