

**Submission
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INQUIRY INTO USE OF E-SCOOTERS, E-BIKES AND RELATED MOBILITY OPTIONS

Organisation: Australian Council of Recycling

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To whom it may concern

Inquiry into the use of e-scooters, e-bikes and related mobility devices

On behalf of the Australian Council of Recycling (ACOR), we welcome this opportunity to comment on the opportunities and requirements for e-mobility devices at end of use, which include the priority of safe collection for either reuse, recycling or safe disposal.

ACOR is the peak industry body for the resource recovery, recycling, and remanufacturing sector in Australia. Our membership is represented across the recycling value chain, and includes leading organisations in advanced chemical recycling processes, CDS operations, kerbside recycling, recovered metal, glass, plastic, paper, organic, tyre, textile, oil and e-product reprocessing and remanufacturing, and construction and demolition recovery. Our mission is to lead the transition to a circular economy through the recycling supply chain.

ACOR, and member organisation Revolve Recycling, are focused on improving the management of e-mobility devices at the end of their lifecycle. As the technology scales and becomes more widespread, it is crucial to establish requirements to ensure effective repair, reuse, recycling and disposal processes.

E-mobility devices present social and environmental opportunities; however, the batteries involved also pose safety risks, particularly at end-of-use for the waste and recycling sectors. Batteries—in loose or embedded form—are an alarming hazard in both kerbside and commercial waste and recycling streams. Research by [ACOR and the Waste Contractors and Recyclers Association \(WCRA\) this year revealed that there are between 10,000 and 12,000 fires and heat events a year across Australia's waste and recycling system](#), as a result of incorrectly disposed batteries and consumer electronics. Alongside significant infrastructure losses, recycling workers' safety and lives are at risk.

Revolve Recycling is improving end-of-use outcomes for bikes and e-bikes by refurbishing donated and discarded push bikes for re-use, as well as adding value by modifying pushbikes into e-bikes. Revolve Recycling has trialled a process for reuse that is safe and repairable, with all necessary warranties. However, Revolve Recycling finds many used e-bikes are in poor condition, with some subject to dangerous unauthorised alterations.

Revolve Recycling have worked with NSW EPA to catalyse waste reduction in bike shops, targeting the collection of waste rubber, metal and batteries, and electronic components in general. Half of the bike shops involved in the program have signed on to safely collect e-bike batteries, however with participants numbering around 15 out of approximately 200 bike shops in NSW, there are clear gains to be made in supporting wider involvement. To establish a safe and robust collection network for e-bike batteries within bike shops, it is essential to support these shops to attain the infrastructure to safely collect used e-mobility batteries, particularly in regional and remote Australia. Better data is also required on the number and type of battery-assisted mobility devices in Australia.

A major priority is expedited delivery of comprehensive EPR regulation for all consumer electronic products (including batteries from e-mobility devices), to fully fund safe collection—and, where possible, reuse and recycling—underpinned by a deposit scheme to strongly incentivise safe disposal of batteries.

Comprehensive EPR regulation should allow brand owners to discharge their obligations by engaging directly with recyclers, as some in the e-mobility space are already doing—or by joining a product stewardship scheme. EPR arrangements should capture online sales, where lower-quality devices are often sold.

While the product stewardship scheme B-cycle has e-bike and e-scooter batteries within its product scope, most drop-off points are not suitably equipped to receive e-mobility batteries. The scheme is collecting only 14% of in-scope material. A targeted collection rate must be supported by a detailed delivery plan developed in consultation with the waste and recycling sectors, where 86% of in-scope batteries are ending up. The costs of collecting, transporting and processing e-mobility batteries are significant.

Product stewardship arrangements that lack incentives for consumers to return items to away-from-home collection points often result in poor recovery rates. A successful model to consider is container deposit schemes (CDS), which provide a refund for the return of beverage containers. The risks to health and the environment from improper disposal of batteries are not deterrent enough—or not widely enough understood—to motivate most community members to seek safe disposal options. CDS effectively aligns economic incentives with environmental goals. Applying a similar approach to battery disposal would significantly enhance safe disposal practices.

ACOR's members bring considerable real-world resource recovery and recycling expertise based on their operating in every jurisdiction in Australia and internationally, and we would be very pleased to facilitate further dialogue and consultation on the above matters.

Yours sincerely

Policy Adviser