

# Australian Waste and Recycling Industry Joint Call to Action: A National Response to Battery Fires

## Batteries pose a major hazard in conventional waste and recycling streams

All loose and embedded batteries, including those in consumer electronics, pose an extreme hazard when they are thrown away in conventional waste and recycling streams: they can cause fires, which not only pose a heat risk but also release toxic gases. Our people, facilities and environment are at serious risk from these fires.

And these risks are growing—industry research shows there are almost thirty fires per day across Australian waste and recycling facilities. This amounts to between 10,000 and 12,000 battery related fire events every year across the country, with enormous social, economic and environmental costs.

## What and where are these batteries?

Over recent years, there has been a rapid growth in the prevalence of lithium-based batteries (LiB) in consumer items.

Lithium-based batteries are more volatile than conventional battery formats due to their susceptibility to thermal runaway, which can lead to rapid and dangerous releases of heat, gases, and fires or explosions. The prevalence of LiB has exponentially increased the risk of battery-related fires in waste and recycling systems.

While many batteries are sold in loose form, more and more consumer electronics now contain lithium-based batteries. These products are portable, and can easily—and incorrectly—be disposed of in conventional waste and recycling systems, including household recycling. The growth of innovative transport options like e-scooters and e-bikes is creating yet more powerful batteries to contend with in consumer products. At the same time, the design of items with integrated batteries, such as disposable vapes or light-up shoes, makes it near impossible to remove, or even identify, such batteries at the end of the item's use.

Meanwhile, there is a growing variety of lithium chemistries in batteries, such as lithium-ion, lithium-polymer, and lithium iron phosphate, which differ in their energy density, stability, and performance characteristics. There is, however, very little labelling or transparency about these specific chemistries, which presents a further risk to workers, fire fighters and the general public.

## There are very few avenues to safely dispose of electronic items

Despite a variety of product stewardship schemes that may accept some forms of batteries and electronics, there are still perilously few options for the safe disposal of many types of electronic items that contain batteries, which ultimately means that the community is often confused about correct disposal options for end-of-life loose and embedded batteries.

Some members of the community may store them at home, while others incorrectly dispose of them in household or commercial waste or recycling streams.

Product stewardship schemes, where manufacturers or brands take responsibility for the entire life cycle of their products, do not apply to most items with batteries that are sold in Australia.



## Joint call for urgent action by Australian, State and Territory Governments

Our collective focus must be on risk mitigation. All Governments must prioritise with urgency actions to reduce the risks from batteries when disposed of in conventional waste management streams. Sustainability initiatives must also progress however the immediate challenge is to protect our people, infrastructure, and the financial sustainability of the waste & resource recovery sector.

In order to safeguard Australia's waste, resource recovery and recycling sectors and protect the lives of our workers, all of Australia's peak industry bodies across the waste and recycling value chain, call on Australia's governments to urgently progress the following measures:



State, Territory and Local Governments to ban the disposal of batteries in household kerbside, commercial, industrial, construction and demolition waste and recycling bins; and apply penalties for non-compliance.

All State and Territory Governments must urgently roll out a comprehensively accessible network of approved 'safe disposal' collection points for end-of-life loose and embedded batteries, to ensure there is always an easily accessible option for the community.

State and Territory Governments, supported by the Australian Government must deliver a nationally consistent, comprehensive awareness-raising and education campaign, to ensure that the community understands how to dispose of batteries and consumer electronics safely and appropriately.

State and Territory Governments must underwrite insurance for the waste and recycling sectors, and also support industry in mitigating risks through measures including grants and an expanded collection network, prioritising regulatory reform to address the dangers posed by batteries.

All Australian Governments must work together to expedite the delivery of national extended producer responsibility (EPR) regulation underpinned by a deposit scheme for all consumer electronic products, to fully fund safe collection, where possible, recycling, or disposal. This must deliver an integrated scheme covering all consumer e-products, including batteries and items containing batteries (i.e. vapes), and leaving no gaps in relevant product categories.

Setting ambitious targets for battery recovery, to ensure accountability, and delivery of meaningful outcomes by those placing these items on market, must form part of the overall cross-government strategy.

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