Inquiry into e-mobility safety and use in Queensland

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Submitter Comments:

A | Level 27, 101 Collins Street, Melbourne VIC 3000 E | contact@bsc.org.au T | 1300 853 820 W | bcycle.com.au

Attention: State Development, Infrastructure and Works Committee

Dear Sir / Madam,

A case for Product Stewardship to improve e-mobility safety

The BSC is a not-for-profit organisation incorporated in 2018 for the sole purpose of operating Australia's national battery stewardship scheme, B-cycle. B-cycle has today collected over 6 million kilograms of used batteries reducing the risk of fires and other hazards to the general community.

The BSC has been working with the e-mobility sector for the past 2 years to implement battery stewardship, battery safety, and compliance to standards for the supply of safe batteries for e-mobility vehicles.

Along with the Bicycle Industries Australia (BIA) we have been working to consider how the e-mobility sector can address these sustainability matters. As a participant of the BIA Sustainability Committee our primary focus is to secure the participation of the e-mobility sector within the national B-cycle battery stewardship scheme to improve e-mobility safety in use, storage, and recycling.

A nationally consistent battery stewardship approach is not merely a policy ambition, it is a public safety, environmental and economic necessity. The cost of inaction is already being felt across Australia: fires are on the rise, valuable materials are being lost to landfill, communities are being placed at risk. The burden is falling on councils, waste operators and government agencies.

Australia is on the brink of an e-mobility battery crisis. Many consumers remain unaware of the increasing risks associated with e-mobility batteries and are confused. Without stronger action, the following challenges will continue to escalate.

e-mobility battery challenges

- Imports of low-quality e-mobility batteries have surged in recent years, with little regulatory oversight.
- + Lithium battery-related fires, both during use and from improper disposal, are increasing at an alarming rate.
- + Public awareness of battery-related risks remains low. Most consumers do not differentiate between battery types or understand proper disposal methods.
- + The cost of safely collecting, sorting and recycling batteries is high. Even with improved consumer behaviour, funding is essential, particularly through regulation to address freeriders.
- + B-cycle is leading the charge but cannot scale to meet the rising risk without nationally harmonised regulation.

B-cycle Stewardship Scheme - Regulation Ready

To truly solve the problem, governments need to act. For battery stewardship to scale it needs policy alignment, regulation, proper investment and long-term certainty. Without consistent regulation and sustainable funding, Australia's battery challenge will escalate putting lives, infrastructure and the environment at risk.

The recent introduction of the NSW Product Life Cycle Responsibility Act 2025 received strong crossparty support, with 16 MPs from across the political spectrum speaking in support of the Bill. This reflects the clear public interest in ensuring safety and protecting critical infrastructure, an issue that garners public support and attracts bipartisan backing.

Australia needs a nationally consistent approach to battery stewardship, but the risks we face today can't wait for consensus tomorrow. As battery fires, lost resources and public confusion grows, states and territories have a clear choice: act now and lead, or continue to bear the rising costs to health, safety and the environment.

BSC strongly supports national alignment but also stands ready to work with individual states and territories. New South Wales has already taken that step. Other states and territories are well-positioned to drive reform and become part of the solution.

B-cycle provides a proven, regulatory-ready model to enable swift and effective implementation. B-cycle 2.0 has already received interim authorisation by the ACCC and is ready to manage e-mobility batteries and improve safety for the community.

The challenge isn't system design, capacity or awareness, it is funding. Current resources are insufficient to meet the operational needs of collecting, sorting, processing batteries and scaling to meet future growth. For further information on B-cycle 2.0 please refer to the Scheme Design B-cycle 2.0 Design 20250130

What the Queensland Government can do

- + Collaborate across jurisdictions to align on regulated product types, and compliance mechanisms.
- Adopt or mutually recognise a shared regulatory framework for battery stewardship, drawing on NSW's Product Lifecycle Responsibility Act 2025 as a model.
- Mandate importer and producer participation to eliminate free-riders and provide stable funding for education, infrastructure, and recovery.
- Establish a Circular Battery Taskforce, bringing together B-cycle, government, councils, emergency services and industry to guide coordinated implementation.
- Partner with B-cycle to scale Drop off access, manage compliance, and deliver tailored communications to regional, remote and high-risk communities.

Consumer Education is essential

The BSC is poised to work with governments and communities to address safety risks associated with e-mobility batteries once regulation is in place to secure appropriate funding. A key component of our work is, and will be, to educate the community about the safety risks.

Currently we are working with the BIA to educate retailers and e-bike uses. The following is an example of the messaging currently in use.



Storage guidelines

- Cool, dry location. Store e-mobility batteries in a well-ventilated area away from direct sunlight, heat sources, and moisture, ideally on the bike itself.
- Partial charge for storage. If storing an e-mobility battery for an extended period, leave the battery at around 50% charge to prevent overcharging or deep discharge.
- Keep batteries separate. Avoid storing e-mobility batteries near metal objects or flammable materials to reduce the risk of short circuits or fires.
- + Avoid extreme temperatures. Battery performance drops at low temperatures due to slower chemical reactions and overheating can occur at high temperatures causing harm to battery health and a potential safety risk.
- Avoid metal objects. Store away from other batteries and metal objects to prevent short circuits.
- Restricted access. Keep batteries out of reach of children.

Safe charging habits

- Use approved chargers. Only use chargers supplied or approved by the battery manufacturer.
- Supervise charging, charge e-mobility batteries in a well-ventilated area on a non-flammable surface. Never charge batteries when unattended or overnight. Consider using a powerpoint timer. Do not over charge, disconnect from the charger once charged.
- Emergency access. Charging should not be done in hallways or entrances to buildings. Ensure charging areas are clear of obstructions, allowing quick exits in case of an emergency.
- **Temperature awareness.** Avoid charging in extreme temperatures. Let hot batteries cool naturally away from flammable materials before charging.
- + Ensure proper ventilation. Never charge an e-mobility battery in a confined space or near flammable materials.

Responsible recycling

- Never bin your batteries. Never dispose of e-mobility batteries in general waste or recycling bins due to fire risks and environmental concerns.
- + Tape exposed terminals. If there is exposed metal on your battery, tape it with clear tape before recycling with B-cycle.
- Use a B-cycle Drop off point. Take used e-mobility batteries to a certified B-cycle Drop off point. Find the nearest location at bcycle.com.au by entering your postcode and battery type.
- Handle damaged batteries safely. If an e-mobility battery is leaking or damaged, contact the manufacturer for guidance. If they cannot assist, take the battery to a council depot or transfer station and inform staff to handle it separately.

The BSC are ready to assist the Queensland Government in addressing the safety risks associated with e-mobility. We welcome the opportunity to expand on this paper and to continue the discussion to realise a harmonised regulatory environment that supports the expansion of battery Product Stewardship within Australia.

Yours Sincerely,



Brett Buckingham Director - Engagement & Technology Battery Stewardship Council & B-cycle

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