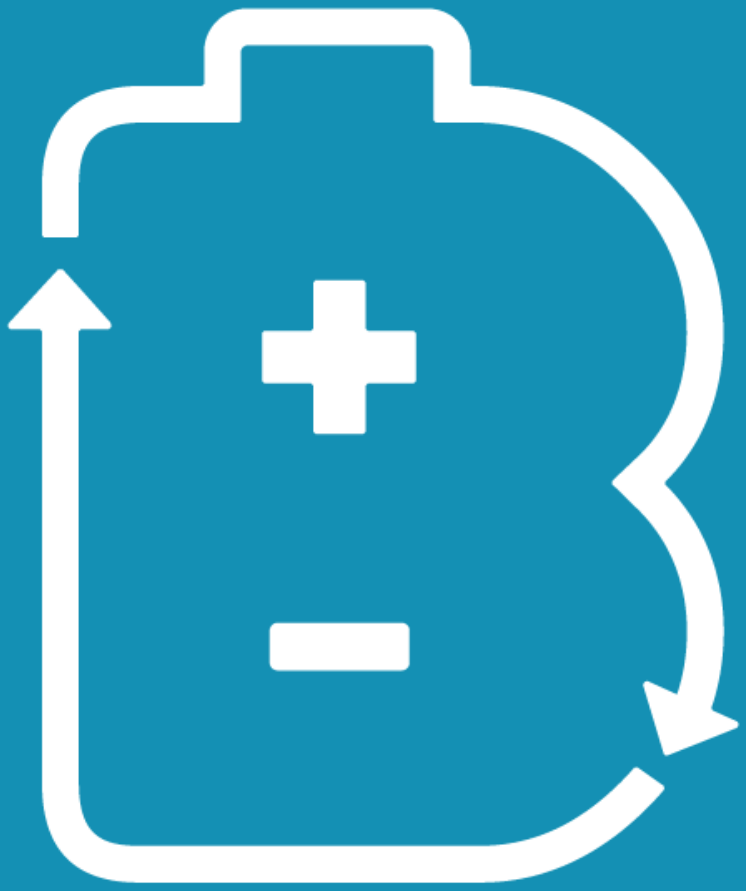


BATTERY STEWARDSHIP COUNCIL SUBMISSION

PRODUCTIVITY COMMISSION: OPPORTUNITIES FOR CREATING A CIRCULAR ECONOMY

NOVEMBER 2024

Battery Stewardship Council

B-cycle Battery Recycling

Contents

1. Summary of recommendations 1

2. Challenges for circularity in Australia 2

2.1 The role of stewardship in delivering circularity outcomes 2

2.2 Australia's unique challenges 2

2.3 Challenges specific to stewardship schemes 2

3. Stewardship challenges for achieving circularity outcomes 3

3.1 The long road 3

3.2 Cost of free riders 3

3.3 Time to secure engagement 3

3.4 Need to adapt and change 3

4. The proposed solution 4

4.1 Benefits of light regulation compelling participation 4

5. Building circularity into stewardship schemes 4

6. About the BSC 5

6.1 History of the scheme 6

7. BSC Mission 6

8. Scheme design for B-cycle 7

8.1 The proposed B-cycle 2.0 scheme principles 8

8.2 How B-cycle works 9

8.3 Authorised B-cycle 1.0 scheme design elements 9

8.4 Batteries included in B-cycle scope 10

8.5 Challenges since implementation 10

9. The importance of stewardship for circularity 10

10. Existing schemes provide important learnings for circularity 11

10.1 Address the anti-competitive behaviour of free riders 12

B-cycle Battery Recycling

Australian Government Accredited Product Stewardship Scheme

This Scheme is authorised by the Australian Competition & Consumer Commission (ACCC), accredited by the Australian Government, and has received financial support from the Australian Government and industry.

1. Summary of recommendations

In determining the need for policy, procurement, investment or regulatory intervention to achieve circularity outcomes, it is important to first establish the challenges to be solved, and what level of encouragement or regulation is needed to address a problem product.

Having navigated the establishment and deployment of a voluntary scheme, the BSC is well placed to understand the challenges and how a simplification of regulatory interventions could transform stewardship with minimal delay and reduced cost to government, industry, and consumers.

Recommendation 1. Work with the DCCEEW to implement stewardship regulations that empower industry to deliver circularity outcomes

- Introduce regulation that compels liable parties, e.g. importers of products, to join an accredited scheme responsible for solving market failures and deliver circularity outcomes (see attachment).

Recommendation 2. Embed Product Stewardship in Circularity Policy

- Define the product stewardship responsibilities of government, producers, importers, distributors, retailers, and users, and for priority listed products compel these parties to participants in accredited schemes.
- Establish and enforce import standards to address product quality and information; for example battery products must be labelled, meet quality standards, and be designed for recycling.

Recommendation 3. Product declarations

- Require importers and product suppliers to provide product declarations, design for recycling / recycled content, battery removability / reuse import standards, product information.

Recommendation 4. Provide financial support for circularity

- Government provide appropriate tax incentives, loans & procurement priorities to support circularity outcomes e.g. for participation in accredited stewardship schemes that facilitate circular economy outcomes
- Create a circular economy investment fund to support innovation and regional infrastructure development.

Recommendation 5. Create a roadmap for improving logistics efficiency

- Government to support the establishment of regional hubs for pre-processing, aggregation, and staging.
- Support state government regulation for facility permitting through speedy approvals, regional zones.

Recommendation 6. Short circuit insurance roadblocks

- Creating a circularity insurance program to underwriting stewardship participants for recycling hubs and facilities.

Recommendation 7. Work with GS1 to strengthen accountability

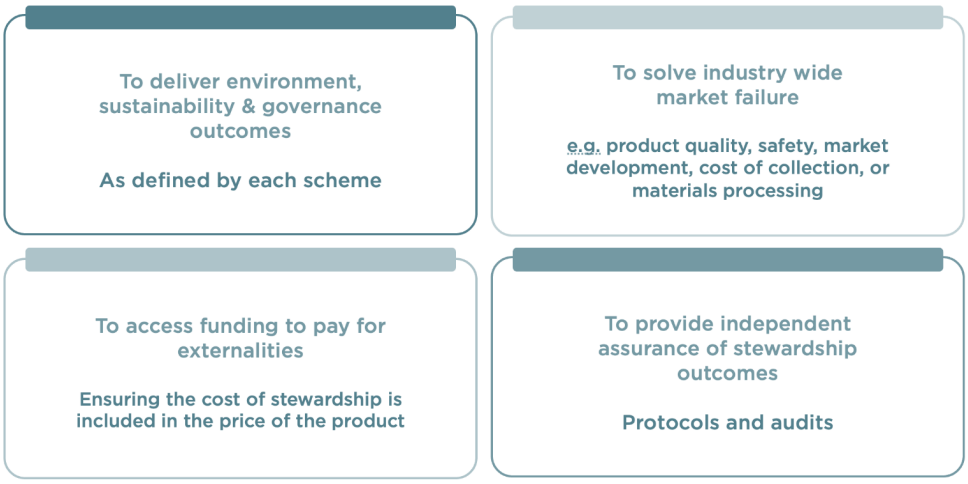
- Traceability and reporting of stewardship outcomes with third party verification of end-of-life outcomes to demonstrate the full chain of custody until the material become a new product.

Recommendation 8. Invest in education

- Governments to enable a coordinated approach to education about stewardship and circularity and their critical role for future well-being.

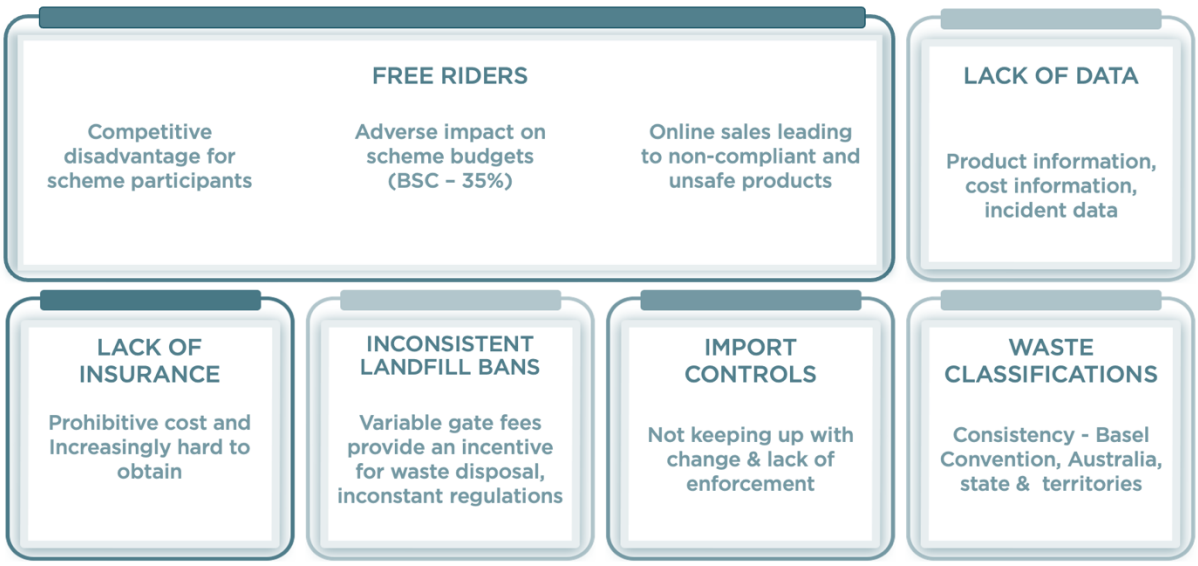
2. Challenges for circularity in Australia

2.1 The role of stewardship in delivering circularity outcomes



2.2 Australia's unique challenges

2.3 Challenges specific to stewardship schemes



3. Stewardship challenges for achieving circularity outcomes

The core challenge to achieve strong circularity outcomes is to secure full industry participation in a scheme, while still allowing industry the flexibility to change and adapt the scheme to achieve stewardship outcomes as circumstances and the market dictate.

3.1 The long road

For those seeking to action the Minister's product list by initiating a scheme or expanding an existing scheme into new product categories, the pathway requires:

- initiating action with limited resources
- clear definition of scope in order to identify obligated parties
- consultation on the Scheme design and establishing the value proposition
- negotiating participation and funding need for launch and implementation
- engaging new importers or expanding into emerging product categories.

3.2 Cost of free riders

The importance of whole of industry engagement cannot be understated. Free riding is problematic because it:

- has a direct and significant impact on scheme budgets and their corresponding ability to achieve stewardship outcomes
- disadvantages participating importers by enabling free rider competitors to avoid a levy and receive a price advantage in highly competitive markets
- inevitably means schemes pay for the collection and recycling of products imported by free riders.

3.3 Time to secure engagement

Everyone who has dedicated themselves to launching a scheme knows it is a very long process. For batteries, the time between the priority listing and launch was 9 years. This is not unusual and not desirable for problem products.

3.4 Need to adapt and change

A major challenge for co-regulatory schemes is the inability to flex and adapt in response to lessons learned or market realities. Problem products are rarely static and constraining the scheme to its original design can have far reaching impacts, often inconsistent with the object of the Act.

By introducing light regulation to empower industry to deliver circularity outcomes, Government could radically transform the stewardship environment so that the objects of the Act could be achieved in a much shorter and cost-effective manner, allowing industry to take action but also remain accountable.

4. The proposed solution

BSC is in the process of undertaking a major scheme review to future proof circularity and stewardship outcomes. The proposed changes will only be successful if accompanied by government action to address free riders. In this context, BSC has prepared draft regulations to demonstrate how this might be achieved. In summary, the proposed draft Rule would:

- compel participation in accredited stewardship schemes for priority products
- include a new definition of liable parties to capture online sales
- see a scheme to prepare a 5-year plan to address market failures and achieve circularity outcomes including providing financial resources to implement the plan
- require public accountability with independent auditing of scheme outcomes.

4.1 Benefits of light regulation compelling participation

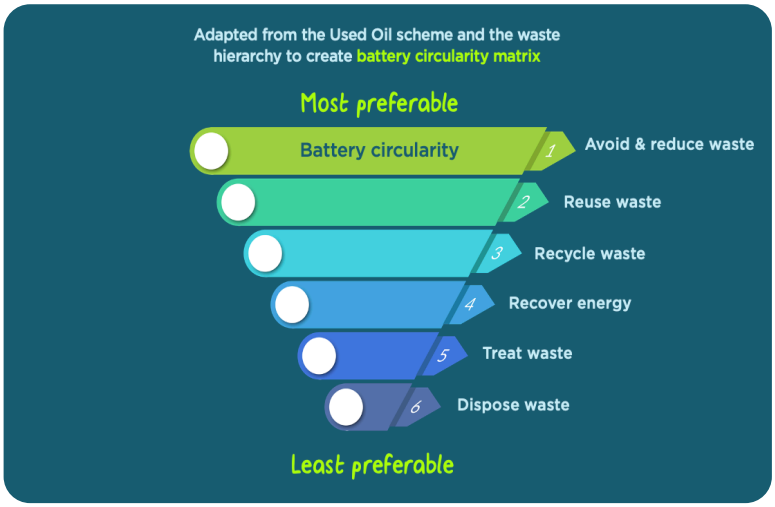
The approach proposed by the BSC would:

- allow industry to gain control of the approach while remaining accountable
- provide fertile ground for innovation and continual improvement
- reduce the cost of free riders by creating a level playing field for importers of problem wastes
- lower cost of administration than co-regulated or mandatory schemes (usually in the order of 20%)
- enable greater flexibility to pivot and adapt to changing market realities and industry experience.
- allow for changes to fee structure as needed in response to changing costs or changing commodity markets
- ensure problem wastes are managed in a timely manner.

5. Building circularity into stewardship schemes

In our current scheme review, the BSC is developing performance-based processing rebates to incentivise circularity and improve scheme outcomes. Eligibility for processing rebates would be determined using a calculator linked to resource recovery outcomes. This model is still draft and subject to consultation prior to adoption, but the opportunity it presents may be useful for the Commissions consideration:

WORKING DRAFT CIRCULARITY CRITERIA



ESG Footprint
Incentivise a reduction in the sustainability footprint of processing facilities by minimising energy use, emissions and waste.

Audit Outcomes
Incentivise best practice in audit outcomes to improve conformance and resolve any non-conformities promptly including:

1. No non-conformities
2. Corrective Action Plan completed within 3 months
3. Audits are completed on time.

Transparency
Incentives timely, accurate and comprehensive request data including recovery rates.

B-cycle Promotion
Provided to participants who demonstrate ongoing and pro-active marketing of B-cycle.

These circularity criteria could be further refined to apply to other products or other parts of the supply chain and to focus more directly on circularity across the supply chain.

WORKING DRAFT CIRCULATORY MATRIX

		B-cycle circularity outcomes matrix					
	LEVEL	LEVEL 1. REUSE	LEVEL 2. RECYCLING	LEVEL 3. DOWNCYCLING	LEVEL 4. ENERGY RECOVERY	LEVEL 5. TREATMENT	LEVEL 6. WASTE DISPOSAL
	Example	Recovered materials used in new batteries or battery components e.g black mass for cathode manufacture.	Recovered materials used in products where they can be recovered again e.g. Copper plate	Recovered materials used in un-recoverable or lower environmental value end products e.g. concrete or fertiliser.	Recovered materials used for energy recovery	Recovered materials encapsulate in legally permitted manner.	Recovered materials sent to landfil.
INDICATOR	PART A PERFORMANCE	Weighted rebate eligibility score (maximum of 100%)					
Processing outcomes	Evidence based recovery	90 percent	80 percent	70 percent	60 percent	50 percent	25 percent
INDICATOR	PART B PERFORMANCE						
Environmental footprint	Recovered energy from Used Batteries	1 percent					
	Electrolyte recovery	1 percent					
	Emissions reduction/Clean Energy Use	1 percent					
Audit outcomes	Audit completed on time	1 percent					
	No non conformities	3 percent					
	Required Corrective Action Plans completed within 3mths	1 percent					
Transparency factor	Requests for data and information provided on time	1 percent					
B-cycle promotion	Ongoing and pro-active marketing of the B-cycle Scheme	1 percent					

6. About the BSC

B-cycle is an industry-led stewardship scheme launched in February 2022 to facilitate responsible management of all types of used batteries and battery products. The Scheme has been designed to expand the scope on a staged basis beginning with loose handheld batteries in early 2022 and micro-mobility batteries were included from early 2024. The Scheme achievements are impressive for such a young scheme, yet with the rapidly changing risk profile of batteries, BSC and our stakeholders believe a step change is needed.

6.1 History of the scheme

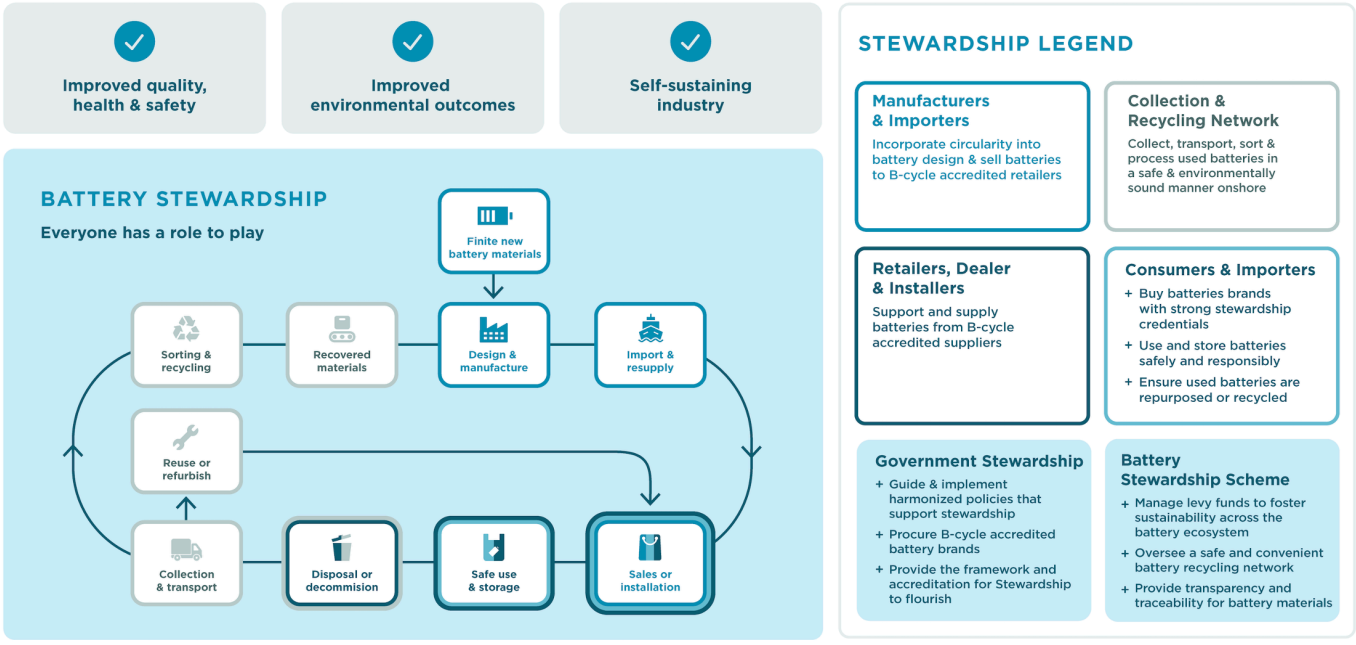
Between 2013 and 2020, government and industry collaborated to further the goal of implementing battery stewardship in Australia. The Battery Stewardship Council (BSC) was formed in 2018 with the primary goal of establishing a battery stewardship scheme in Australia that would see a significant increase in battery collections and recycling.

Batteries imported by members of the scheme would attract a levy of four cents per 24 grams (the median weight of a AA battery). Rebates are paid to recyclers to help offset the cost of collecting, sorting and processing expired batteries. Members of the scheme agree to only deal with other members along the supply chain, with limited exceptions such as for pre-existing arrangements.

In 2021, the BSC received a Product Stewardship Investment Fund Grant which, together with matching funds from industry enabled the BSC to launch to the public on the 16th February 2022 and has since seen significant progress in providing accessible B-cycle Accredited Drop off points around the country and more than doubling the collection rate of batteries.

7. BSC Mission

To create a circular economy for batteries as a leading model for product stewardship. This will be achieved by ensuring B-cycle continues to be a trusted and successful Scheme that conserves resources, reduces environmental and health impacts, and improves safety.



BSC long term goals

- Zero battery waste to landfill through strong community accessibility, & engagement.
- Safety risks of batteries are successfully managed by the community & industry.
- The domestic battery recycling industry is self-sustaining, profitable, and growing.
- Sustained financial security and efficiency for the Scheme.

Short term goals

- Ensure the financial stability of the Scheme through the re-authorisation of B-cycle 2.0 to deliver impactful stewardship outcomes.
- Strengthen the validation and audit processes to ensure that participant obligations are met, and Scheme integrity is maintained.
- Expand the scope of the Scheme to include additional battery categories, such as vapes, small electrical and electronic equipment (SEEE), and portable energy storage batteries.
- Expand the national network of battery Drop off points to make battery recycling safer and more convenient for consumers.
- Raise awareness and encourage positive behaviour around safe battery use, handling, storage, and recycling.
- Continue engaging with industry to strengthen battery stewardship in the energy storage and electric vehicle sectors.

Regulatory reform

- BSC and its members agree regulation to address free riders is an essential pillar of B-cycle 2.0.
- BSC strongly supports light regulation but recognises multiple options exist.
- B-cycle 2.0 will dovetail into the final regulatory model best suited to advance battery stewardship.

8. Scheme design for B-cycle

The following provides a summary of the core elements of the B-cycle scheme design.

Governance	Funding	Member 2 Member agreements
+ Not for profit company + Independent Chair & Directors + Whole supply chain represented on the Board including recyclers + Outsourcing of import data to protect market share information + Member obligations and accreditation + Audits to verify outcomes	+ Membership fee for non-importer participants + Battery importers to pay a levy on imported batteries to resolve market failures which is passed on to the retailers in the sale price + Import threshold to exclude small importers from the levy + Levy adjustments based on annual review	+ Members to contract for batteries and their supply chain with other scheme accredited parties

Drop off point safety	Battery collection and processing	Battery collection
+ Drop off point code of practice + Risk assessment and safety plans + Drop off point safety training	+ Rebates paid to offset the cost of collection, sorting and processing + Incentives for onshore processing	+ Rebates paid to offset the cost of transporting batteries

Market research & best practice	Behavioral change	Government action
+ Stocks and flows + Best practice guidance + Economic modelling + International benchmarking	+ Communication + Consumer behaviour research + Incentives for community-based recycling	+ Support expansion in sorting and processing infrastructure + Positive procurement strategies + Waste and transport permitting to specify B-cycle accreditation + Enforcement of import controls + Enforcement of Environment, health and safety, and export regulations

8.1 The proposed B-cycle 2.0 scheme principles

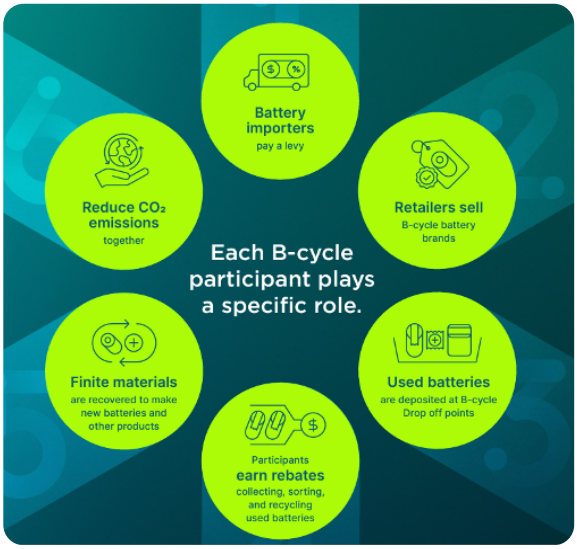
These principles shown below are largely the same as those originally authorised with three strategic changes are proposed and highlighted below an underline.

Figure 1. Battery Stewardship Principles

SHARED RESPONSIBILITY	CIRCULAR ECONOMY OUTCOMES
+ Everyone in the supply chain has a role to play. + Level playing field through regulatory reform focussed on the elimination of free riders. + Government support for industry development, stewardship procurement and efficient regulation.	+ Improve the economics of collection and recycling of batteries. + Increase availability of battery materials for remanufacturer into batteries and other products. + Facilitate positive procurement policies in industry and government.
FAIR AND EQUITABLE FUNDING MODEL	**IMPROVED SUSTAINBILITY OUTCOMES**
+ Funding model addresses market failure on a cost recovery basis. + Procedure ensure that obligated parties will not be double charged. + Funding model designed to adapt to market forces.	+ Eliminate batteries from landfill to avoid environmental impacts. + Maximise resource recovery from waste batteries and minimise use of finite raw materials. + Leverage the expansion of existing collection and recycling process to reduces emissions.
INCREASED COMPETITION, INNOVATION, & EFFICIENCY	**FOCUS ON RISK REDUCTION & IMPROVED SAFETY**
+ Effective and efficient processes to assure scheme commitments are met. + Invest in research to support program development: best practice, innovation, stocks & flows. + Address known barriers to increased recovery of waste batteries to offset market failures.	+ Improved product safety and labelling standards. + Reduce the risk of button battery injuries. + Reduce the risk of Lithium battery fires. + Collaborative development of best practices and control measures to enhance safety
FOCUS ON BEHAVIOURAL CHANGE	**TRANSPARENCY & ACCOUNTABILITY**
+ Strong branding and marketing with a clear call to action. + Incentives for stewardship action. + Leverage marketing and education of industry participants and synergistic schemes.	+ Uphold good governance standards as a not-for-profit stewardship organisation with board oversight and audits. + Outsources import data reporting to independent agency. + Verification of collection, processing, EH&S, downstream shipments and costs.

8.2 How B-cycle works

Figure 2. Key obligations of participants



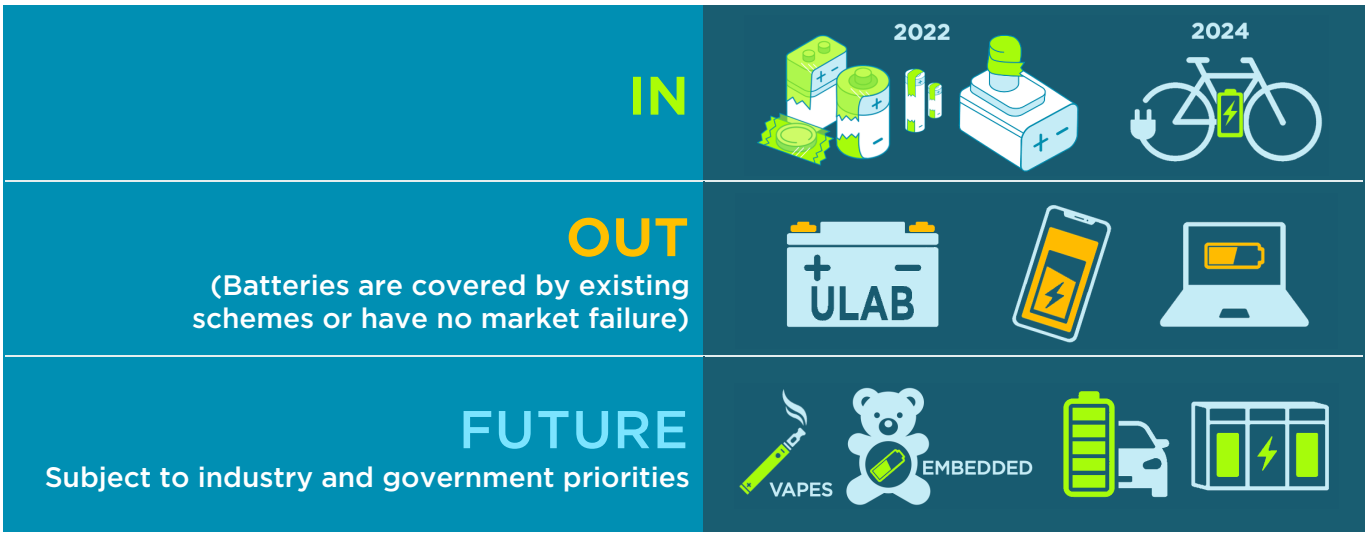
8.3 Authorised B-cycle 1.0 scheme design elements

The ACCC authorised scheme design elements include:

1. **Battery importers pay a Levy**
   - Voluntary self-reported and independently verified
   - $0.04 per EBU and may be adjusted by the BSC Board to ensure cost recovery
   - The importers can absorb the levy or pass to retailers
   - The levy amount would be monitored and reviewed annually by the Board and adjusted as necessary to ensure that the commitment to cost recovery is maintained.
2. **Retailers sell B-cycle accredited battery brands**
   - If the levy is passed to the retailer, they can absorb it or include the levy in the battery price.
3. **Used batteries are taken to accredited drop off points**
   - Drop off points are required to operate according to the B-cycle code of practice
   - Drop off points that are not collectors are not eligible for rebate payments
4. **Accredited collectors provide drop off point bins and transport services**
   - Collectors provide services to drop off points by providing binds, assisting with completing risk assessments and transporting batteries to accredited sorters and recyclers
   - Rebate payments to collectors are intended to offset the costs associated with collection containers and transport of batteries to an accredited sorter and/or recycler
5. **Accreditors sorts and recyclers sort (to recycler specifications) and recycle material so it can be used to make new batteries and other products.**
6. **B-cycle reports publicly to the ACCC, industry and the public on recycling outcomes and performance.**
   - Annual reports are made available on the B-cycle website.

8.4 Batteries included in B-cycle scope

Figure 3. Batteries covered by the scheme

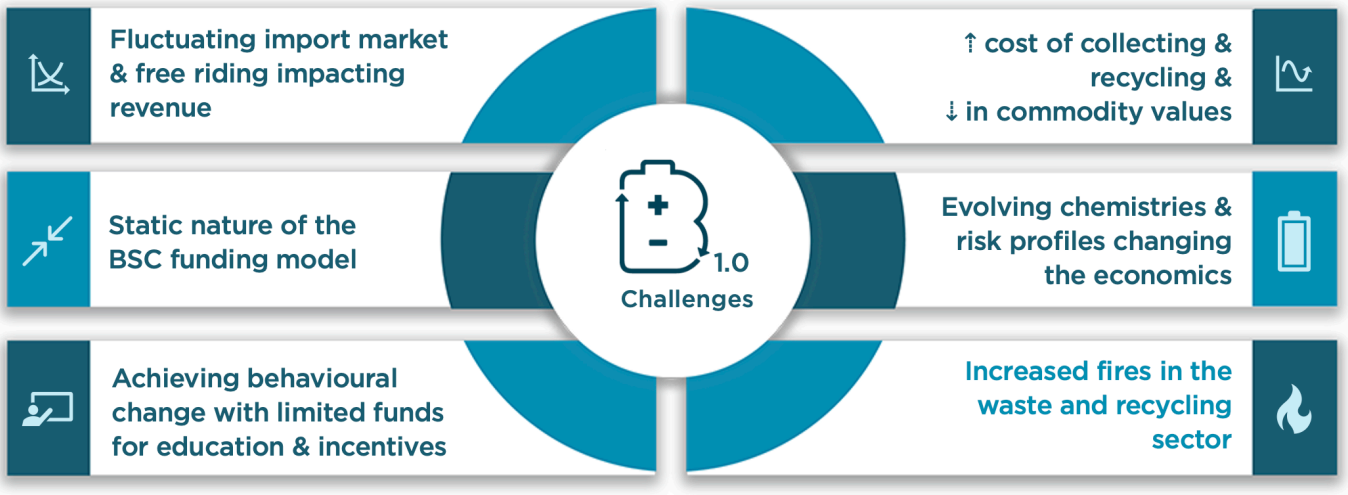


ULAB = Used Lead Acid Batteries.

8.5 Challenges since implementation

There have been valuable learnings since scheme started and there have been some significant challenges emerging due to changing technologies and changing economic conditions. The BSC is in the process of consultation to design B-cycle 2.0 in readiness for our re-authorisation application to the ACCC in 2025.

Figure 4. Challenges to battery stewardship



9. The importance of stewardship for circularity

Stewardship is crucial for achieving a circular economy as it fosters a responsible and sustainable relationship between society and the environment. This approach emphasizes the careful management of resources, ensuring that products are designed for safety and circularity, that materials are used efficiently, and waste is minimized.

By including recommendations for supporting stewardship schemes in circularity policies and regulations, the

Australian Government can facilitate circularity, thereby reducing reliance on finite resources. This shift not only conserves natural ecosystems but also promotes innovation in product design, leading to longer-lasting goods that are easier to repair and recycle.

Moreover, stewardship encourages a collaborative mindset, where stakeholders—including consumers, businesses, and governments—work together to create a more sustainable future. This is very much the ethos of stewardship. By embracing shared responsibility for resource management, industry can take the lead in engaging in practices that support local economies and enhance social equity.

This collective effort is essential for transitioning to a circular economy, as it requires systemic change across industries and sectors. Ultimately, stewardship empowers individuals and organizations to take proactive steps in mitigating environmental impacts and building a resilient economy that thrives on sustainability and circularity.

10. Existing schemes provide important learnings for circularity

Product stewardship schemes have experience in:

- engaging producers, brands and retailers in taking responsibility for environmental management of their products across the entire lifecycle by investing in these schemes.
- increasing resource recovery and reducing the loss of resources to landfill or polluting the environment by investing in collection and recycling systems and infrastructure in urban, rural and regional locations.
- increasing onshore capacity to reprocess materials and manufacture in Australia
- developing end-markets for recovered materials by investing in research and market development as well as standards for material reuse in products and infrastructure construction.
- preventing pollution and harm to human health by removing hazardous substances and toxic micro materials and encouraging more sustainable and safer product design and use.
- reducing carbon emissions; for example, in the case of batteries where research shows that placing refined materials from recycled batteries back on the materials market reduces emissions by around 50%.
- establishing best practice for traceability and transparency with independent auditing and verification processes.
- demonstrating real-world approaches to implementing circular economy objectives, including year-on-year improvement to close the circularity gap.

Stewardship schemes have also developed knowledge and mechanisms:

- for ensuring competitors can work collaboratively and productively to deliver efficient and effective solutions to environmental and social problems
- to work collaboratively across value chains from suppliers and product designers through to recycling and resource recovery
- to design and redesign products to be more sustainable and safer
- to drive change and transition to the circular economy by engaging and educating consumers.

All this activity and investment is being achieved voluntarily by industry, however, the single most persistent challenge to implementing these changes at scale, nationally and promptly is **'free riders'** i.e. companies who do not yet understand or accept their producer responsibility by not contributing their fair share to the development and operation of these schemes.

10.1 Address the anti-competitive behaviour of free riders

CALL TO ACTION:

REMOVE THE COMPETITIVE DISADVANTAGE IMPACTING RESPONSIBLE PRODUCT STEWARDS

Free riders put those responsible companies investing in a sustainable, circularity and net zero future at a competitive disadvantage. Free riders also limit the ability for each sector to make the necessary at scale system wide changes, resulting in:

- lost economic uplift limiting new capability and job creation through reduced resource recovery
- ongoing damage and pollution to the environment and harm to human health
- the continued emission of greenhouse gases
- limited services to rural, regional and remote areas
- ongoing costs to government to clean up, restore and protect the environment.

B-cycle Battery Recycling

Australian Government Accredited Product Stewardship Scheme

This Scheme is authorised by the Australian Competition & Consumer Commission (ACCC), accredited by the Australian Government, and has received financial support from the Australian Government and industry.