



Welcome to the Australian Battery Recycling Initiative

Recycling Power

September 2022 – Battery circular economy trends, announcements and news from Australia and around the world Copy

Highlights – Government policy levers focusing on funding for battery recycling and reducing fire risks

1. E-mobility battery safety drawing increasing attention from authorities
2. US Department of Energy seeking advice on how to spend US\$335 million on battery recycling
3. Australian and state/territory governments driving an expansion in battery industry capability
4. India mandates extended producer responsibility for collection and recycling/refurbishment of waste batteries
5. Supporting a solar panel and battery circular economy – results of analysis from over 3,000 scientific articles
6. Stanford University interactive summary on 28 of its battery research projects
7. Join ABRI and be part of the growing Australian battery recycling industry

1. E-MOBILITY BATTERY SAFETY DRAWING INCREASING ATTENTION FROM AUTHORITIES

E-mobility battery safety is drawing increasing attention and policy responses from authorities.

New York City Housing Authority is the latest organisation to [propose a ban](#) on e-bikes and associated batteries in apartments and common areas of their building.

This follows similar action by Transport for London (TfL) in December 2021 with the [announcement](#) that privately owned e-scooters and e-unicycles are not permitted on any TfL service or premises.

The challenges of e-mobility battery safety, and indeed all lithium battery products, flows through to the battery recycling sector. Battery hazards remain through a battery's life cycle including end of life management. That's why the Australian Battery Recycling Initiative (ABRI) is collaborating with the Australian Battery Industry Association (ABIA) to examine options for developing an Australian endorsement symbol for lithium batteries to show they have completed safety and product quality tests. The proposed symbol would also support product stewardship.

2. US DEPARTMENT OF ENERGY SEEKING ADVICE ON HOW TO SPEND US\$335 MILLION ON BATTERY RECYCLING

The US Department of Energy (DOE) issued a [request for information \(RFI\)](#) seeking public advice to inform the DOE's implementation of battery recycling initiatives.

The DOE has been allocated US\$335 million over five years to spend on:

- Lithium-ion batteries end of life and second use applications – US\$ 200 million for the research, development, and deployment of technologies to collect, transport, sort and process (recycle) end-of-life Lithium-ion batteries and for the potential use of lithium-ion batteries in second use application; and
- Broad range of end of life battery recycling areas to accelerate and increase battery recycling rates – US\$135 million for activities including research, demonstration projects, safety initiatives and consumer education to increase acceptance and participation in battery recycling.

The policy questions asked in the RFI focus on many of the matters being discussed in the Australian battery recycling industry providing opportunities for the Australian industry to learn from work in the US. These discussions include:

- better documenting the reverse logistics process
- how to reduce transport costs and strengthen safety

- difficulties in identifying end of life batteries by chemistry due to a lack of labelling
- business operating barriers to increasing recycling
- the impact of planning and other regulatory approvals on expanding recycling operations
- challenges in establishing second life applications for lithium batteries

The responses to the RFI will not be made public. However, ABRI will track submissions made public by individual organisations to draw on their insights and policy suggestions.

3. AUSTRALIAN AND STATE/TERRITORY GOVERNMENTS DRIVING AN EXPANSION IN BATTERY INDUSTRY CAPABILITY

Across Australia, governments are driving an expansion in battery industry capacity across the entire life cycle. Australia already has a competitive advantage in mining, metallurgical and recycling processes. This base is being used to grow lithium and vanadium battery chemistry manufacturing and support the establishment of a [National Battery Testing Centre](#).

Government initiatives include

- Investment up to A\$100 million in an [Australian Made Battery Precinct](#) and development of a National Battery Industry Strategy
- Queensland Battery Industry Strategy – The Queensland Government is investing \$5 million to develop the Strategy. It will outline actions to maximise opportunities to leverage the state’s battery related mineral base (copper, zinc, vanadium and cobalt), develop battery chemicals, expand battery manufacturing capability, and integrate Queensland’s efforts with work being done nationally.
- NSW A\$130 million [Critical Minerals and High Tech Metals Activation Fund](#)
- [WA future battery industry strategy](#)

4. INDIA MANDATES EXTENDED PRODUCER RESPONSIBILITY FOR COLLECTION AND RECYCLING/REFURBISHMENT OF WASTE BATTERIES

India has published Battery Waste Management rules to support sustainable management of waste batteries. The rules cover all battery types, including electric vehicles, portable, automotive and industrial batteries. Under the extended producer responsibility framework, all batteries must be collected and recycled or refurbished at end of life. A minimum percentage of the recycled materials must go into new batteries.

These rules follow a similar framework to that proposed under the new European Batteries Regulation.

For those interested in the technical details, you can read the draft rules – the [English language Battery Waste Management version starts at page 27](#).

5. SUPPORTING A SOLAR PANEL AND BATTERY CIRCULAR ECONOMY - RESULTS OF ANALYSIS FROM OVER 3,000 SCIENTIFIC ARTICLES

National Renewable Energy Laboratory analysis of more than 3,000 scientific publications has identified that a range of tools, in addition to recycling, is required to underpin a circular economy in solar panel and battery product life cycles.

These tools include: reducing the use of virgin materials in manufacturing; reusing for new applications; and extending product life spans.

The study finds that the deconstruction process takes more energy and generates more associated greenhouse gas emissions to then build into another product compared with keeping the first product in use longer.

**NREL ANALYSIS OF
STRATEGIES TO BOLSTER
CIRCULAR ECONOMY
FOR SOLAR AND
BATTERY TECHNOLOGIES**

6. STANFORD UNIVERSITY INTERACTIVE SUMMARY ON 28 OF ITS BATTERY RESEARCH PROJECTS

Stanford University has published an [interactive summary on 28 of its research projects](#) to improve battery performance, safety and sustainability. Articles include:

- AI accurately predicts useful life of batteries
- What drives rechargeable battery decay? Depends on how many times you charged it
- Pervasive health threats of unregulated battery recycling
- A new approach boosts lithium-ion battery efficiency and puts out fires, too
- Research makes alkali metal-chlorine batteries rechargeable

7. JOIN ABRI AND BE PART OF THE AUSTRALIAN BATTERY RECYCLING INDUSTRY



Workshops – Presentations and policy discussions from leading industry players and research institutions

Policy and advocacy – working with governments on a national waste tracking system

News – member bulletins on key regulatory and other events, general bulletins on industry news

Collaboration with Australian Battery Industry Association on industry issues e.g. lithium ion battery safety

[CLICK HERE TO FIND OUT
MORE ABOUT US!](#)

[CLICK HERE TO JOIN](#)



Email secretariat@batteryrecycling.org.au



You received this at associations@aigroup.com.au because you signed up for ABRI emails.

If you do not wish to receive emails from ABRI, please [unsubscribe here](#). Please add the email address info@batteryrecycling.org.au to your address book to ensure delivery to your inbox

Copyright © 2022 Australian Battery Recycling Initiative. All Rights Reserved.

[Privacy](#) | [Terms & Conditions](#)