



NSW EPA Responses to Question on notice

Inquiry Electric and hybrid vehicle batteries

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The ACTING CHAIR: We will now move on to questions from the Committee. Before we begin questions, I'd like to inform you that you may wish to take questions on notice and provide the Committee with an answer in writing. I'll begin. We heard a little bit earlier from Fire and Rescue about some of the concerns regarding contaminated water in the mitigation of electric vehicle fire or small vehicle fire. How can the environmental impact of electric and hybrid vehicle battery fires such as this contaminated water run-off be managed in urban and regional areas?

TONY CHAPPEL: I'll give an answer but perhaps take the full detail on notice so I can give you a complete answer, but we have pretty extensive arrangements for managing fire water run-off in a variety of sensitive contexts. Towns like the Blue Mountains that sit within very sensitive national parks, other parts of Sydney that adjoin national parks—we regularly work with Fire and Rescue to make sure the fire water is contained and then appropriately treated and disposed of. I know that thermal runaway events often require extensive effort to extinguish. I imagine the challenge is simply a magnified version of what we are already dealing with in a variety of contexts, but I'll take on notice any other specifics, if that's all right, Chair.

Answer:

The environmental impact of fires involving lithium-ion batteries is an emerging area, with limited information in Australia and overseas. The NSW Environment Protection Authority (EPA) has initiated a project to assess the environmental impact of these fires in partnership with Fire and Rescue NSW (FRNSW). We will also work with the Rural Fire Service (RFS).

The EPA supports FRNSW to manage fire and hazardous material incidents so that the impact on people, property and the environment is minimised. This includes containing or confining firewater where possible. The two agencies continue to develop their partnership through a memorandum of understanding.

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Mr MATT CROSS: Thank you, Mr Chappel, for coming today and thank you also to the EPA for putting a submission in. It's very valuable for the Committee. In the submission I note that—and it comes across as common sense, but I'll repeat it anyway—batteries of any kind and products containing batteries should not be put in kerbside council collection bins. I understand the EPA has partnered with local councils to collect batteries at all community recycling centres. How is that going?

TONY CHAPPEL: It's perhaps making a difference but not the level of difference we need to make. The proliferation of batteries expands significantly year on year. They're in things like pregnancy tests now, children's shoes—when you see kids running around with their shoes lighting up, there is an embedded battery there. For a lot of these products, you can't take the battery out and it's not safe to remove it. Any of these batteries—if they're compressed when there are garbage trucks that collect them and they've been put in the red bin inappropriately—potentially can create a fire risk and, as we've just alluded, that fire can be hard to extinguish. We're seeing far too many of those fires. The waste industry is at the front line of dealing with a lot of those day by day because people—without, I think, any bad will—put them into the red bin or even the yellow bin, mistakenly thinking that's the safe or appropriate place for them to go.

Through community recycling centres and chemical clean-out events, the EPA works with councils to try and highlight the range of products—and batteries are one, but they're a particular challenge, because of the fire risk when they're damaged, to take in a safe way to a safe disposal area where they can be dealt with. It is fair to say that the infrastructure to do that will need to expand as we use more batteries. The other issue which, of course, we don't deal with through those services is batteries that are damaged or modified by people at home and then create a fire risk in the home. We can't touch that side through the collection, but it is quite striking the number of multi-cell batteries that end up either on what we call a MRF—which is a mixed recycling facility where people are separating the waste and it goes into different streams, and it can cause a real problem there—or just in the back of a garbage truck.

Mr MATT CROSS: It says the EPA has partnered with local councils. Is that every single council in New South Wales?

TONY CHAPPEL: I know our aim is to cover every council. I don't think we quite cover every council, but I'll take that on notice and give you an accurate answer.

Mr MATT CROSS: If you're able to, in that question on notice, list all the councils you are partnered with, I think it would be helpful to the Committee to know where the gaps are. My final question is in relation to illegal dumping. Are you seeing an increase in relation to illegal dumping when it comes to batteries either from e-scooters and e-bikes?

TONY CHAPPEL: Not so much from scooters, but certainly batteries in things like vapes. I mean, you just have to walk down George Street and you'll probably see one. Again, these embedded batteries are prolific and a real challenge. I'll take on notice if we've seen any uptick in scooters and e-bike dumping.

Answer:

Partnered councils for community recycling centres

- Albury City Council
- Armidale Regional Council
- Ballina Shire Council
- Bathurst Regional Council
- Bega Valley Shire Council
- Bellingen Shire Council
- Berrigan Shire Council
- Bland Shire Council
- Blue Mountains City Council
- Broken Hill City Council
- Byron Shire Council
- Cabonne Council
- Camden Council
- Campbelltown City Council
- Central Coast Council
- Cessnock City Council
- City of Canada Bay Council
- City of Coffs Harbour
- City of Newcastle
- Clarence City Council
- Coolamon Shire Council
- Cootamundra-Gundagai Regional Council
- Cowra Council
- Cumberland City Council
- Dubbo Regional Council
- Edward River Council
- Eurobodalla Shire Council
- Federation Council
- Forbes Shire Council
- Gilgandra Shire Council
- Glen Innes Severn Council
- Greater Hume Council
- Griffith City Council
- Gunnedah Shire Council
- Hawkesbury City Council
- Hay Shire Council
- Hornsby Shire Council
- Inner West Council
- Inverell Shire Council
- Junee Shire Council
- Kempsey Shire Council
- Kiama Municipal Council
- Kyogle Council
- Lachlan Shire Council
- Lake Macquarie City Council
- Leeton Shire Council
- Lismore City Council
- Lithgow City Council
- Liverpool City Council
- Lockhart Shire Council
- Maitland City Council
- MidCoast Council
- Mid-Western Regional Council
- Moree Plains Shire Council
- Murray River Council
- Murrumbidgee Council
- Muswellbrook Shire Council
- Nambucca Valley Council
- Narrabri Shire Council
- Narrandera Shire Council
- Northern Sydney Regional Organisation of Councils
- Oberon Council
- Orange City Council
- Parkes Shire Council
- Penrith City Council
- Port Macquarie Hastings Council
- Port Stephens Council
- Queanbeyan-Palerang Regional Council
- Randwick City Council
- Richmond Valley Council
- Shellharbour City Council
- Shoalhaven City Council
- Singleton Council
- Snowy Monaro Regional Council
- Snowy Valleys Council
- Tamworth Regional Council
- Temora Shire Council
- Tenterfield Shire Council
- Tweed Shire Council
- Upper Hunter Shire Council
- Uralla Shire Council
- Wagga Wagga City Council
- Walcha Council
- Wentworth Shire Council
- Wingecarribee Shire Council
- Wollongong City Council

Grants have been awarded to a number of other Councils (such as Goulburn, Coonamble and Parramatta) for the development of Community Recycling Centres and some of these are likely to open in the next 12 months.

The EPA also provides grants to regional groups for the Household Chemical CleanOut events in other areas. The timing and location of these events depends on the demand and uptake from the local councils who co-contribute.

Partnered councils for chemical clean-out events

- Blacktown City Council
- Blue Mountains City Council
- Camden Council
- Campbelltown City Council
- Central Coast Council
- Cessnock City Council
- City of Canada Bay Council
- City of Canterbury-Bankstown Council
- City of Parramatta Council
- City of Ryde
- City of Sydney Council
- Cumberland City Council
- Fairfield City Council
- Georges River Council
- Hawkesbury City Council
- Inner West Council
- Kiama Municipal Council
- Ku-ring-gai Council
- Lake Macquarie City Council
- Liverpool City Council
- Maitland City Council
- Muswellbrook Shire Council
- Newcastle City Council
- Northern Beaches Council
- Penrith City Council
- Port Stephens Council
- Randwick City Council
- Shellharbour City Council
- Shoalhaven City Council
- Singleton Council
- Strathfield Council
- Sutherland Shire Council
- The Hills Shire Council
- Wingecarribee Shire Council
- Wollondilly Shire
- Wollongong City Council



e-scooters and e-bike dumping

Councils are the appropriate regulatory authority to investigate small scale dumping like e-bikes and scooters. Anecdotally we are aware that the abandonment of these items is an issue for councils, however our illegal dumping database, RIDonline which captures voluntary data entry from councils and public land managers, does not indicate any emerging trends of increased or high dumping rates of e-bikes and scooters.

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Mr ROY BUTLER: Thanks, Mr Chappel, for being here today. I acknowledge the EPA's regulatory role in regards to waste transfer stations and tips, contaminants and all those sorts of things. Across regional New South Wales there are hundreds of waste transfer stations. We've moved on from pushing it into the ground and pushing dirt over it; now we sort it a bit. We do have e-waste in those waste transfer stations but there's no guidance at the e-waste station. There's a separate place where, generally, lead acid batteries or chemical containers are collected but there's no guidance at the e-waste station that that should also include lithium batteries.

I don't know how, but there needs to be some way of educating regional New South Wales—at least putting signage at those waste transfer stations. I'm wondering how the EPA is going to ensure that there is compliance with that moving forward, with the proliferation of batteries, as you've alluded to?

TONY CHAPPEL: I think it's also going to be a question of resourcing for some of these councils or the operators of these stations, because it is a relatively new challenge. I know we've had e-bikes for a few years now, but a number of these programs were really designed for lead acid batteries. The infrastructure for collection and then transport and removal sometimes will need to be updated. There are some councils that are already quite sophisticated in how they engage with lithium-ion batteries, but I think there is a new program of work that's required. I'm happy to get the particulars of what our current thinking is on what that infrastructure need might look like and come back to you on notice.

Answer:

There are 100 Community Recycling Centres (CRCs) across NSW, 72 of which are in regional NSW. Many of these CRCs are located at waste management facilities and are operated by local councils. The NSW Environment Protection Authority (EPA) covers the costs of particular target wastes at CRCs. These wastes include: household batteries (including lithium-ion) and car batteries (lead acid batteries), water-based paint, oil-based paint, aerosols, gas cylinders, fire extinguishers, motor oil, other oils, smoke detectors and fluorescent tubes and globes. Many councils accept additional materials, including e-waste. The EPA funds the collection and recycling, or safe disposal, of CRC target waste, and councils arrange and pay for the disposal of any additional materials that they elect to accept.

By way of support, the EPA provides funding for CRC signage as well as education and communication activities. The EPA has created an extensive range of artwork for CRC signage, which not only includes the CRC target waste items but also a wide range of other waste materials. The EPA provides funding to cover the cost of producing and installing this signage at CRCs, which ensures a consistent look and feel to CRCs. The funding can be used to produce signs for other materials collected at the site, such as e-waste.

Councils which do not have a CRC but wish to install improved signage at their waste transfer stations are welcome to contact the EPA's Community Recycling team to request copies of the artwork. The production and installation of these signs would be at their own cost, unless it is on a site that has a CRC.

The EPA conducts regular audits of its CRCs to ensure that CRCs meet minimum standards which includes, but is not limited to, signage and general presentation of the site. The EPA also regulates facilities that undertake waste storage as a scheduled activity under the *Protection of the Environment*

Operations Act 1997. Regulatory oversight of waste storage facilities, including e-waste and lithium-ion battery facilities, will continue.

As e-waste is a council run service, local councils are responsible for communicating what can and can't be accepted. Often this is dictated by their e-waste provider and can vary depending on the contractor. The EPA recommends that local councils check with their e-waste provider as to whether products containing lithium-ion batteries can be accepted in e-waste collections, and then prepare a list of accepted and not accepted items for display in their e-waste drop off area and in promotional materials.

The EPA works in partnership with B-cycle, the national product stewardship scheme for batteries. All CRCs and Household Chemical CleanOut events are B-cycle drop off points, and eligible batteries are recycled as part of the B-cycle scheme. Currently, the scheme only covers batteries weighing up to 5kgs and excludes embedded batteries, electric vehicle (EV) batteries and batteries from residential energy storage and large-scale grids.

B-cycle recently commenced consultation with a range of stakeholders, including industry, over the potential inclusion of EV batteries in the scheme. The EPA supports this work and recommends that the most sustainable solution is a well-designed mandatory product stewardship scheme that delivers extended producer responsibility (EPR) for these products. It will be the best solution to the growing problem, and establishes the necessary collection systems, recycling infrastructure and public awareness to ensure the safe recycling of batteries as they continue to become more prevalent across society.

B-cycle's work on embedded batteries is on hold, pending the outcome of the Commonwealth Government's consultation on the proposed new national Small Electrical and Electronic Equipment (SEEE) product stewardship scheme, which is likely to include products with embedded batteries.

The EPA supports effective product stewardship arrangements, ensuring that producers consider the entire lifecycle of products that they supply into the market. For batteries, this means ensuring safe and convenient options for the community to dispose of their batteries once they reach their end-of-life.

The EPA has been supporting the Commonwealth Government with their proposal to develop a regulatory scheme to reduce waste from small electrical products and solar photovoltaic systems. We expect this scheme will help to enhance the product stewardship arrangements for a range of products, including those with batteries.

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The ACTING CHAIR: We heard earlier about some concerns in planning controls, particularly with more dense buildings and underground car parks, removal of contaminated water and removal of toxic smoke. Has the EPA been working with the department of planning on changes to building codes to factor in potential EV fires in underground car parks?

TONY CHAPPEL: I'll have to take that on notice. I know we've been engaging with our planning colleagues on a whole raft of waste recycling and other collection and management issues for the apartment design standards and the pattern books. I think our understanding is that, generally, the four-wheel electric vehicle catching fire in the car park is much less of an issue than bikes that have been tinkered with or plugged in at home. But I'll take it on notice for you, Chair, and come back with an answer.

Answer:

The EPA has not started specific work with the NSW Department of Planning, Housing and Infrastructure (DPHI) on changes to building codes to factor in potential EV fires in underground car parks. For information about work in this space this question is best referred to DPHI.

For additional information, the National Construction Code (NCC) is requiring new buildings to be ready for EV charging. In 2023 the Australian Building Codes Board (ABCB) published an Advisory note on their website.

To understand and respond proportionately to any updated evidence of EV risks like battery fires, the ABCB has reviewed the approaches taken by international regulators, including those countries with greater uptake of EVs. The ABCB has engaged Australian research team [EV FireSafe](#) to help develop a set of recommendations that can support safer installation and use of EV chargers.