Inquiry into e-mobility safety and use in Queensland

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Insurance Council of Australia

13 June 2025

State Development, Infrastructure and Works Committee

Dear Sir/Madam,

Re: Queensland inquiry into e-mobility safety and use in Queensland

The Insurance Council of Australia (Insurance Council) welcomes the opportunity to provide comment in relation to the Queensland Legislative Assembly's inquiry into e-mobility safety and use (Inquiry).

The purpose of this Inquiry is to consider the benefits of e-mobility devices, any key safety issues associated with ownership or use, the suitability of the current rules and how to improve enforcement approaches including what has been tried and tested in other jurisdictions. We understand the Queensland Government is particularly concerned about safety issues associated with illegally imported e-mobility devices and seeks legislative reform at a federal level to close loopholes that are allowing illegal and unsafe e-scooters and e-bikes to be imported into Australia.

The Insurance Council commends the Queensland Government for undertaking this Inquiry. It is timely to ensure laws keep pace with rapidly advancing technology, the wide availability of e-mobility devices for purchase in shops and online and the community's embrace of this form of transportation.

The Insurance Council provides the following key points in this submission:

- E-mobility devices offer significant benefits, but their increased use brings a range of safety concerns.
- Injuries and fatalities from accidents involving e-mobility devices have increased dramatically in recent years highlighting the need for appropriate insurance coverage.
- Insurers do not support insurance being provided through the CTP scheme given the lack of registration and premium collection requirements.
- Management of the risks posed by e-mobility ownership such as fire risk from lithium batteries is crucial. The Insurance Council's briefing note on managing fire risk from electrified transport in residential buildings is included in Appendix A.

Benefits of e-mobility

The Insurance Council recognises the benefits e-mobility devices such as e-scooters, e-skateboards and e-bikes offer to a community that is increasingly living within close proximity to urban centres. The widespread adoption of e-mobility devices has revolutionised urban mobility, offering a convenient, environmentally friendly, and cost-effective alternative to traditional transportation.

There has been rapid acceptance and integration of e-mobility devices into daily commuting and recreational activities with 3.6 million Australians using e-scooters in 2022 alone.[1] The increased use of e-mobility devices brings a range of safety concerns.

[1] 'E-micromobility is booming, but so are injuries', 19 February 2025, Monash University, E-micromobility is booming, but so are injuries – Monash Lens

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Injuries related to e-mobility devices

The increased use of e-mobility devices has resulted in a corresponding increase in the number of accidents and injuries involving these devices. The types of injuries sustained in accidents involving e-mobility devices can be significant and include, for example, brain injuries and facial fractures. Data also indicates that these types of injuries occur more frequently following a fall from an e-scooter than a bicycle.[2]

In Queensland, between 2021 and 2024 there was a 112 per cent increase in injuries to riders of e-mobility devices, passengers and pedestrians and eight riders died in 2024 alone.[3] E-scooter-related presentations to hospitals rose from 279 in 2019 to 877 in 2022[4] and then again to 1,504 presentations in 2024.[5]

The increasing number of e-scooter related injuries and fatalities highlights the need for an appropriate legislative framework and insurance coverage for those involved in e-mobility accidents.

Legislative framework

Queensland was the first state in Australia to legalise e-scooters when public hire schemes were introduced in Brisbane in 2018. Companies such as Lime, Beam and Neuron have since expanded their operations across various Australian cities. Personal e-scooters have been legal in Queensland since 31 October 2022, when new rules and penalties for using Personal Mobility Devices came into effect.

In Queensland, regulations include a limit of one person per device, speed limits (e.g., 12km on footpaths and 25km on bicycle paths and roads), the use of an approved helmet, and requirements to stop, assist and exchange information in the event of a crash.

The development of an appropriate legislative framework in relation to e-mobility devices is a key priority for many jurisdictions, particularly those that are yet to legalise the use of private e-scooters on public roads and paths.

In South Australia, legislation that will allow for e-scooters to be used on public roads and paths passed state parliament in November 2024. It is expected that the laws will commence from mid-2025 following the development of regulations and an education campaign to ensure all riders are across the new rules.[6]

It is expected that the use of private e-scooters and other mobility devices on public roads and paths will also be legalised in NSW. A Parliamentary Inquiry commenced in June 2024 with the report released on 13 February 2025. The report made numerous recommendations including that the NSW Government investigate options for e-micromobility insurance, including compulsory insurance for owners/riders.

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[2] Hartz, F, Zehender, P, Resch T. et al, 'Characteristics of e-scooter and bicycle injuries at a university hospital in a large German city – a one year analysis', Injury Epidemiology, 9 January 2025, Characteristics of e-scooter and bicycle injuries at a university hospital in a large German city – a one-year analysis | Injury Epidemiology | Full Text

[3] Hon. BA Mickelberg, Ministerial Statement, 1 May 2025, 2025_05_01_WEEKLY

[4] 'Data shows e-scooter riders still not taking safety seriously', 19 December 2023, RACQ, Data shows e-scooter riders still not taking safety seriously | RACQ

[5] 'RACQ welcomes e-mobility safety inquiry', 1 May 2025, RACQ, RACQ welcomes e-mobility safety inquiry | RACQ

[6] 'E-scooter trial laws and road rules, Government of South Australia, My Licence - E-scooter Trial

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Insurance requirements

While the rules governing e-mobility devices vary across states and territories, there is no requirement in any Australian state or territory for the owner or rider of a personal e-scooter to have personal or public liability insurance. In Queensland and other jurisdictions, e-scooters are not required to be registered so there is no requirement for CTP insurance coverage and accidents involving e-scooters do not fall within the ambit of the CTP schemes. This means there is no mandatory insurance if you are injured on the road in an e-scooter accident whether as an e-scooter rider or pedestrian.

Without an insurer to claim from, a third-party injured in an accident involving an e-scooter (or other e-mobility device) can be left with significant out-of-pocket expenses and no legal recourse. The Insurance Council acknowledges the need for appropriate insurance coverage for injuries sustained in e-scooter accidents but does not believe this should be provided through CTP schemes given the lack of registration and premium collection requirements. In the event of legislative reform to expand the Queensland CTP scheme to include e-scooters (which is not supported by insurers), the Insurance Council notes that a mechanism for collection of premiums would need to be introduced. To allow otherwise, would impact insurance premiums paid by ordinary motor vehicle owners.

Risks presented by lithium batteries

In addition to the increasing number of accidents and injuries involving e-mobility devices and questions about insurance coverage, there are also issues associated with e-mobility ownership, such as risk of fire, storage and disposal of lithium batteries used in e-mobility.

While the Insurance Council supports the electrification of Australia's transport system, policy action is required from all levels of government to support this transition to ensure potential risks are managed appropriately. There is a high risk of battery fire from e-bikes and e-scooters, which is primarily due to poor design and manufacturing, high wear and tear, poor regulation and enforcement, and the storage and charging of personal mobility devices inside buildings.

The Insurance Council has developed a briefing note on managing fire risk from electrified transport in residential buildings which is included in **Appendix A**.

The briefing note outlines how fire risks from lithium-ion batteries in all vehicle types can be minimized by the correct purchase, operation and maintenance of vehicles and charging cables and units. It is not about prohibiting technologies, rather, managing risk more appropriately, including how and where batteries are stored and charged. This risk management includes:

- Ensuring there is sufficient air flow around lithium-ion batteries when charging.
- Storing batteries and lithium-ion products in cool, dry places and out of direct sunlight, including while charging.
- Avoiding using batteries, products or chargers that are damaged, overheating or showing signs of failure such as swelling, leaking or venting gas.
- Choosing a reputable brand from a 'bricks and mortar' supplier.

The Insurance Council also encourages the Queensland Government to examine opportunities to strengthen regulation and enforcement of e-scooters and e-bikes to improve consumer safety. There should be coordinated and immediate action by the Federal and State Governments, including Queensland, to deliver the following:

1. A nationally consistent approach to the importation, safe design, supply and sale of lithium-ion powered e-mobility devices.
2. The provision of additional funding to support their fire authorities in their objectives to educate the public about fire safety and prevention.

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3. Expedited progression of a national approach under the Australian Consumer Law to address the safe use of lithium-ion battery powered e-mobility devices.

Learnings from other jurisdictions

The NSW Government has implemented a number of safety initiatives in relation to e-bikes and e-scooters to better protect consumers, and these can serve as a guide for future regulatory reforms in Queensland.

This includes, for example, the introduction of prescribed mandatory Safety Standards before these products can be sold in the state, as well as the planned introduction of a new Information Standard for e-mobility devices. This will require suppliers to provide clear and accurate product safety information, including details about safe use, charging, storage, fire prevention, and disposal of devices and their batteries. An embedded battery trial has also been established with local councils to accept products with embedded batteries, including lithium-ion batteries, at select Community Recycling Centre locations.

The Insurance Council encourages the Committee to consider how the approach in NSW can serve as a template for a nationally consistent regime to make a measurable difference in consumer safety and behaviour.

The Insurance Council acknowledges that implementation of any legislative or regulatory frameworks enabling and encouraging safe e-mobility use in Queensland will need to be supported by a public education campaign. This campaign will need to outline the established legal requirements, raise awareness of liability risks and identify the actions that e-mobility users can take to reduce risks. The Insurance Council would also support the active enforcement of rules governing the use of e-mobility devices to ensure the safety of riders and the community.

In 2024, the NSW Government launched the 'Shop, Charge and Recycle Safely' campaign which provides the public with easy-to-understand steps at each stage of a battery's life cycle, including shopping, using, charging, and recycling. This serves as a potential template for similar communication initiatives in Queensland.

We would be grateful to have the opportunity to engage further in relation to any changes to insurance coverage for e-mobility devices.

Yours sincerely,

[redacted]

Alexandra Hordern
General Manager, Regulatory & Consumer Policy

Appendix A

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Briefing note: Managing fire risk from electrified transport in residential buildings

November 2023

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Contents

The Insurance Council of Australia thanks EV Fire Safe and the Electric Vehicle Council for their expert review which assisted in the development of this briefing note as well as ICA members.

Acknowledgement of Country

The Insurance Council of Australia acknowledges the Traditional Owners of country throughout Australia and their continuing connection to land, culture, sea and community. We recognise the tens of thousands of years of continuous custodianship and placemaking by First Nations peoples and their proud role in our shared future. This report was produced on the lands of the Gadigal people of the Eora Nation. We pay our respects to Elders past, present and emerging.

Managing fire risk from electrified transport in residential buildings

Snapshot

Rechargeable lithium-ion batteries are contained in common household items, such as mobile phones, power tools and personal mobility devices such as e-scooters and e-bikes, and also electric vehicles such as cars, buses and trucks.

If severely damaged, abused or faulty, lithium-ion batteries may go into 'thermal runaway', a heat-generating unstable chemical process that can lead to three main hazards: off-gassing, fire and gas explosion.

All hazards of thermal runaway pose serious life and property safety risks when they occur.[1] Whilst incidents are currently rare, a recent report by the ACCC finds that they appear to be increasing.[2]

There are three distinct types of electrified transport that use lithium-ion batteries for propulsion and require connection to power to recharge the battery pack. These are:

Personal Mobility Devices (PMDs), including electric bikes, scooters, skateboards, hoverboards and unicycles.

According to EV FireSafe data, personal mobility devices have a higher risk of battery fire overall and a higher risk of causing injury, fatality and property loss. This is primarily due to market demand leading to poor design and manufacturing, high wear and tear, poor regulation and enforcement, and the storage and charging of personal mobility devices inside buildings.

EV FireSafe's data shows that for personal mobility devices, there is at least one battery fire incident every day in New York and London, and they are occurring weekly in Australia. There is at least one verified death from a personal mobility device battery fire in Australia and multiple serious injuries.

Light Delivery Electric Vehicles (LDEVs), including electric golf buggies, carts and tuk-tuks.

Data is emerging to suggest light delivery electric vehicles are a moderate fire risk. This is primarily due to market demand leading to poorly constructed battery cells.

EV FireSafe's data indicates that for light delivery electric vehicles there have been at least 35 battery fires in Europe, one verified in Australia and one currently being investigated.

Road Registered Electric Vehicles (EVs), including electric cars, buses, trucks and motorbikes.

According to EV FireSafe data, electric vehicles have a very low risk of battery fire. Electric vehicles are subject to stringent regulations and testing, and use very high quality battery cells encased in a protective (IP rated) battery pack.

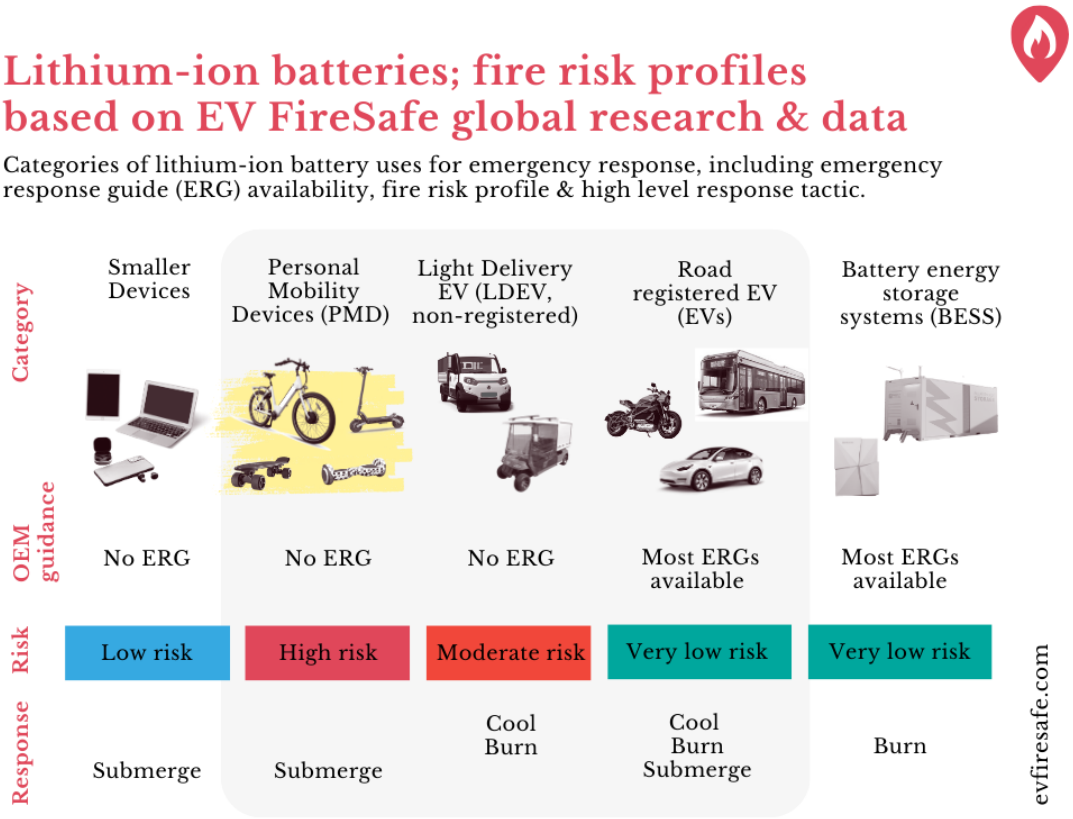
EV FireSafe has found that for electric vehicles there have been 6 battery fires in Australia, with one fatality (still under investigation). None of these vehicles were charging, or connected to

[1] ACCC (2023), Consumers urged to use and store lithium-ion batteries safely to prevent deadly fires
[2] ACCC (2023), Consumers urged to use and store lithium-ion batteries safely to prevent deadly fires

charging equipment, at the time of the fire. Research indicates that road registered electric vehicles do not present a greater risk of fire occurrence than internal combustion engine (ICE) vehicles[3] and one study has found that they catch fire at about one-twentieth of the frequency of ICE vehicles.[4] However, when electric vehicle battery fires do occur, they need to be managed differently, and may require more time, resources and firefighting water to manage the incident.

Minimising potential fire risks

As shown in the figure below,[5] different categories of electrified transport have different fire risk profiles, with personal mobility devices having the highest risk.



The fire risk associated with lithium-ion batteries in all vehicle types, can be minimised by:

- Improving public understanding of the risks and hazards, including highlighting the situations where potential fire risk is increased, such as where vehicles have been damaged in an accident.
- The correct purchase, operation and maintenance of vehicles and charging cables and units.

[3] Boehmer HR, Klassen MS and Olenick SM (2021) Fire Hazard Analysis of Modern Vehicles in Parking Facilities, Fire Technology, No 5; Burke G (2021) EV Risk Assessment. Risk Impact Pty Ltd; Bisschop R, Willstrand O and Rosengren M (2020) Handling Lithium-Ion Batteries in Electric Vehicles: Preventing and Recovering from Hazardous Events, Fire Technology, 56, 2671–2694; Sun P, Huang X, Bisschop R and Niu H (2020) A Review of Battery Fires in Electric Vehicles, Fire Technology, 56, 1361–1410.
[4] MSB (2023) Fires in electric means of transport in 2022; as cited in The Driven (2023) Petrol and diesel cars 20 times more likely to catch fire than EVs.
[5] Figure 1. Different categories of electrified transport have different fire risk profiles, with personal mobility devices having the highest risk. Courtesy EV FireSafe.

Key principles

The Insurance Council and its members have developed the following principles for users of personal mobility devices such as e-bikes and e-scooters, which align with recent recommendations from the ACCC.[6] Users should:

- Choose a reputable brand from a 'bricks and mortar' supplier and buy the best they can afford
- Ensure there is sufficient air flow around lithium-ion batteries when charging.
- Store batteries and lithium-ion products in cool, dry places and out of direct sunlight, including while charging.
- Avoid using batteries, products or chargers that are damaged, overheating or showing signs of failure such as swelling, leaking or venting gas.
- Check the charger being used is suitable for the product being charged.
- In the event of a fire, contact 000 immediately.

Next steps

To help support the uptake of personal mobility devices, such as e-bikes and e-scooters, the Insurance Council intends to:

- Engage with relevant fire authorities in supporting testing and building a better understanding of emerging risks, particularly in relation to personal mobility devices.
- Engage with the relevant strata groups and associations to support the development of guidance or by-laws to assist in consistent risk management across strata buildings.
- Work in collaboration with key bodies across industries and governments to support the acceleration of Australia's electric vehicle transition, whilst appropriately managing emerging risks.

[6] ACCC (2023) Consumers urged to use and store lithium-ion batteries safely to prevent deadly fires

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About the Insurance Council of Australia

The Insurance Council of Australia is the representative body for the general insurance industry of Australia. Our members represent approximately 90 per cent of total premium income written by private sector general insurers, spanning both insurers and reinsurers. Our work with our members, consumer groups and all levels of government serves to support consumers and communities when they need it most.

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