Energy Safe Victoria

Consultation Submission:

Department of Transport and Planning

October 2025

Purpose

This paper provides the Department of Transport and Planning's (DTP) submission to Energy Safe Victoria's (ESV) consultation paper: "Electrical safety requirements for lithium-ion battery powered e-transport devices - August 2025"[1].

DTP acknowledges that it has been consulted by ESV throughout the development of the proposal and appreciates the opportunity to provide formal feedback through this process.

Submission

DTP welcomes ESV's proposal in the consultation paper to amend the *Electricity Safety Act 1998* (Vic) (Act) to declare lithium-ion battery powered e-transport devices (ETDs) as "controlled electrical equipment" under section 55 of the Act. DTP understands that the proposed declaration would apply to e-bikes, e-scooters, e-skateboards, self-balancing scooters and similar products, and would require that these devices be certified to relevant electrical safety standards and appropriately marked before they can be supplied in Victoria.

The Department supports the intent of the proposed amendment and recognises its potential to improve safety.

ETDs fall outside existing road vehicle standards and do not required registration, which makes them more difficult to regulate through current road rules. Stronger controls addressing electrical safety risks will assist in reducing poorer quality devices entering the transport network, and poor build quality is correlated with substandard electrical design and battery safety.

Risk of ETD fires

DTP acknowledges the increasing risk posed by lithium-ion battery powered ETDs. The growing popularity of these devices has coincided with a rising number of battery fires and thermal runaway incidents both in Australia and internationally. These incidents can occur during charging, storage, or use, and can have serious consequences, particularly in enclosed environments, including inside transport vehicles and on public transport infrastructure. The risk is often exacerbated by the presence of poorly manufactured or uncertified batteries and chargers, or through the modification of devices to increase performance.

[1] Consultation webpage: https://www.energysafe.vic.gov.au/electrical-safety-requirements-e-transport-devices

DTP's response to the risk

Proposed ETD ban on public transport

In response to fire risk posed by ETDs, and in the absence of mechanisms to prevent unsafe devices being sold and used in the community, DTP had proposed banning the carriage and use of ETDs on trains and coaches in Victoria, and limiting the carriage of other ETDs on other public transport modes.[2]

The proposal reflected both the safety risk that these devices pose to passengers and infrastructure, and the current inability to distinguish between compliant and non-compliant devices. The proposal also reflected the difficulty for authorised transport officers to identify devices that meet minimum electrical and battery safety standards.

At the time of writing, no decision has been made in response to the proposal. However, the increasing incidence of ETD fires, stemming from a lack of electrical safety standards, has led the Department to seriously consider measures to reduce fire risk on public transport, including a possible ban on carriage—despite the important transport benefits these devices offer Victorians.

Commonwealth support for product safety standards

As acknowledged in the consultation paper, the Victorian and New South Wales Transport Ministers have jointly written to the Commonwealth Assistant Treasurer, the Hon Dr Daniel Mulino MP, seeking national action on the safety of personal mobility devices.[3] The Ministers' letter calls for the development of a new national product safety standard under the Australian Consumer Law to address both speed capability and battery safety. A national approach would ensure consistent regulation across jurisdictions, close existing regulatory gaps, and provide a stronger framework to prevent unsafe and non-compliant devices from being imported and sold in Australia.

Specific feedback on device definitions: *'Equipment that would be subject to the declaration'*

DTP broadly supports the draft definition of "controlled electrical equipment" provided in section 2.2 'Declaring e-transport devices to be controlled electrical equipment', for e-scooters, e-skateboards, and other e-transport devices, and the draft definition for e-bikes and e-bike conversion kits. However, we offer the following points of feedback for consideration:

- The proposed definitions do not explicitly exclude motorised mobility devices (including electric wheelchairs), however the consultation paper suggests that they be excluded. Given there appears to be no mandatory standard for such devices this may be an opportunity to include them. DTP understands there is an existing standard which could be used as a requirement – **AS/NZS 3695.1:2011**

- It may be necessary to explicitly exclude electric motorbikes or e-mopeds as these should be covered under motor vehicle standards.

- The definition for electric scooters, electric skateboards, electric mono-wheels and electric self-balancing scooters may wish to remove the reference "…intended for a single rider" as there are devices which have been

[2] DTP's consultation on the proposed amendments to the Conduct on Public Transport Regulations: https://engage.vic.gov.au/public-transport-regulations

[3] https://www.smh.com.au/interactive/hub/media/tearout-excerpt/46995/Letter-to-the-Hon-Dr-Daniel-Mulino-MP---E-micromobility-devices.pdf

legitimately designed and "intended" to be used by multiple people (for example, the Razo EcoSmart Cargo[4] - see images below). Although this type of device is not currently legally permitted to be used on public roads or road related areas in Victoria (or anywhere in Australia), such devices should not be excluded from the proposed electrical standard.

Figure 1 - Razor EcoSmart Cargo two-person scooter

In addition, you may wish to amend the definition to ensure it captures devices intended for personal (human) transportation and does not capture self-driving/unmanned devices increasingly used in delivery and logistics industries.

Finally, some refinements could be made to remove redundancy from the proposed definitions (e.g. removing "with or without" statements that therefore include both forms of devices).

Some proposed amendments to the definition for consideration:

> Electric scooters, electric skateboards, electric mono-wheels and electric self-balancing scooters has the same meaning as used in *AS/NZS 60335.2.114:2023 Household and similar electrical appliances - Safety, Part 2.114: Particular requirements for Personal-eTransporters* or refers to any other **electrically powered** micromobility device **designed for personal (human) transportation**, ~~with or without a seat and~~ without **functional** pedals, **and fitted with one or more wheels** ~~that balances and propels the rider (and may or may not comprise a handle and may or may not be self- balancing)~~.

The e-bike definition can also be simplified because it doesn't matter whether the electric motor provides pedal assist or throttle power; the standard should apply to any bike with an electric motor, e.g.:

> Electric bike means a single or multi-wheeled device with functional pedals that includes one or more electric motors ~~to either assist the rider when pedalling or provide motive power to the wheels when the rider is not pedalling~~.

[4] https://razor.com/products/electric-scooters/ecosmart-cargo/

Pedal assist e-bikes and their batteries

DTP notes that the "relevant standard" for pedal assist e-bikes and associated batteries – *AS 15194:2016 – Cycles – Electrically power assisted cycles* (AS 15194) – does not prescribe adequate requirements for batteries, including testing for factors that may prevent battery fires (as outlined in the submission).

DTP supports ESV's stated intention to consider ways to address current gaps in ensuring that pedal-assist e-bikes are certified as electrically safe for operation (noting that EN and UL standards cannot be referenced under Victorian legislation). If considered beneficial, DTP would be pleased to request that Standards Australia review and update AS 15194 to incorporate battery testing requirements, and would welcome the opportunity to collaborate with ESV on this work.