

## **Safety regulations for e-transport devices such as e-bikes and e-scooters to be certified before being sold in Victoria.**

**October 13, 2025**

UL Solutions appreciates this opportunity to provide comments on Energy Safe Victoria’s public consultation on safety regulations for e-transport devices. Given the fire and electrical hazards associated with these devices, we agree that it is appropriate and necessary for them to be declared “controlled electrical equipment.” However, as discussed in more detail below, we also suggest expanding the compliance options to include the UL standards for these products, particularly for those products which have been tested, certified, and marked to those standards to comply with the NSW requirements for e-mobility products.

UL Solutions is a leading global safety science company, supporting a 131-year-old mission of working for a safer world. UL Solutions provides testing, inspection, and certification services to confirm whether products meet standards for safety, security, and sustainability. UL standards are developed by UL Standards and Engagement (ULSE),<sup>1</sup> a nonprofit organization accredited by the American National Standards Institute.

### Declaring e-transport devices to be controlled electrical equipment

Requiring e-transport devices to meet specified standards and declaring them to be controlled electrical equipment under the Energy Safety Act is necessary and appropriate to protect Victoria residents. The serious incidents and concerning trends in Victoria and NSW cited in the August 2025 *Consultation Paper* (p. 5-6) are reflective of reports from fire departments and regulators around the world. For example, the [New York City Fire Department](#) reported conducting over 1,000 investigations of battery fires associated with e-transport devices, from 2019 to July 2025. These fires were linked to 540 injuries and 35 fatalities. The [UK Office for Product Safety & Standards](#) reported 624 such fires, associated with 171 injuries, and 18 fatalities between 2017 and 2024. Outside of some jurisdictions, like the UK and the US,<sup>2</sup> the availability of national-level data is limited. While the

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<sup>1</sup> ULSE is the majority holder of UL Solutions outstanding common stock

<sup>2</sup> See Consumer Product Safety Commission. 2025. *Safety Standard for Lithium-Ion Batteries Used in Micromobility Products and Electrical Systems of Micromobility Products Containing Such Batteries: Notice of Proposed Rulemaking*. March 26, 2025. Page 27,

availability of national-level incident data is limited, UL Solutions [efforts](#) to track lithium-ion battery related fires and incidents globally from media reports, fire department data, and other sources, has identified 1,982 injuries associated with e-transport device battery incident and 340 fatalities.

As noted in the *Consultation Paper* (p. 5), these serious incidents are typically the result of a “thermal runaway” event, where the heat from individual, damaged battery cells, triggers overheating in the adjacent cells, creating a self-sustaining, exothermic chemical reaction. Lithium-ion batteries under thermal runaway conditions can cause deflagrations, intense and very fast-moving fires, and produce toxic gases that are hazardous for civilians and firefighters alike. There are typically five causes of internal short circuits or battery separator failures that can result in thermal runaway: environmental, mechanical, again, design/manufacturing, and electrical. E-transport devices and the batteries that power them should be designed and constructed to the applicable standard to mitigate these types of stresses.

### Safety Standards

We support the use of comprehensive and robust safety standards for the e-transport devices being sold in Australia. While the UL standards may not currently fall within the definition of “relevant standard” under AS/NZS 3820, we would recommend that Victoria consider accepting those devices tested, certified, and marked to UL 2849 or UL 2272 in compliance with NSW e-mobility requirements, for compliance under this rule. This would ease compliance burdens for manufacturers who have already taken steps to comply with the UL standards for market access in NSW and other jurisdictions, like New York City<sup>3</sup> and Singapore.<sup>4</sup> In addition, just as Standards Australia adopted the EN 15194 standard, they could recognize the UL standards too at some point in the future.

The UL standards address the safety needs for the e-transport devices on the Australian market. As noted in the *Consultation Paper*, e-bikes with a continuous rated motor power exceeding 250 watts, and those that are non-pedal assist, are not within the scope of AS 15194. The *Paper* further notes concerns that AS 15194 “does not prescribe adequate requirements for the batteries, including testing for factors critical for preventing battery fires . . .” (p. 11). The scope of UL 2849 is not limited to e-bikes with a 250-watt motor, and

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Table 1.1, noting 227 reported incidents from 2019 to 2023, with 181 injuries, and 39 fatalities.  
<https://www.regulations.gov/document/CPSC-2025-00XX>.

<sup>3</sup> New York City. *Administrative Code of the City of New York*, § 28-103.7.1 (added by Local Law 39 of 2009, effective December 29, 2009). [https://www.nyc.gov/assets/buildings/building\\_code/cc\\_update\\_21-LL39-09.pdf](https://www.nyc.gov/assets/buildings/building_code/cc_update_21-LL39-09.pdf).

<sup>4</sup> Land Transport Authority (Singapore). *Active Mobility Act 2017*, § 5 and subsidiary regulations. As amended by regulatory notices requiring UL2272 certification for motorised personal mobility devices. Effective July 1, 2020.  
[https://www.lta.gov.sg/content/ltagov/en/industry\\_innovations/industry\\_matters/regulations\\_licensing/active\\_mobility/active\\_mobility\\_rules\\_for\\_retailers.html](https://www.lta.gov.sg/content/ltagov/en/industry_innovations/industry_matters/regulations_licensing/active_mobility/active_mobility_rules_for_retailers.html).

it includes testing for electrical-, environmental-, mechanical-, and fire-caused failure modes. It also requires batteries be certified to UL 2271.<sup>5</sup> Also, because UL 2849 pertains to the electrical system (encompassing the battery, charger, battery management system, and related componentry), it can be an applicable standard for e-bike conversion kits.

For e-scooters, UL 2272, which addresses the safety of electrical systems of personal e-mobility devices with the same rigor as UL 2849 does for e-bike electrical systems. We would recommend allowing devices that have complied with the standard to meet the NSW regulations to be recognized for the purposes of these regulations.

Thank you for this opportunity to provide comments. If we can answer any questions, please reach out to [REDACTED], Australasia Regional Director ([REDACTED]).

Sincerely,

[REDACTED]

[REDACTED]

Australasia Regional Director  
UL Solutions

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<sup>5</sup> UL 2849 also allows batteries that comply UL 2580, or with UL 62133-2 or UL 2054, subject to additional testing requirements.