

From: [Electric Bicycle](#)
To: [Consultation](#)
Subject: FW: Electric Bicycle Safety
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Attachments: [image002.png](#)

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Attn Energy Safe Victoria (ESV)

I would like to take this opportunity to congratulate your organisation on instigating some action to attempt to get some control over the quality of e-transport devices in Victoria as this industry to a great degree is totally out of control in terms of electrical safety of products currently being used and offered for sale in Victoria.

Let me preface this submission by including some background to my Company 'The Electric Bicycle Co Pty Ltd (TEBCO), 17/109 Tulip St, Cheltenham, Victoria, 31292. In March 1999 TEBCO imported the first ever commercial shipment of Electric bicycles to Australia. Since that date TEBCO has continued to import and distribute electric bicycles on a wholesale and retail basis right across Australia.

TEBCO is indeed the industry pioneer and longest continuously operating electric bicycle Company in Australia. TEBCO has seen it all and no other electric bicycle Company is in a position to offer the industry insights that we can offer.

TEBCO thinks it is an excellent idea that Energy Safe Victoria is currently consulting on a proposal to declare e-transport devices, such as e-bikes, e-scooters and e-skateboards and their rechargeable lithium-ion batteries, as "controlled electrical equipment" in Victoria under the *Electricity Safety Act 1998*.

As TEBCO has only ever dealt with electric bicycles and rechargeable lithium-ion batteries in its 26-year history then we will restrict our comments and views solely to those items.

To get to satisfactory end result unfortunately we need to go right back to the start where electric bicycles are imported into Australia. In years long now passed all importations of electric bicycles required 'Import Permits' where importers had to 'declare' to Federal Authorities that the electric bicycles being imported met the definition of an 'electric bicycle' under Australian Design Rules (ADR). This requirement has subsequently been done away with and there is now a voluntary application process for an 'Advisory Notice' – this system is totally flawed and openly allows and encourages the importation of product that simply does not meet the requirements for usage under existing Road Laws in all States and Territories – this must be addressed.

The current definition of an electric bicycle under ADR is:

ELECTRICALLY POWER-ASSISTED CYCLE (EPAC) - means an electrically powered. pedal cycle with a maximum continuous rated power of 250W, of which the output is:

(a) progressively reduced as the cycle's travel speed increases above 6 km/h.

and

(b) cut off, where:

(i) the cycle reaches a speed of 25 km/h: or

(ii) the cyclist is not pedalling, and the travel speed exceeds 6km/h.

There are currently 2 types of electric bicycles defined under Victorian Law - definition are:

Electrically power-assisted cycle (EPAC) that have:

- at least one auxiliary propulsion motor
- a maximum continuous rated power of 250 watts
- a motor that provides power assistance when the rider is pedalling, and only up to 25km/h.
- a motor that does not provide power at speeds higher than 25km/h.

They **cannot** be propelled by a throttle (except up to 6km/h – sometimes referred to as "walk mode").

And:

Power-assisted bicycles with a power output of 200 watts or less:

This category includes power-assisted pedal cycles which are not commonly available in Australian retailers anymore.

E-bikes in this category must not produce a combined maximum uncontrolled continuous rated power

output of more than 200 watts.

Due to their lower power output these bicycles have less stringent requirements compared to an EPAC and exist primarily to allow legacy devices.

Not only does the Federal Government definition of an electric bicycle under ADR differ from Victorian definition but indeed a different definition exists in all other States and Territories. Do describe this as 'lunacy' would be an extreme understatement – it makes consistency of product almost impossible for importers / suppliers, and we are forever walking a tight rope in attempting to supply legal product into all jurisdictions around Australia.

As recently as yesterday Monday September 12 there has been a **Private Members Bill** introduced into Federal Parliament - '**Road Vehicle Standards Amendment (Safer E-Bikes) Bill 2025**' by the Member for **Mackellar, Dr Sophie Scamps**.

This Bill attempts to rationally define an electric bicycle with 6 basic requirements:

- Maximum 250W continuous Power Output
- 25kmh maximum assisted speed
- 6kmh max throttle speed
- Power activated by rotation of pedal cranks.
- Bicycle must have adjustable seat height.
- Electric System must be tamper proof.

Whilst all this is going on in the background this does not alleviate the immediate threat and danger that is playing out each and every day with the current and ever-increasing level of electric bicycles usage in Victoria. It is imperative – I repeat it is **IMPERITIVE** that the Victorian Government introduce measures that ensure that ALL electric bicycles offered for sale in Victoria are at a quality of safety level that absolutely minimises chances of fires / explosions emanating from Lithium-ion Batteries and Lithium Ion Chargers as soon as possible.

Whilst the electric system including Lithium-Ion batteries and Chargers is paramount to safety it is also extremely important to ensure the safety of riders by including the mechanical attributes of the bicycle as well.

How to achieve that may look like an overwhelming, lengthy and time consuming task. However, I believe it may not be as difficult or prolonged as it first seems – let me offer a possible solution.

You will most probably be aware that in June 2024 the New South Wales Office of Fair Trading commenced a procedure whereby once implemented it will require **ALL** electric bicycles offered for sale in NSW will be required to be tested to 1 of 3 International Standards:

For e-bikes with a maximum continuous rated output not exceeding 500 watts.

- AS 15194:2016-Cycles -Electrically power assisted cycles -EPAC Bicycles (also known as pedelecs), or
- EN 15194:2017+A1:2023-Cycles-Electrically power assisted cycles -EPAC Bicycles, or
- UL 2849-Electrical systems for ebikes

For e-bikes with a maximum continuous rated output exceeding 500 watts:

- UL2849-Electrical systems for ebikes

e-bike batteries

- EN 50604-1:2016+A1:2021 -Secondary lithium batteries for light EV (electric vehicle) applications, or
- IEC 62133-2:2017-Secondary cells and batteries containing alkaline or other non-acid electrolytes- Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications-Part 2: Lithium systems, or
- UL 2271-Batteries for use in light electric vehicle (LEV) applications

Once this testing is complete than Test Reports must then be 'Certified' by authorities in NSW for that product to be legally offered for sale in New South Wales. The compliance date for this final certification is February 1, 2026.

Note 1: As current Victorian Law mandates a maximum continuous power output not exceeding 250W then the relevant standards that Victoria should accept are proposed new AS 15194:2026 and EN

15194:2017+A1:2023 as UL2849 does not specify maximum power rating. The EN15194 Standard is the standard used right throughout Europe and is most commonly used and reference standard in the world.

Note 2: Again, IEC62133 is the most commonly used and reference standard in the world.

All of the long standing, reputable importers, wholesalers and distributors of electric bicycles in Australia today are quickly moving to have all the testing and certification of their product in place by February 1, 2026 it would not be a complicated process for Energy Safe Victoria to adopt a similar stance.

Might I suggest ESV adopt a 3-step procedure along these lines for compliance of electric bicycles to be offered for sale in Victoria:

1. Suppliers must produce a current Test Certificate for bicycles tested to either proposed new AS15194:2026 or EN15194:2017+A1:202
2. Suppliers must produce a current Test Certificate for batteries tested to IEC62133.
3. Suppliers must produce a current Certificate of Compliance for Battery Charger

Most of the established and responsible suppliers of electric bicycles in Australia have already expended very significant funds to get their e-bikes and batteries tested for compliance in New South Wales which are now the strictest e-bike laws in the world. It is most important that ESV do not lump suppliers with any additional costs as the last thing any of us want is to put impediments in the way of the development and supply of safe and compliant e-bikes in Victoria. **Personal Electric Transportation** is a fast evolving and irreversible worldwide phenomena and is *undoubtedly the way of the future*.

As I indicated above I believe this is a very sensible, straight forward and time sensitive procedure which can easily eradicate a huge percentage of possible risks of fires and explosions in lithium-ion batteries and chargers which are currently being imported, distributed and sold in Victoria with zero testing or compliance requirements.

Thank you for the opportunity to submit our thoughts and we are available at any time to further discuss any content of this submission or any other matters that our vast experience might be prove beneficial.

Best regards

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Managing Director
The Electric Bicycle Co

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The Fred Hollows Foundation

TEBCO WILL DONATE \$25 FOR EVERY BIKE SOLD, TO HELP RESTORE SIGHT

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