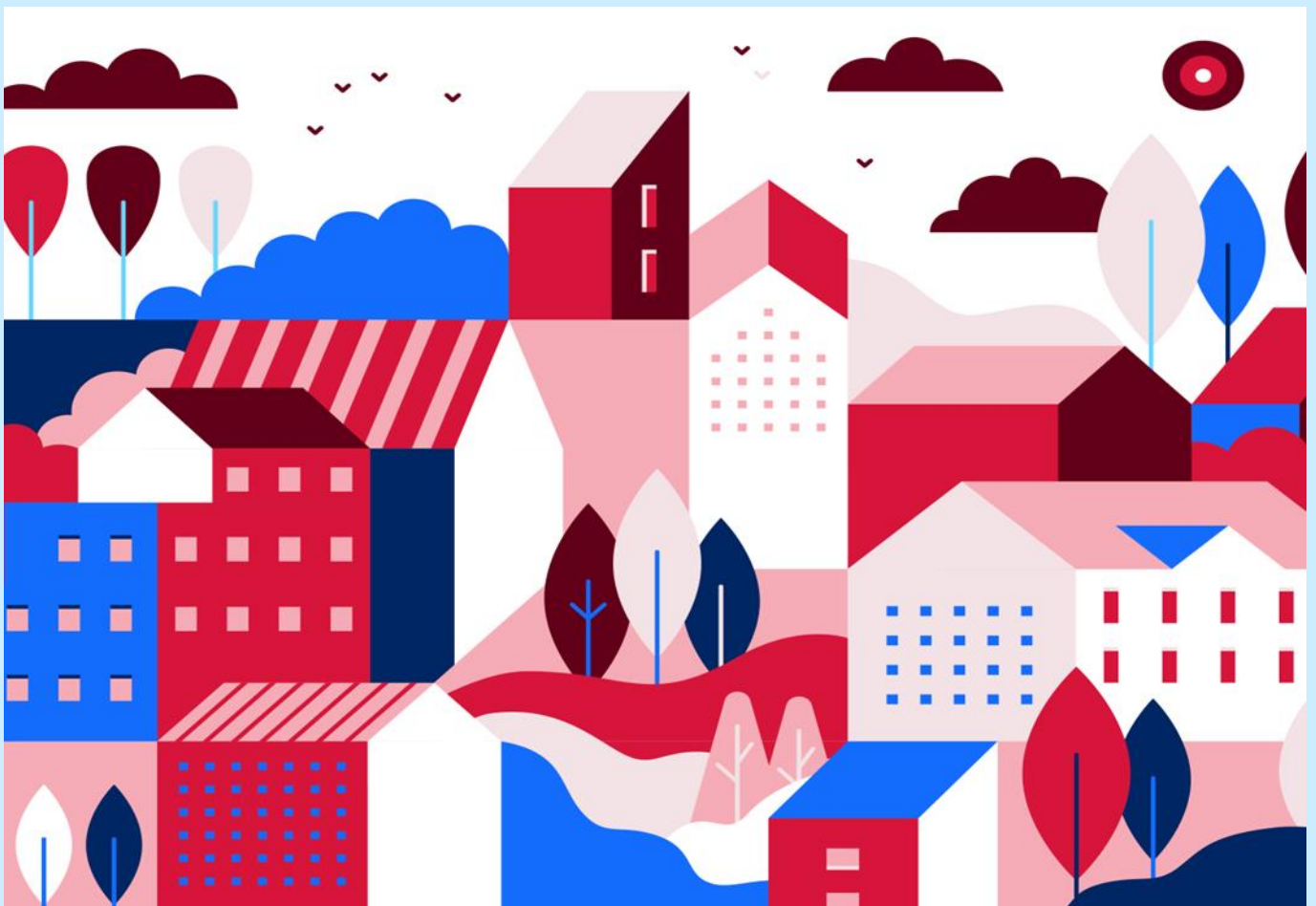


# Modification of Standards for E-bikes

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Consultation Paper  
20 March 2025



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# 1. Introduction

The *Gas and Electricity (Consumer Safety) Act 2017* (the G&E Act) is the primary electrical product safety legislation in NSW and regulates the sale of electrical articles. On 2 August 2024, NSW Fair Trading designated e-bikes, e-scooters, e-skateboards and self-balancing scooters (e-micromobility vehicles) and their associated Li-ion batteries as 'declared electrical articles' under the G&E Act by publishing an Order under section 12 of the Act in the NSW Gazette No 298 of 2024.

This is the highest level of regulation for electrical articles and requires articles to comply with prescribed Standards, and obtain tests, certificate of approval and marking to provide evidence of compliance. In the wake of growing number of fires attributable to e-micromobility vehicles, NSW Fair Trading has introduced these strict requirements under the G&E Act to ensure only high quality, compliant stock is sold in NSW and to improve consumer confidence in these products.

For e-bikes, NSW Fair Trading has prescribed 3 standards- AS 15194 :2016; or EN 15194: 2017 +A1:2023; or UL 2849.

From 1 February 2025, suppliers must ensure that their products comply with either one of the prescribed Standards. From 1 August 2025, suppliers must ensure that their products are tested and certified prior to sale and from 1 February 2026, products must also be labelled in accordance with the G&E Act.

Since the designation of e-micromobility vehicles as declared electrical articles, NSW Fair Trading has received feedback from industry on the applicability of safety Standards of e-bikes and the cost impact on the industry.

Based on the additional feedback received from industry, this paper discusses a proposed modification of the current Order to limit the applicability of the Standards for e-bikes to electrical systems only.

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## 2. Proposed modification

Based on industry feedback and re-evaluation of the prescribed safety Standards, NSW Fair Trading is proposing to limit the applicability of AS15194 and EN15194 to clauses 4.2, 5 and 6. This will ensure that electric systems of the e-bikes are safe and built to Standard, and appropriately tested and certified.

Under the proposed modified Order:

- AS 15194 :2016 - requirements will be limited to Clauses 4.2 (all - except requirements of Electro Magnetic Compatibility), Clause 5 (all - except requirements of AS/NZS 1927) and Clause 6 (all - except requirements of AS/NZS 1927).
- EN 15194:2017+A1:2023 - requirements will be limited to Clauses 4.2 (all - except requirements of Electro Magnetic Compatibility), Clause 5 and Clause 6. References to EN 60335-2-29 (battery chargers) will be replaced by AS/NZS 60335.2.29.

As under the original Order, AS 15194 and EN 15194 will only apply to e-bikes with a maximum continuous rated power not exceeding 500 watts. E-bikes having a maximum continuous rated power exceeding 500 watts must comply with UL 2849.

The proposed modified Order is included below as **Appendix A**.

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## 3. Case for change

Of the 3 Standards prescribed for e-bikes, EN 15194 and AS 15194 deal with electrical and mechanical components of e-bikes while UL 2849 deals only with electrical components of an e-bike. Under the current Order, e-bikes must comply with the entirety of the prescribed safety Standards which includes mechanical safety and elements that go beyond the regulatory intent of the G&E Act.

The intention to regulate e-micromobility vehicles under the G&E Act was to ensure that these vehicles, their associated batteries and chargers are electrically safe. While mechanical safety of e-bikes is also crucial, it is not the focus or expertise of NSW Fair Trading as the electrical product safety regulator.

NSW Fair Trading has received representations from industry to limit the applicability of safety Standards EN15194 and AS15194 to electrical systems only and to exclude mechanical systems for e-bikes. It has been submitted that this would minimise the cost of testing and certification, as well as the cost of ongoing compliance with the prescribed safety Standards, without compromising the electrical safety of e-bikes in NSW.

Including compliance with mechanical specific clauses of the prescribed safety Standards requires suppliers to get their products tested against the mechanical clauses and certified for compliance to those clauses. As currently specified, this would mean that if there is any change in mechanical design of the product, the product will need to be re-tested and re-certified even if the change in design does not impact the electrical components of the product.

Testing of products under the G&E Act is expensive and can cost thousands of dollars for each model. In addition to this, certification costs around \$1,200 per model. Industry has represented that the cost of testing varies depending on the scope of the Standard. For instance, EN 15194 and AS 15194 require reflector testing which could cost around \$900 and a separate report for the bell which could cost around \$1,000. NSW Fair Trading notes that testing costs vary and are set by individual testing laboratories.

Amending the applicability of the prescribed safety Standards to limit them to electrical safety sections as proposed in section 1 will save the industry thousands of dollars without compromising electrical safety of the products.

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## 4. Compliance with the modified Order

The modification of the Order is only for the purpose of compliance to the G&E Act. Requirements under any other NSW, other State, Territory or Federal legislation remain unchanged. This modification is only for the purpose of independent testing and obtaining a certificate of approval under the G&E Act for e-bikes to be sold as 'declared electrical articles' in NSW. If there is a requirement to comply with AS 15194 or EN 15194 in their entirety under any other legislation, that requirement must still be met.

The proposed modification is intended to reduce the cost burden of testing mechanical elements of e-bikes. This could save industry substantial funds in initial and ongoing testing costs in case of change of mechanical elements over time.

Compliance with clause 4.2 will need to be independently tested by an accredited testing laboratory. Compliance with clauses 5 (Labels) and 6 (Instructions) may be determined by NSW Fair Trading or a Recognised External Approval Scheme (REAS) directly by inspection, without requiring independent testing. Independent legal advice on compliance with legislation should be sought by suppliers to ensure that their products comply with all requirements of the G&E Act and any other applicable legislation.

The G&E Act operates on model approvals and therefore every model of a declared e-bike must obtain a certificate of approval under the Act. A reference to a **model of electrical article** is a reference to each electrical article of the same design, material and construction.

It is noted that test laboratories can often test multiple models on a single report which can then be assessed and approved by NSW Fair Trading or REAS. It is advisable to seek clarification on individual circumstances about testing and certification from a testing laboratory and a certifying body as early as possible.

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## 5. Making a submission

Feedback is sought on the proposed modification to ensure that the proposed changes address the issues faced by industry without compromising or minimising the electrical safety of e-bikes.

We request you to kindly provide us with detailed reasoning, data and evidence to support your position where possible. Detailed responses will allow the Department to better evaluate the feedback. Data could include cost of testing against the proposed clauses, impact on business and deliverables, and any other data that would help the Department in making a final decision.

As this is a targeted consultation, this paper has only been circulated to key stakeholders. You may share this paper with the members of your organisation for further consultation, however, this paper must not be published on any website or disseminated outside your organisation.

Feedback on any issue covered in this paper is invited. You may provide feedback in accessible word or PDF documents sent by email to [lithiumionbatteries@customerservice.nsw.gov.au](mailto:lithiumionbatteries@customerservice.nsw.gov.au).

We request you to please provide any feedback by **5pm, Friday, 4 April 2025**. Noting the need to modify the Order as soon as possible to minimise impact on industry, we will not be able to grant any extensions for providing feedback.

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## 6. Appendix A- Proposed Order

### Declared High Risk Battery Articles under section 6; and Declared Electrical Articles under Section 12

#### Interpretation:

In this schedule AS 15194:2016 and EN 15194:2017+ A1:2023 are modified to include an E-BIKE with a maximum continuous rated power not exceeding 500 watts.

AS 15194 :2016; requirements are limited to Clauses 4.2 (all - except requirements of Electro Magnetic Compatibility), Clause 5 (all - except requirements of AS/NZS 1927) and Clause 6 (all - except requirements of AS/NZS 1927).

EN 15194:2017+A1:2023; requirements are limited to Clauses 4.2 (all - except requirements of Electro Magnetic Compatibility), Clause 5 and Clause 6. References to EN 60335-2-29 (battery chargers) are replaced by AS/NZS 60335.2.29.

A battery article of a class for the following:

E-BIKE

An E-BIKE means a bicycle that:

- a) is built to be propelled by human power through a belt, chain or gears; and
- b) is equipped with one or more auxiliary propulsion motors; and
- c) cannot be propelled exclusively by the motor or motors; and
- d) contains or is powered by a rechargeable lithium battery;

and includes –

- e) any associated propulsion battery; and
- f) any associated charger.

But does not include -

- g) any vehicles that are described as road vehicles for the purposes of the Road Vehicle Standards Act 2018 or any vehicles that require registration in New South Wales.

Class specification:

For an E-BIKE with a maximum continuous rated power exceeding 500 watts:

UL 2849

Other:

AS 15194 :2016; (until 1 February 2027) or

EN 15194: 2017 +A1:2023; or

UL 2849

