Dear Minister D'Ambrosio

RE: SUBMISSION TO THE VICTORIAN ENERGY COMMISSION REVIEW INTO EBIKE CERTIFICATION

Bicycle Industries Australia (BIA) would like to thank the Victorian government for the opportunity to provide a submission to this consultation.

Consumer and industry members safety are paramount in the minds of the light electric (specifically e-bicycle) industry as we move towards a more electric future.

While the use of e-bikes and e-scooters is not new, mass production, technological advancements, logistic and supply chain developments and evolving consumer demand have brought about a transformative shift in the industry.

Consumer sentiment continues to shift for a desire to utilise light electric vehicles (LEV). Sales of e-bikes across the globe and in Australia show that the shift to electric vehicles is well underway.

Bicycles have consistently outsold motorcars each year in Australia for more than two decades, with sales of new bikes growing to 3.2million units during the 2020 and 2021 covid years (this does not include scooters or other LEV). Sales of e-bikes has now grown to 25% of all annual bike sales and if we continue to follow international trends, we expect this number to grow to 50% of annual sales.

The world's leading automakers, motorcycle and electronic manufacturers are investing heavily in e-Bike technology, identifying not only economic, but the environmental and community benefits of transitioning greater numbers of people and goods to be moved by LEV. These brands are investing high levels of funding in the technology required, but also production capacity to produce millions of LEV.

These benefits have been highlighted through the current costs of living crisis, with many families benefiting from the ability to achieve their transport tasks utilising e-bikes as a cost-effective method of chaining multi-modal opportunities for single journeys, reducing the requirement for a primary or secondary motor vehicle.

Nevertheless, as with any transformative industry shift, along with the benefits, there are challenges that both the industry and decision-makers must overcome.

We as a nation have an opportunity to benefit significantly from this change but must work together at all levels to achieve the potential.

While the market has expanded significantly in Australia, LEV sales in Australia remain a very minor element of LEV sales across the world and any decisions or processes implemented must acknowledge the impact on pricing, product range and the access to product for consumers.

In recent years, the industry has been let down by Government intervention and regulations, at the federal and state level, and the unintended consequences of amendments to regulation.

These consequences, along with the experience of the NSW implementation process of certification should act as a warning to the Victorian Government.

The NSW Government as an example has been forced to Gazette multiple changes to the original legislation prior to its implementation, leading international brands have withdrawn from the NSW market, consumer choice has been reduced, and confusion has increased as Fair Trading certified products have been impounded by police.

Along with these impacts, the process has had a massively negative impact on small business and personal mental health of many in the industry.

The BIA supports safer product but would push to ensure this process does not punish quality brands, while failing to address the initial intended aims.

We would welcome the opportunity to expand on the information provided through this submission.

Regards Peter



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Bicycle Industries Australia

Bicycle Industries Australia is an independent not-for-profit incorporated membership organisation representing bicycle industry importers, manufacturers, retailers and suppliers. Affiliated with peak industry organisations around the world, BIA is leading the development of the industry in Australia.

For over 50 years the BIA has operated to support bicycle importers, manufacturers and distributors, and in 2014, incorporated the activities of the Retail Cycle Traders Association to expand its focus to include bicycle retail.

Through its leadership and expertise, the BIA has held key positions on Standards Australia committee CS-110, Auto Skills Australia, PWC Skills for Australia's IRC, AUSMASA (The mining and automotive skills alliance), along with the Australian Bicycle Council and Cycling Walking Australia New Zealand.

E-BIKE CERTIFICATION

Due to the nature of e-Bikes as an individualised or personalised product and the singular focus of the electrical regulation sector, the regulation or certification of e-bikes in Australia by the Electrical sector utilising the same framework as household electrical goods has created the fundamentally flawed position that the process cannot assure the consumers of a safe product.

The impact of the NSW certification structure and the implementation of the certification process must act as warning to all other jurisdictions.

Key learnings

- Unlike a toaster or hairdryer, e-Bikes are modified to suit the individual user, both in personal taste, individual skills and body attributes, along with the way the product is used (e.g. updated forks allowing for greater travel E-MTBS's for better riders)
    - Unlike most household appliances, e-Bikes are designed to be modified, pre and post-sale by retailers and consumers
    - The original NSW model did not allow for this personalisation and made the practise of upgrading the bike to fit the users' needs/personal taste a fineable office
    - The current NSW certification model provides no assurance of a safe or legal product as bikes can be certified without basic requirements or design to be safe and legal including fundamental elements such as power and speed levels.
    - The current model will have the unintended consequence of decimating the cycle tourism industry, especially in regional areas.

This situation has been created by the shift in approach from an e-Bike as a bicycle with an electric motor for assistance by the transport sector, to the electrical regulators approach that they are an electrical product only.

This approach from the electrical regulators does not address critical risks of death and serious injury caused by unsafe mechanical product and may in fact increase the risk due to consumer confusion through the presentation of a product as safe and legal when it may not be.

E-BIKE REGULATIONS IN AUTRALIA

The approach to e-mobility safety in Australia has been fragmented, lacking coordination and contributed significantly to the current challenges the e-mobility sector is now faced with.

The approach to the management of e-Bike standards, testing and safety has been typified by a siloed approach that has impacted the sector with lack of consistency both across states and within states.

NSW must be highlighted as a significant case study on the impact of states working within silos, along with individual departments within states not aligning with other areas of the state Government.

Since the beginning of 2024, the bicycle sector has been forced to respond to an overwhelming number of reviews and inquiries into e-bikes –

- NSW – Parliamentary Inquiry into hybrid and battery powered vehicles
- NSW – Parliamentary inquiry into e-mobility devices
- NSW – Review of the Roads Act
- NSW – Lifecycle Productivity Bill and battery end of life review
- NSW – E-mobility device certification – 1st consultation paper
- NSW – E-mobility device certification – 2nd consultation paper
- NSW – E-mobility device certification – impact on the tourism sector
- NSW – Consultation into e-mobility devices on trains
- Qld – Parliamentary Inquiry into emobility devices
- Tas – E-Bike regulation review
- Vic – Consultation into e-mobility devices on trains
- Vic – E-mobility device certification consultation
- WA – Parliamentary Inquiry into emobility devices
- WA – development of e-mobility parking guidelines
- NTC – review of National Road Regulations
- ITMM – review of national approach to e-Bike regulations
- ACCC – review into mandatory bicycle standards
- Standards Australia – committee CS-110 - e-Bike standard review
- Standards Australia – committee EL-002 – review of scope for separate e-Bike standard

The critical issue from this list is that there is a significant lack of coordination across states and as importantly across departments that impact elements of the supply chain of the product including import, sale, use and disposal.

Each individual approach reduces the ability of the industry to deliver quality products to the consumer at a cost-effective price. The process has a significant impact on quality operators already ‘doing the right thing’.

This process has profoundly been exacerbated by the shift in management of e-bikes from the transport departments to the electrical regulators and the conflicts this has created.

The shift in management of e-Bikes to the electrical regulator has moved the focus from the supply of a safe complete product to just specific components of the bicycle.

- Prior to this shift, e-Bikes were defined as bicycles with an electric motor, under the electrical regulators, they are now determined as electric devices only.

The impact of this change is that the electrical certification does not provide any 'assurance' that the complete product is safe, adding excessive costs and barriers to quality products, while supporting products that are not necessarily safe or legal to use in public spaces.

The implementation in NSW reflects that process, products have been certified as safe and legal, and the police impounding some of those same brands, deeming them as illegal and dangerous.

This siloed approach has created the divide between what is legal to sell and what is legal to use, creating increased cost and confusion for consumers.

The bicycle industry acknowledges the need for action, but the fragmented and 'scattergun' approach which has been the forte of state Governments is not providing the solution but exacerbating the problem.

WHAT IS AN E-BIKE?

The first issue that must be reviewed regarding the current siloed approach to the management of e-bikes is highlighted in the definition of an e-Bike and lack of consistency of that definition, both across Australia but more importantly within Victoria.

- Energy Safe Victoria has identified a definition of an e-Bike that is greatly different from the definition utilised by the Vic Dept of Transport, which will create confusion for consumers and the potential for legal action.

- This issue has been highlighted in NSW with the NSW Office of Fair-Trading issuing certification for products that they have determined as safe and legal,

    - These brands are actively promoting that their bikes have been certified as safe and **legal**

    - A specific subset of these products being used on roads without any physical modification are subsequently being confiscated and crushed by the NSW police due to what has been deemed as dangerous behaviour on non-road legal product or unroadworthy motorbikes.

    - Police have commenced a campaign including increased school engagement, issuing warnings for users of overpowered, throttle controlled or non-speed restricted bikes, including those certified by the Office of Fair Trading, indicating future use will expose riders to fines up to $2,995

    - The following 'education' flyer is being placed on overpowered e-bikes (unroadworthy motorbikes) at NSW schools – a number of which are certified.

- This issue is going to grow in significance as the number of higher powered, high speed and dangerous products increases and are certified under the declared articles framework.

- The same outcome would be expected in Victoria.

ENDORSING ILLEGAL BUSINESS PRACTICES

Under the Road Vehicle Standards Act, an e-Bike is defined as an EPAC (Electrically Power Assisted Cycle) or a Power Assisted Pedal Cycle.

These are defined as

An electrically power-assisted cycle has a maximum continued rated power of up to 250 watts. This power output must be:

- *progressively reduced as the bicycle's speed increases beyond 6km/h*
- *cut off when:*
    - *your bicycle reaches a speed of 25km/h*
    - *you stop pedalling and the speed exceeds 6km/h*

A power-assisted pedal cycle: a vehicle designed to be propelled through a mechanism primarily using human power, that;
Meets the following criteria

- *is equipped with one or more auxiliary propulsion electric motors*
- *a combined maximum power output of up to 200 watts*
- *cannot be propelled only by the motor/s*
- *has a tare mass less that 35kg (including batteries)*
- *has a height-adjustable seat.* [1]

If the products do not meet these definitions, they are not deemed to be e-bikes and are therefore not legal to import as an e-Bike into Australia.

The certification of a product that does not meet these guidelines could be construed as endorsement of the illegal import of products into Australia.

Under the Federal regulations and the Victoria road transport act, an e-Bike that has higher power, but is restricted mechanically, electronically or otherwise is still legally considered to be the higher rating. Therefore, any bike certified to 500w in NSW can never be legal to import as an e-Bike into Australia, nor can it ever be road legal in Victoria.

There are several law firms reviewing the current activities for potential class actions, and endorsement of product that is deemed to be dangerous and illegal by a coroner in the future may be the instigation of such action.

[1] Vehicle Standard (Australian Design Rule – Definitions and Vehicle Categories) 20025 Amendment 11

The Victorian coronial inquest into Moustafa Abou-Eid[2] highlights these concerns.

- The importer was denied an import advisory notice as it was not deemed road legal.[3]
- As the advisory notice process is voluntary for e-mobility devices, no further applications were made, the e-scooters were not subjected to further restrictions of import and the product was continued to be imported.
- These scooters can be certified as electrically safe and presented as legal in Victoria under the presented definition.
    - A clear example of not safe and non-road legal
- The coroner made the comment that the import of these products for use on private land only is farcical.
- Certifying them as safe and legal would be a significant concern.

Utilising a definition that is unique to the Victorian Energy regulator from other states and other departments within Victoria, will be detrimental to the importers, retailers and consumers, and a potential contributor in legal action.

LICENSED MOTOR CAR TRADER (LMCT)

In response to the NSW certification process, bicycle retailers in NSW have been informed by their insurance agents that they will not be covered if they repair over-powered e-bikes as they are not registered to work on motorbikes unless they have a LMCT.

This includes 'e-Bikes' that have been certified as safe and legal by the Office of Fair Trading, but have a higher power, speed or throttle than that defined by Transport for NSW.

This advice also includes e-Bikes that are sold at 500w but are made available to be 'unlocked' for private land use only.

Consumers are 'complaining' that the products are safe and legal, yet bicycle shops will not work on them.

An LMCT is not required for the repair of motorbikes in Victoria but is for the sale of motorbikes. Retailers selling overpowered, overspeed or throttle e-Bikes, even if certified by Energy Safe Victoria may be breaking motor vehicle trading legislation.

[2] Finding into death following Inquest – Moustafa Abou-Eid – COR 2022 5630
[3] FOI 25-332

CHOICE OF STANDARD

There is significant activity through Standards Australia on the identification of an appropriate standard for e-Bikes in Australia.

EL-002 committee has pursued the expansion of the scope of ASNZS60335-2-114. This expansion has been based on the perceived success of the previous expansion of the scope to include e-scooters and other emobility devices.

This process and the history of e-Bike regulations is very different to e-scooter products, as e-scooters were considered an immature market without a previously acknowledged world leading standard. International markets have been making e-Bikes to EN15194 since it was first adopted in 2009, with updates in 2017 and 2023.

Unlike scooters, e-Bike markets already require that their products meet minimum safety standards. This requirement to meet leading international standards was removed from Australian regulations in 2021 (because of a desire to simplify the definition of an e-Bike and a perceived issue with consumers not being able to freely access the standard because of its location behind a paywall).

ASNZS 60335-2-144 is a household electrical goods standard

A critical failure of the testing protocols within the standard is the capacity of the battery to be removed and tested away from the bicycle. Reflecting the common practice and source of failure of removing for charging or swapping out batteries when utilising second batteries, especially in the food delivery sector.

A key leading e-Bike leasing brand has identified dropping of batteries when swapping or charging externally from the bicycle as a critical element (and their primary source of failure), permanently attaching an accelerometer to each of the batteries to indicate when a significant fall has occurred.

This testing of the detached batteries is included in EN15194 and UL2849, utilising impact from a greater height and force than any impact testing in ASNZS60335 to reflect the nature of these drops.

Further to testing limitations, ASNZS60335-2-114 is limited to just the electrical elements of the bicycles. This limitation has clear implications in the assessment of a safe complete product; therefore, the standard fails to ensure the product is safe for use.

No other jurisdiction in the world tests e-Bikes to 60335-2-114, therefore it would be a requirement for .15% of the world market – which would be unviable for many brands and force leading from the Victorian market.

An expansion of scope or more appropriately a 'call up' into legislation of ASNZS60335-2-114 is problematic for reasons that include a very small jurisdiction adoption, electrical testing shortfalls, massive increase in testing costs, a lack of product availability for consumers and a general lack of awareness of the supply chain for such a small market.

As the title of the standard makes clear, this is a household electrical item standard, it was never intended (by definition and scope!) to be used in evaluating e-bikes (and therefore is not used in their evaluation in any other market), it is not a standard to regulate or manage a safe vehicle for use on roads or paths, in competitions, fitness or transport.

IEC62133 is currently in a transitionary process for the largest e-Bike markets across the world and the majority of the international e-Bike market.

Although it is accepted in NSW, along with AS15194 as an e-Bike standard, across Europe and America, IEC62133 testing requirements have been replaced by EN50604 or UL2271 as these are deemed to be more reflective of current technology and best practice as they include testing for additional use-dependent hazards (vibration, impact, charging, thermal risks, protective enclosure, etc.),

"EN 15194:2017 expired in Europe from August 2025 and has been replaced by EN 15194:2017+A1:2023. EN 15194:2017+A1:2023 requires application of EN 50604 to the battery, with application of IEC 62133 no longer permitted (as was allowed by EN 15194:2017)"[4]

Leading battery manufacturers including Phylion/Joycube no longer test to IEC62133 nor supply batteries that have been tested to IEC62133 as it is not deemed as a leading standard by best practice guidelines.

To meet IEC62133, many brands will be required to undertake new and costly testing, for no identified beneficial outcome other than meeting a lower quality arbitrary requirement of a single state government which is not even considered best practice in Europe.

It is estimated that Victoria makes up approximately 0.15% of the world e-Bike market.
Any standard that is specific to such a small market will force up costs and force brands out of the market.

With the lack of import controls, this activity may in fact promote the growth of drop shipped, often poorer quality, direct to consumer brands from Asian manufacturing locations.
NSW has admitted that they have limited capacity to police online direct to consumer products and Victoria would be expected to face the same difficulties.

The reference to this standard will significantly reduce the range of quality products pushing users to look at other options – which will include an increase in poor quality drop shipped batteries direct from poor quality sources.

[4] EN15194:2017+A1:2023

AS15194

AS15194:2016 is the current Australian e-Bike standard

AS15194 was identified by the industry as lacking in the required technical specifications and the industry supported an application to Standards Australia to undertake a process to for it to be updated to reflect current world best practice, including utilisation of EN50604.

EN15194 has been identified as the leading complete product/e-Bike standard across the world, ensuring that the bicycle is **safe** and **legal** to **use** both electrically and mechanically.

The process to update AS15194:2016 commenced in 2024 and Standards Australia is expected to shortly release for public comment a draft modified adoption of EN15194:2017+A1:2023 to supersede the current AS15914:2016. If adopted this standard would become AS15194:2026 and include all electrical and mechanical testing elements of the most widely utilised standard for e-Bikes in the world.

This process would overcome Energy Safe Victoria's concerns that it could not 'call up' a European standard.

The adoption of the updated draft AS15194 would provide the industry with confidence to continue to supply the Victorian market, while providing assurance that the product is both electrically and mechanically safe.

ACCC

The ACCC is currently undertaking a review of the Australian mandatory bicycle standard AS1927:1998.

The ACCC has indicated it will undertake an expedited process commencing on the 8th of Oct 2025 with a recommendation to the Minister expected in early 2026.

Based upon a similar review of the mandatory helmets standard concluding in 2024[5], it is the expectation of the industry that the Minister will adopt the position that bikes meeting the international standard ISO4210 part 1-9 to be legal to provide to consumers in the Australian market.

The current **Australian Consumer Law**[6] explicitly excludes all e-bikes from a requirement to meeting the mandatory bicycle standard.

A transition to ISO4210 is strongly supported by the industry which is also hoped to include a future adoption of technical specifications ISO4210 part 10 in allowable standards.

This process is critical for future safety as it includes specific testing based upon the specific use of product with activities such as mountain biking and cargo bikes requiring great frame stress testing than that for general city biking.

ISO 4210 Part 10 is specific and thorough electrical testing.

ISO4210 Parts 1-10 would provide the most comprehensive complete e-Bike testing in the world.

The adoption of ISO4210 part 10 and alignment with EN15194 is to be discussed at the next International Standards Organisation meeting of TC 149 in October this year.

[5] Consumer Goods (Bicycle Helmets) Safety Standard 2024
[6] Consumer Protection Notice number 6 of 2004 – pedal bicycles

PRODUCTIVITY COMMISSION

In 2024, the Federal Treasurer instructed the Productivity Commission to undertake and analysis and provide advice on the impact of 'adopting international and overseas standards in regulatory frameworks, and harmonising regulated standards across Australia, in priority sectors identified by governments.'[i]

The focus of the review by the Productivity Commission were the 50 current mandatory standards including bicycle helmets and bicycles.

The interim report into National Competition Analysis 2025 identified that[7] -

There are three main ways in which harmonisation of standards – be it with international or overseas standards or across Australia – could produce net benefits:

- *lower compliance costs incurred by businesses – for example, Treasury estimated that ACL reforms would reduce business compliance costs by $10m p.a. per mandatory safety standard or $500m p.a. across all 50 standards*
- *lower administrative costs for government – for example, from accepting another jurisdiction's conformity assessments and approvals, and*
- *increase the range of products available in Australia, because more products designed for overseas markets can be sold here. Greater range would imply:*
  a. *consumer welfare gains from greater competition, lower prices and greater product diversity*
  b. *productivity gains – for example, from earlier access by business to new technology or other production inputs, and*
  c. *public welfare gains – for example, from earlier access to new or cheaper medical devices*
  .

Moving in the opposite direction to these recommendations has already been demonstrated in NSW to have a detrimental economic impact.

Bicycle helmets are a clear example of the desire for the bicycle industry to move towards harmonised and leading world standards.

In March 2024, after an 8-year review process, the ACCC announced that helmets that met leading American and European standards would now be compliant to be imported and sold in Australia.

The adoption of international standards was identified by the Productivity Commission as reducing costs and delivery timelines, increasing product choice and increasing product availability while maintaining product safety standards.

[7] Productivity Commission – National Competition Policy analysis 2025

Due to lack of harmonised implementation, 8 years after realising the value of harmonisation, most Australians [8] are yet to see the benefits due to limitations in the capacity for industry implementation caused by differences across jurisdictions.

The evidence has actually indicated that the lack of harmonisation will have the opposite effect on specific jurisdictions.

Over the 18 months since the March 2024 announcement, the industry has worked with state and territory jurisdictions to update road regulations to ensure consistent application of the regulations.

After 18 months we still have a single state that is yet to amend the required legislation. Due to production requirements, testing costs, minimum order quantities and supply timelines, helmet importers and distributors have made the business decision to cease importing helmets tested to Australian standards and only sell products tested to European and American standards.

This decision may leave that state with little or no supply of helmets that can be legally used on roads and paths. It will also have a significant impact on cycle tourism sector with interstate tourists inadvertently breaking the road laws leaving them exposed without insurance.

The Australian bicycle market is tiny by world standards and the introduction or enforcement of standards not required elsewhere in the world will be harmful to the consumer.

[8] Productivity Commission – National Competition Policy analysis 2025

COUNCIL ON FEDERAL FINANCIAL RELATIONS
Review of the Regulatory Framework for the Safety of Household Electrical Products

On 1 December 2023, Treasurers across Australia at the Council on Federal Financial Relations (CFFR) agreed to review the national, state and territory electrical safety frameworks for household electrical consumer products

In that meeting it was identified that Australia's existing system for the safety of household electrical consumer products (low voltage and extra low voltage) is primarily made up of different state and territory laws administered and enforced by the electrical safety regulators in each jurisdiction.

The existing system has protected consumers from unsafe products for many years, but over time inconsistencies and regulatory gaps have arisen. These issues impede the system's national operation and ability to respond to emerging safety risks posed by new technologies.

The review was conducted through a partnership between the Australian Government Department of Finance and the Australian Competition and Consumer Commission in consultation with the states and territories. As part of this work, a Reform Action Plan was developed, identifying areas for improvement for consideration by ministers responsible for electrical safety ahead of CFFR decision in the second half of 2024.

The review of the existing regulatory framework for household consumer electrical products (low voltage and extra low voltage) seeks to improve or maintain safety levels while ensuring regulation is fit for purpose, efficient and effective. This includes resolving inconsistencies and closing regulatory gaps to achieve national harmonisation.

There were 9 recommendations from the plan. Three key recommendations of that plan relating to this process are;

Overarching Recommendation

Commonwealth, State and Territory Governments to cooperate to harmonise and consistently implement household electrical consumer products regulation.

Recommendation 2

Ministers should update the Electrical Equipment Safety System framework to achieve:

- *Harmonised and consistent certification requirements for all jurisdictions*
- National use of the Regulatory Compliance Mark
- Adjusted distribution of funds for projects of national benefit with increased public transparency
- and reporting of financial arrangements
- A process to ensure a consistent approach to post-market controls
- Escalation processes to assist jurisdictions in reaching national agreement

The updated arrangements for the Electrical Equipment Safety System should be implemented by all states and territories through a revised intergovernmental agreement for the Electrical Equipment Safety System (Recommendation 1) and then implemented through legislation in each state and territory.

Recommendation 4

Develop a nationally agreed pathway for market-wide recognition of overseas standards that provide an appropriate level of safety for household electrical consumer products.

This pathway should harmonise existing pathways under the Electrical Equipment Safety System and NSW system and be implemented through a revised intergovernmental agreement (Recommendation 1) and updated administrative arrangements for the Electrical Equipment Safety System (Recommendation 2), with jurisdictional legislative reform.

The current proposed certification in Victoria will ignore these key recommendations and create a more fractured approach.

It will

- Reduce harmonisation
- Utilise an inferior Australian or IEC product standard, ignoring recognised international e-Bike safety standards that provide an appropriate level of testing and safety requirements including use-dependant hazards.

In ignoring the recommendations, to which Victoria is a signatory, this approach reduces the access to a range of safe and quality products for consumers in Victoria and will impact Australia.

INFRASTRUCTURE AND TRANSPORT MINITERIAL MEETING (ITTM)

The safety and management of emobility devices was placed on the agenda of the August ITMM meeting after a letter, signed jointly by the Victorian Minister for Active Transport and Public Transport, the NSW Minister for Transport and the NSW Minister for Roads was forwarded to The Assistant Treasurer, the Treasurer and the Federal Minister for Transport.

This letter called on the federal government to lead the way on managing the quality of emobility devices available to Australian consumers through federal regulation and controls

The ITMM meeting on the 11th of August 2025, identified a need to 'bring together' the jurisdictions in the management of emobility devices across Australia.

Ministers observed that personal mobility devices bring a range of benefits to the Australian community, but also new risks that must be managed. Ministers noted work underway under the Australian Consumer Ministers Network to examine the safety of the Lithium-ion batteries use in personal mobility devices and ongoing discussions between Commonwealth, State and Territory transport officials to identify and explore broader safety management options.

To improve rider and pedestrian safety, Ministers agreed to work together to develop an integrated regulatory framework. The development of the framework was to be led by Western Australia, with support from the NTC and all other jurisdictions. A draft framework will be considered by Infrastructure and Transport Ministers later this year.

The development of individual position when states are working together to develop a national position, including import controls and road regulations may create greater confusion and increase the negative impact of the individual approach from Energy Safe Victoria.

- Energy Safe Victoria must review the outcomes of the ITMM approach to ensure that the greatest level of harmonisation across jurisdictions and departments is achieved.

- Energy Safe Victoria must acknowledge that management of the complete product is critical and not just the electrical component

Consultation paper questions

1. Do you agree with our proposal to declare e-transport devices and associated Lithium-ion batteries as "controlled electrical equipment" under the Act? Why or why not?

The industry supports greater controls to ensure safety of product for the consumer.

We do not support testing or certification requirements that;

- Do not promote harmonised certification across Australia
- Are unique to Victoria from any other jurisdiction
- Do not support the assurance a safe and road legal product – not just electrical safety
- Utilises a different definition of an e-Bike from the Vic Dept of Transport
- Utilises a different definition of an e-Bike from the federal government
- Utilises a definition of an e-Bike which is illegal to import (as an e-Bike)
- Utilises an out-of-date standard
- Does not align with import regulations and road law/use regulations
- Imposes excessive fees and costs to quality brands without address the key issues of direct supply from offshore to the consumer.

A key learning that must be made from the NSW process is that e-bikes are personalised to the individual rider.

The allowance to make appropriate modifications to the product from 'factory' settings to the mechanical elements of the bike, must be allowed within any evaluation or certification process. An example that identified a failure within the NSW process was making it illegal to change the brand/range of tyres or tubes on the bike as this impacted on the braking test.

In identifying the requirement to personalise the product, the testing must include anti-tampering specifics to ensure that road legal requirements are maintained.

The process or use of an e-Bike is very different to a household appliance such as a toaster or electric blanket, and the NSW process has identified that attempting to utilise the identical process has been extremely problematic.

Any definitions or processes must include the impact of import regulations and use regulations, not just focus solely on sale regulations.

2. Are there alternative approaches you believe would effectively manage the electrical safety risks associated with Lithium-ion battery powered e-transport devices?

The primary focus must be on the management of import controls including e-Bike definitions within the Road Vehicle Standards Act and the mandatory advisory notices through the ROVER import portal - ensuring poor quality products not meeting minimum safety standards are not permitted to enter Australia.

Offshore online marketplaces contribute a large percentage of the poor-quality product in Australia. Many offshore businesses advertise direct to consumers for shipping to your door from offshore locations.

This was highlighted during 'Trump tariff wars' with China with a significant uptick in advertising direct to consumers of product which could be described as questionable quality.

The lack of border controls nullifies the sales process that Energy Safe Victoria is currently reviewing.

Secondly the state road regulations must be updated referencing the current leading international safety standards with the road laws or 'use' regulations.

The federal and state government should withdraw the 'for use on private land only' loophole, allowing for the import and sale of unsafe product.

This is not going to be 'fixed' by a single approach as a unique sales regulation, but by a joint and harmonised approach by all departments within all states and the federal government.

3. If you are a user or potential user of e-transport devices, would knowing the product is independently safety certified impact your purchasing decisions?

4. Do you agree with our draft definition for e-scooters, e-skateboards, and other e-transport devices?

5. *Do you agree with our draft definition for e-bikes and e-Bike conversion kits?*

No – the industry does not support the definition of an a-bike.

Prior to 2021, the definition of an e-Bike was harmonised across all federal and state departments across Australia, ensuring that import, sale and road use regulations were aligned.

In Jan 2021, the Assistant Minister to the Deputy Prime Minister, introduced the Motor Vehicle Standards (Road Vehicles) Amendment Determination (No 1) 2021[9] (without consultation with the industry), modifying the two definitions of an e-Bike, Pedalecs became EPACS and modified the definition of a Power assisted pedal cycle.

Since that period, states and individual departments within states have created unique definitions for e-bikes responding to their 'focus'. This process has reduced clarity, creating confusion for consumers, enforcement officers, the media and the industry.

It has also allowed an increase in import and sale of dangerous and unsafe product.

This process has been exacerbated by separate definitions between departments within the same state.

NSW is a prime example of the confusion created by separate definitions of e-Bikes between the electrical regulator and the transport regulator.

Product is being certified as safe and legal by the Office of Fair Trading, only for the same product, without modification, being impounded and crushed as dangerous and illegal by the police.

This process has also created the ambiguous situation that we now have product that is illegal to import as an e-Bike yet is legal to sell in Victoria but illegal to use on Victorian roads, the same product is illegal to sell in NSW but legal to use on NSW roads.

What is an e-Bike?

The Office of Fair Trading must utilise the same definition of an e-Bike as the Victorian Department of Transport.

Anything that is not within this definition must not be certified as an e-Bike.

Any electrical certification of an e-Bike must align with the power and speed restrictions as per the definitions

[9] Motor Vehicle Standards (Road Vehicles) Amendment Determination (No 1) 2021

Please note –

The Industry supports the alignment of definition of an e-Bike with the Victorian Dept of Transport, and based on NSW experience, support the certification of only the electrical elements, BUT only on e-Bikes that meet the road legal definition of an e-Bike.

We support a second definition and certification of a high powered, high-speed product or throttle only controlled devices – but they must not be certified as an e-Bike.

This separation would provide an electrically safe product, while ensuring clear communication and education for consumers, without the confusion created by the term 'safe and legal' when it is not 'safe and road legal'.

6. *Do you have any other suggestions for defining e-transport devices, including whether we need to clarify exclusions?*

E-bikes, e-scooters and other e-mobility devices must utilise the same definition as the Victorian Department of Transport.

In the explanatory notes to the Motor Vehicle Standards (Road Vehicles) Amendment Determination (No 1) 2021[10], it was identified that utilizing the term EPACS inferred alignment with the European definition of and e-Bike which makes specific reference to EN15194.

The Victorian Department of Transport adopted this change through the National Road Regulations, utilising the definition of an EPAC and therefore inferred that the product must meet EN15194.

The industry strongly supports alignment with EN15194 or the expected adoption of the current draft AS15194 expected to supersede AS15914:2016.

We would support a specific exclusion for e-Bikes specifically designed built and promoted for use of people with a special need due to disability.

We do not support any other definition of an e-Bike.

[10] Motor Vehicle Standards (Road Vehicles) Amendment Determination (No 1) 2021 – explanatory statement

7. *If you are a supplier/manufacturer/importer, what standards are your e-transport devices currently complying with?*

The vast majority of road legal complete e-Bikes sold in Australia are complying with EN15194:2017+A1:2023.

Any bike that features a power capacity greater than 250 continuous rated power, an assisted speed of greater than 25kmh, or a throttle capacity greater than 6kmh cannot meet EN15194.

A key component of EN15194/AS15194 is the anti-tampering testing which ensures that the brand/retailer must implement processes to prevent the modification of speed, power or throttle control of the bike.

Due to the testing requirements implemented by The NSW Office of Fair Trading, several brands have certified to UL2849 as they cannot meet the requirements within EN15194 and are not road legal. This includes both specific mechanical testing and electrical anti-tampering requirements.

A secondary cohort of brands have chosen to test to UL2849 due to the model definition of an e-Bike implemented by NSW Office of Fair-Trading including the frame, but as UL2849 does not include any frame or structural testing, UL2849 for some brands is considered easier/cheaper to meet as it tests less elements of the bike.

For batteries, “EN 15194:2017 expired in Europe from August 2025 and has been replaced by EN 15194:2017+A1:2023. EN 15194:2017+A1:2023 requires application of EN 50604 to the battery, with application of IEC 62133 no longer permitted (as was allowed by EN 15194:2017)”

8. *Do you have any comments on the electrical safety shortcomings of AS 15194? How do you think these shortcomings can be best addressed?*

We support the decision that the current AS15194 standard does not meet the required outcomes.

As an industry we support the current process to update the AS15194 to reflect the requirements within EN15194:2017+A1:2023.

The industry would support a requirement to meet AS15194 once it is aligned to EN15194:2017+A:2023.

“As EN 15194:2017 expired in Europe from August 2025 and has been replaced by EN 15194:2017+A1:2023. EN 15194:2017+A1:2023 requires application of EN 50604 to the battery, with application of IEC 62133 no longer permitted (as was allowed by EN 15194:2017)”

Therefore, the adoption of a predicted future AS15194:2026 would support the alignment with the most current battery standard for e-Bikes EN50604

We do not support ASNZS60335-2-114 replacing AS15914 as the Australia e-Bike standard.

9. *What would be the impact of certification to different standards in different jurisdictions of Australia (e.g. different standards in VIC and NSW)?*

The most direct outcome of this process would be the forced withdrawal of leading international brands from the Victorian and the Australian market.

A BIA survey of its members has already identified that due to the specific fees and costs associated with meeting NSW's unique declared articles certification, there will be a 40% reduction in the range of e-bikes (brands supplying less models to NSW) that are expected to be made available to NSW consumers (many of these products are from leading brands, already meeting international standards for American and European markets).

Two leading international brands have already withdrawn from the NSW market due to fees associated with the NSW certification process, but continue to operate in other states, America and Europe with UL2849 and EN15194 testing.

The entire Australian e-Bike market is estimated to be approximately 0.6%[11] of the world e-Bike market, we are already a very minor contributor to the world e-Bike sales.

Further reduction of market size into individual 'segments' will make the sector unprofitable and unmanageable.

It is estimated that there are over 100 e-Bike brands in Australia, with each servicing on average 10 models of e-bikes (this is industry definition of a model – not NSW Office Fair Trading definition). Current estimates indicate Victoria accounts for approximately 70,000 e-bikes sales per year, that equates to 70 bikes per model sold in Victoria.

The size of the market for each model does not allow for a significant investment in testing and certification which will be required in each jurisdiction.

NSW is a key demonstration of the impact of unique legislation from any other jurisdiction in the world

NSW introduced a maximum continuous rated power output of 500w with a 25kmh assisted speed limit in 2023, compared to 250w form the rest of the country.

The vast majority of Australian e-Bike brands do not produce a 500w model, maintaining a single consistent power level across Australia. It is not feasible to have different versions of the same product in different Australian states, logistically or economically.

As highlighted, the impact of the NSW certification requirements, which are unique from any other jurisdiction in the world, are a clear test case for unique certification process.

[11] Statista

According to industry feedback;

- There will be an approximate reduction of models on offer from 1000 to 600 in NSW after the 1st of February implementation date.
    - The brands will continue to offer several of these models in other states.

- The industry so far has invested approximately $10,000 per model to achieve certification or $6million on testing and certification (that number is growing), along with investing approximately 25,000 hours in staff time between Australian and international staff to complete the process.

- Brands that have withdrawn from NSW, but continue to operate in other states

If there were different certification requirements in different states, due to staff hours, testing and certification costs and the requirement to maintain stock for different states, it would force brands from the market.

This process would lead to the forced closer of businesses and loss of jobs across the importation and distribution sectors, retail stores and the tourism sector with a loss of hire fleets and associated businesses (as has been witnessed in NSW)

- Many small businesses utilise e-Bike hire fleets to subsidise income.
- Example - Tumba Bikes and Blooms (a nursery) began bike hire after the opening of the Tumbarumba to Rosewood rail trail opening in 2020. Without a change to the NSW regulations, they will not be able to continue hiring their fleet which they purchased in 2024.[12]
    - General bike hire fleets have a useful life expectancy of 5 years as a hire bike, before being sold to provide some capital for the purchase of a new fleet.

It is also expected that with the lack of import controls, the loss of brands would be replaced direct to consumer 'drop-shipped' product that would not be of the same quality levels.

Different certification would be a disaster.

[12] Tumba Bikes and Blooms

10. What type of guidance would you need, if any, to clarify how to comply with the technical construction requirements of AS/NZS 3820?

As the industry has not utilised ASNZS 3820 in the past, with a primary focus on EN15194 or UL2849, there would be a requirement for significant education and guidance to understand the process and requirements of ASNZS 3820.

Through the NSW implementation process, it was also identified that as REAS agents had not previously certified e-Bikes, there was a requirement for significant guidance to the agents, along with the industry to understand the requirements and allowances for e-Bikes.

The introduction in NSW of a new process required significantly more communication to many sectors, not just the bicycle industry such as Tourism and Local Government.

11. What would be the costs and operational impacts to your business of certifying and marking e-transport devices to meet safety standards? Please provide approximate figures or ranges, including any testing, labelling, or administrative costs, and how many product lines you would need to certify.

It has been estimated that industry has so far invested over $6million in testing and certification for the NSW market.

This does not fully include –

- cost of stock lost/tested to destruction (the model definition includes frame which must be sent to testing lab for destruction testing to meet EN15194)
- the impact on the retailers
- the forced sale of current stock at heavily discounted prices to meet deadlines prior to last minute extension
    - The extension of implementation date was announced less than2 weeks prior to expected implementation. This was caused by poor implementation and communication.
- the mental health strain on businesses forced to close /staff let go due to poor implementation process – staff were let go as businesses were not expecting to be able to trade after initial stage 2 implementation date.

This number is based on a current estimated figure of $10,000 in testing and certification of each model of e-Bike.

The estimate of the number of models to be certified in Victoria is challenging. It would be dependent on the model definition and the standards to be tested to.

If ASNZS60335-2-144 was introduced as the e-Bike standard, as no other jurisdiction in the world tests to this standard, the costs would be even greater as all products would be required to undergo unique testing.

There were approximately 1000 models of e-bikes provided for sale in NSW prior the certification requirements. It is estimated that this number will be 600 after certification.

* Please note, this is the number of models based on the industry model definition and differs from the Office of Fair-Trading definition of a model.

The full impact on the number of models available in Victoria is yet to be fully determined from the NSW certification requirements.

12. What factors should we consider when assessing the timing of new electrical safety requirements for e-transport devices?

The NSW development and implementation process has been extremely poorly managed and has led to poor short-term outcomes, increased costs and significant confusion with the industry, the consumers and the REAS agents. Since the initial announcement, the process will be 18 months (after the required extension) and that will still be extremely rushed.

The key factors in requiring an extended period to meet certification requirements

- Lack of clarity from the NSW Office of Fair Trading (as they did not understand the bicycle supply chain)
- Definition of a model – therefore requirements for testing far greater than any other jurisdiction increasing physical testing required
- New certification process for REAS agents not understanding testing requirements
- Increase demand on testing labs with many brands demanding testing to be undertaken at same time
- Increase demand on REAS agencies with many brands demanding certification to be undertaken at the same time.
- Testing requirements on new stock, as discontinued lines were unable to be tested.
    - Even if the same motor/battery is already certified, if the bike frame model is superseded, the bike can never be certified.
- Impact on cycle tourism operators on historical stock.
- Legacy of Covid on supply chains with higher levels of older product in stock in retailers and distributor warehouses
- Lack of initial understanding of the bicycle industry.
- Defining an e-Bike as an electrical device only, not a bicycle with an electric motor.

Factors to be considered

- Time requirements to undertake testing
- Model definition impacting the testing requirements
- Any secondary certifications
- Impact on cycle tourism operators
- Definition of a sale (in NSW a sale includes any hire of a product)
- 12-month supply chain to land products in Australia (not including moving through the retail sales process)
- Model life is often 12 months – therefore annual launch of new models
    - Prioritisation of product launches to Norther Hemisphere seasons

13. If you are a supplier/manufacturer/importer, how much time do you estimate is needed to achieve compliance with new certification and marking requirements for e-transport devices and associated batteries? Please provide as much information and evidence as possible.

The current supply chain from order to delivery of an e-Bike is generally estimated to be 9-12 months.

This number has been severely impacted by the 'tail of covid' with some supplies taking longer.

The key take aways from the NSW experience is that there was a significant failure in communication and understanding of the testing and certification process.

There has been a significant 'bottleneck' in the testing and certification process from factors including;

- The unique approach of NSW from any other jurisdiction in the world.
- NSW Office of Fair-Trading lack of understanding of the personalised nature of a bike (compared to a household appliance)
- The REAS agents lack of understanding of the testing certification requirements
- Two years to move product through design production, testing, delivery and sale.
- Testing labs and brands forced to 'rewrite' test reports as the REAS agents rejected the formatting of 100 + page test reports.
- The time of year the changes were announced – bike sales and therefore production is very seasonal

The supply process is also affected by the time of year of implementation as many brands order stock in January for the following Australian summer 'season'.

NSW announced the requirements on August 1st, 2025, with many brands already landing stock and not expecting new stock for a further 12-month period.

The 12-month implementation phase did not allow sell through of this stock on the floor.

The bike industry often works on a new model every 12 months.

To meet standards, the bikes must be tested either in production or on new stock.
If the product is a superseded model, the NSW experience has shown that many models if over 18 months old cannot be certified as they are not in production or new stock available for testing.

A minimum of **two years** is required to allow stock to move through the supply chain and allow certified products to be made available.

Further Issues

Definition of a sale

- The NSW definition of a sale includes any time the product is hired.
- This definition is going to decimate the bicycle tourism sector, especially in regional communities.

To meet standards, the bikes must be tested either in production or on new stock.
The bike industry often works on a new model every 12 months.

If the product is a superseded model, the NSW experience has shown that many models if over 18 months old cannot be certified as they are not in production or new stock available for testing.

Many hire fleets can never be certified if over 18 months old.

In NSW these products can also never be sold, which will lead to the disposal of 'fleets' of bikes, impacting disposal processes with the potential for more fires in the waste process.

A detrimental outcome for environmental and safety outcomes.

Definition of a model

The definition of a model has been extremely problematic in NSW adding costs and time to testing and certification process.

The industry understands that the Energy regulator can only determine certification for electrical components, adding the frame to the definition of a model is counterintuitive, costly and has means that the same battery, motor and controller have been required to be certified as part of a frame many times.

Leading battery standards UL2271 and EN50604 also dictate that the battery is removed from the bike for testing.

- Impact of tourism sector

As highlighted above, the NSW process, unless a further change is Gazetted, will have a disastrous effect on the cycle tourism sector, and supporting businesses.

The Energy regulator must ensure that it has consulted with Tourism Victoria, Regional Tourism operators and facilities that specialise in cycle tourism

Safe and legal is not necessarily safe and legal

The BIA does not support the use of a definition of a e-Bike that is different from that utilised by the Victoria Department of Transport.

If Energy Safe Victoria does utilise the definition listed in the consultation paper, the regulator must develop and deliver a very clear communication and education campaign.

- Energy Safe Victoria certification does not assure that the product is safe and legal to use.
- Certification only refers to the point of sale and has no relevance in determining if the product is safe and legal to use.
  - Ie - **do not** look for a certification mark to determine if the bike is safe and legal to use.
- Develop a joint campaign with the police and the education department to ensure students are not inadvertently breaking the law.
- Work with the food delivery sector to ensure the riders are looking for both a certified product and road legal product

Markings on bikes

According to Victorian Department of Transport, a bike that has capacity to have a higher power but is restricted by electronic, mechanic or otherwise must be listed as the higher power.

- Therefore, a bike certified to 500w in NSW, can never be road legal in Victoria.

To overcome the issues identified, Energy Safe Victoria should look at a certification process that identifies that any product that does not meet the definition of an EPAC, or a Power Assisted Pedal Cycle, which has a power rating greater than 250w continuous rated power, throttle over 6kmh or assisted speed over 25kmh, is not legal for road use and provide a mark that is clearly identifiable by the police.

Do not 'pretend' to 'fix' the problem of unsafe e-Bikes and create greater confusion with consumers.

Industry training

Victoria has identified that greater support is required to deliver quality and safe e-mobility devices.

In 2012, the Victorian Government halved the funding to support bicycle mechanics to undertake training. A review by the Vic Department of Training[13] identified that bicycle mechanic/technician training enrolments fell from 163 in 2012 to 2 in 2013. The state Government has subsequently withdrawn all subsidies to support bike mechanic training in Victoria.

As a direct result of Victorian Government actions, Victoria does not have any RTOs with bike mechanics/technicians on scope and delivering training.

Under the Australia and New Zealand Standard Classification of Occupations (ANZSCO) rating for skills/careers, bicycle mechanic was rated as a level 5, on a par with a shopping trolley collector and an usher at the movies.

Under the ANZSCO rating, a level 5 skill was described as 'may require some on the job training'.

This rating was utilised during a Victorian Gov review to slash mechanics training funding.

The Australian Bureau of statistics in transitioning to the OSCA program announced in December 2024, that it has now evaluated bike mechanics/technicians as a level 3 skill on a par with car mechanics[14].

Level 3 skills are described as - Occupations at this level involve performing a variety of skilled tasks, often requiring in-depth technical, trade, or industry-specific knowledge.

Although it is now considered a level 3 skill, working on specific and technical products, the Victorian Government has not moved to support training and skill development though increased funding/training subsidies.

As a direct result of the Victorian Government actions, bicycle mechanics without training and qualifications are building, assembling and servicing e-bikes. The provision of good quality products is reliant of the product and the individual working on that product.

The Victorian Government must urgently review training funding to support the provision and servicing of emobility devices.

[13] ACIL ALLEN CONSULTING – Bicycle industry training in Victoria
[14] Aust Bureau Statistics - Major changes between ANSZCO v1.3 and OSCA V1.0