

**Submission  
No 151**

## **INQUIRY INTO USE OF E-SCOOTERS, E-BIKES AND RELATED MOBILITY OPTIONS**

**Organisation:** Bicycle Industries Australia

**Date Received:** 16 August 2024

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Dear Ms Faehrmann

RE: SUBMISSION TO THE NSW INQUIRY INTO THE USE OF E-SCOOTERS, EBIKES AND OTHER MOBILITY DEVICES

Bicycle Industries Australia (BIA) would like to thank the Committee for the opportunity to provide a submission for this inquiry.

Consumer and industry members safety are paramount in the minds of the light electric (specifically 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, 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 20% 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 environmental and community benefits of transitioning greater numbers of people and goods to be moved by LEV. These brands are investing hi levels of funding in the technology required, but also production capacity to produce millions of LEV.

The transition to LEV to complete the transport task has been shown to have significant benefit to both the Australian economy and the community.

In 2022 the bicycle sector made the following contribution<sup>1</sup> -

- \$16.9billion to the Australian economy
- 514,096 tonnes of carbon dioxide (tCO<sub>2</sub>e) avoided over the year (equivalent of taking 207,000 cars off the road for a year)
- \$954million in health and social benefits
- \$1.9billion in cycle tourism (mainly to regional economies)

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<sup>1</sup> The Australian Cycling and E-Scooter Economy in 2022

The release of a 2021 report by the Institute for Sensible Transport found that based on NSW Treasury figures, providing direct incentives for the purchase of e-bikes returned between a \$3 and \$7 return on investment for every dollar invested<sup>2</sup>.

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 substitute 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.

The BIA would welcome the opportunity to expand on the information provided through this submission and look forward to discussing the issues further with the Joint Standing Committee.

Regards Peter

Peter Bourke  
General Manager  
BICYCLE INDUSTRIES AUSTRALIA

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<sup>2</sup> E-bike Subsidy for Australians



## **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.

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## Definitions

Throughout this report, I will refer to a variety of definitions of an e-Bike. Please note although some of these relate to jurisdictions outside of the control of this inquiry, I have chosen to maintain all definitions to highlight the lack of clarity within each of the Government departments involved in the importation, sale and use of e-bikes.

**Pedalec**- A vehicle meeting European Committee for Standardization EN 15194:2009 or EN 15194:2009+A1:2011 Cycles - Electrically power assisted cycles - EPAC Bicycles.”

**EPAC – (national)** – means an electrically-powered pedal cycle with a maximum continued rated power of 250 watts of which the output is:

- (a) progressively reduced as the cycle’s speed increases; and
- (b) cut off, where:
  - (i) the cycle reaches a speed of 25 km/h; or
  - (ii) the cyclist stops pedalling.

**EPAC – (NSW)** – means an electrically-powered pedal cycle with a maximum continued rated power of 500 watts of which the output is:

- (a) progressively reduced as the cycle’s speed increases; and
- (b) cut off, where:
  - (i) the cycle reaches a speed of 25 km/h; or
  - (ii) the cyclist stops pedalling.

**Power Assisted Pedal Cycle – (NSW)** - means a vehicle, designed to be propelled through a mechanism primarily using human power, that:

- (a) meets the following criteria:
  - (i) is equipped with one or more auxiliary propulsion electric motors;
  - (ii) cannot be propelled exclusively by the motor or motors;
  - (iii) has a combined maximum power output not exceeding 200 watts;
  - (iv) has a tare mass (including batteries) of less than 35 kg;
  - (v) has a height-adjustable seat; or
- (b) is an electrically power-assisted cycle;

but does not include a vehicle that has an internal combustion engine.

### **Power Assisted bicycle (state specific)**

- A bicycle with one or more auxiliary motors attached which has a combined maximum ungoverned continuous rated power output not exceeding 200 watts.
- An electrically power-assisted cycle (EPAC). These are pedal cycles with an electric motor that has a maximum continued rated power of 250 watts. The power-assistance progressively reduces as the speed increases and cuts off once a top speed of 25 kilometres per hour is reached. EPACs require the rider to pedal to access the power.

**E-bike** – General term encompassing road legal bicycles assisted by an electrical motor in one or all jurisdictions across Australia

## Community benefits

Australia, for many, is currently impacted significantly by a 'cost of living,' crisis with the NRMA reporting that transport is accounting for up to 17% of total household income or around \$22,000 per household per year.

With around 50% of all trips in metropolitan areas 5km or less, and 50% of trips in regional cities 4.5km or less, distances easily covered by LEV, the transition to sustainable transport will have significant impact on household spending. Replacing the primary or secondary motor vehicle should be encouraged and supported by the NSW Government.

Along with cost savings for individuals and households, the transition to LEV will have a positive impact on the NSW economy, through reduced congestion, increased productivity cost savings to the health system and reduced carbon emissions<sup>3</sup>

In 2022 the bicycle sector made the following contribution to Australia -

- \$16.9billion to the Australian economy
- 514,096 tonnes of carbon dioxide (tCO<sub>2</sub>e) avoided over the year (equivalent of taking 207,000 cars off the road for a year)
- \$954million in health and social benefits
- \$1.9billion in cycle tourism (mainly to regional economies)

Any recommendation that reduces the capacity of LEV (in particular e-bikes), from providing a transport solution from the NSW community will have a negative impact on many individuals, the NSW economy and the NSW environment.

Financial modelling utilising NSW treasury information released by WeRide Australia in 2021, identified that the return on investment of e-bike incentives was approximately 2:1 This modelling was updated in 2023 with data published in the Australian Transport and Planning guidelines identified that this figure was closer \$7:\$1 due to the health, environmental, and congestion impact.

The entire NSW population benefits financially when more people ride e-bikes.

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<sup>3</sup> The Australian Cycling and E-Scooter Economy 2022

## Legislation

To determine the future opportunities and steps to manage LEV, the committee must understand the history of the legislation that has contributed to the current position.

Prior to 2012, the Australian regulations relating to power assisted cycles were loosely defined. The critical restriction in road legislation identified at that time, was that the power of the motor does not exceed 200w **maximum output**. At that time throttle only e-bikes were allowed across Australia.

The Federal Parliamentary Secretary for Transport introduced [Vehicle Standard \(Australian Design Rule - Definitions and Vehicle Categories\) 2005 Amendment 6](#) (pedalec) in May 2012.

The critical elements of this regulation are;

- Maximum assisted speed 25kmh
- Maximum of 250w **maximum continuous rated power**

\* Please note the difference between maximum and maximum continuous is significant

Throttle only power assisted cycles up to 200w continued to be allowed.

At that time, to import an e-Bike, Australian Border Force required an advice notice from the Dept. of Infrastructure, Transport, Regional Development and Communications that the Ebike "had been assessed as not road motor vehicles as defined by the Motor Vehicle Standards Act 1989(the Act)." to prove that met the requirement.

Victoria became the first state to adopt EN15194 into road regulations in Sep 2012.

Over the course of the following 5 years, each state adopted the modification of the Australian Design Rules (EN15194), with the NSW Dept National Parks and Wildlife Service the final jurisdiction in May 2017 to allow the use of e-bikes on public land.

In 2017, Australia imported approximately 9,000 Pedalecs and power assisted cycles (negligible numbers of road legal e-bikes are made in Australia).

The number of e-bikes imported in 2022 grew to almost 200,000 units<sup>4</sup>

In 2016 Standards Australia released the standard for a pedalec AS 15194:2016 as a modified adoption of the European standard EN15194:2009 (we are still operating from the EU 2009 standard which is now 15 years old).

With the release of the national standard, and adoption of EN15194 in each state, all Australian state and territory regulations were harmonised, creating a consistent definition of a pedalec across all jurisdictions in Australia (incorporating import, sale and use of e-bikes).

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<sup>4</sup> The Australian Cycling and E-Scooter Economy in 2022

In 2018, the federal government withdrew an exemption to the 5% import tariff on e-bikes imported from countries not featured in a Free Trade Agreement. As a general statement this has increased the price of higher quality products.

As Australia has a signed FTA with China, e-bikes originating from China do not attract the import tariff.

In Jan 2021, the Assistant Minister to the Deputy Prime Minister, introduced the [Motor Vehicle Standards \(Road Vehicles\) Amendment Determination \(No 1\) 2021](#) (without consultation with the industry or states), moving the definition from a Pedalec to an EPAC and modifying the definition of a Power assisted pedal cycle.

This created a new definition for the importation of e-bikes.

NSW was the only Australian state or territory that adopted the new definition without modification into road regulations.

Coinciding with these changes, the Federal Department of Transport released the ROVER administrative portal for the management of import applications and approvals under the Road Vehicle Standards (RVS) legislation on the 1st of July 2021.

The ROVER system modified the import permit for an EPAC/Pedalec/power assisted cycle to an 'Advisory Notice' under the title of 'that thing is not a road vehicle' (although e-bikes are defined as road vehicles under the Act).

Prior to the ROVER system the importation of any shipment that included an EPAC/Pedal/Power assisted cycle required a permit. Under the ROVER system guidelines, this requirement was withdrawn.

*'While you don't need permission to import vehicles that are not road vehicles, you may like to apply for an advisory notice through [ROVER](#), the department's online application and approval portal. The advisory notice will confirm that the thing you are importing is not a road vehicle. You'll have to answer questions about the e-scooter and provide the manufacturer's specifications. The fee for an advisory notice is \$55.'*<sup>5</sup>

In March 2023, the NSW Minister for Metropolitan Roads introduced [Road Transport Legislation Amendment \(electric skateboards and Bicycles\) Regulation 2023](#), introducing a 500w continuous rated power limit, and creating a variation between NSW and all other Australian jurisdictions, including importation regulations and sales regulations, along with road use regulations.

The combination of speed and power (25kmh and 500w) adopted by the Minister is a unique combination to NSW from any other jurisdiction in the world.

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<sup>5</sup> <https://www.infrastructure.gov.au/department/media/news/importing-e-scooters-made-easy#:~:text=While%20you%20don't%20need,is%20not%20a%20road%20vehicle.>



The decision was made **against industry advice**, as it was advised that it would promote confusion and increase the risk of poor-quality, higher-powered units in NSW.

The change to NSW regulations, created the fundamentally flawed situation whereby there are currently different definitions of a Pedalec/EPAC/power assist pedal cycle/power assisted bicycle across the federal and state departments involved in the 'life' of an e-Bike.

- Federal Dept of Transport – relating to import
- Standards Australia/ACCC – relating to sale
- NSW Dept of Transport – relating to use

This change has created the situation that importers cannot legally declare a 500w e-Bike as a road legal EPAC or Power assisted bicycle at the point of import, but they are road legal to utilise in NSW.

The NSW Minister identified this concern and wrote to the Federal Minister requesting changes to the import process – this request was not supported at a federal level.

This 'clash' of definitions has created confusion for importers, retailers and consumers.

The changes to the definition also created the situation that the largest mainstream suppliers of drive units and batteries into the Australian LEV market, do not supply an e-Bike built to NSW unique specifications as it would be 'more trouble than it's worth.'

Further to the concerns regarding importation, sale and use, an e-Bike drive system that is restricted electronically, mechanically or otherwise to a lower restriction is not considered road legal in Victoria and Queensland. Therefore, a 500w e-Bike sold as road legal in NSW, cannot be restricted to 250w to be sold in another state.

With the modifications of the ROVER import platform, the withdrawal of the tariff exemption and the variations between state and federal definitions of an EPAC/Pedalec/power assisted cycle for import, sale and legal road use, it has created significant confusion and made it easier and cheaper to import inferior quality products (including batteries) that are more susceptible to malfunction.

This process has also decreased the clarity for those charged with 'policing' the legislation.

This history has unfortunately been a demonstration of poor consultation, communication and implementation over the last 5 years.

The industry believes that the attempts to improve the definition of an EPAC/pedalec/power assisted cycle were implemented in good faith, but we are aware that many of the actors involved in the process have not previously examined an LEV prior to making the modifications, resulting in a poorer quality outcome.

## Consumer behaviour

### SPEED + POWER

Australia remains a jurisdiction with the 'lowest' maximum assisted speed limits of e-bikes around the world.

The Australian standard is based upon the European standard En15194:2009 version released in 2009.

Since that time, across Europe, a speed pedelec category has been introduced allowing identified e-bikes to travel with motor assistance up to 45kmh. In North America, the speed limits are 32kmh for e-bikes and 45kmh for hi speed e-bikes (similar to Europe). The speed limit is controlled by location in New Zealand (shared path limit is much slower than on roads)

One critical reason identified by many consumers for purchasing unregulated or modified e-bikes is often stated as looking for speed for either safety in traffic or to arrive at their destination faster.

The review of speed and an increase of the limit may reduce the number of consumers choosing 'online, unregulated' products.

The European market to promote greater use of e-bikes for 'last mile freight' has introduced cargo bike specific regulations – L1e-a.

- Any change must be led at a federal level and cannot be taken on a state by state or 'scattergun' approach.

## INCENTIVES

The Tasmanian Government announced in 2023, a \$1.2million incentive fund for the purchase of sustainable vehicles including e-bikes., this provided for \$200,000 in incentives to promote the purchase and use of e-bikes.

The City of Adelaide motion to introduce e-Bike purchase incentives passed unanimously on the 30th of January 2024 becoming the first Australian city-based incentives.

Other local government areas across Australia have now introduced incentives in a variety of states.

In the absence of federal leadership, states and cities are now recognising the benefits of local incentives to promote e-Bike purchase.

With the inclusion of specific battery and standards guidelines, these incentives have been shown around the world to promote greater uptake of higher quality e-bikes and improving the quality of the market, including the second-hand market.

The introduction of e-Bike purchase incentives will encourage the purchase of higher quality e-bikes.

Research and modelling undertaken by WeRide Australia in 2021 utilising NSW Treasury figures identified a return on investment of two dollars for every dollar invested.

When this modelling is updated with figures released in 2023 with updated NSW health figures, the return on investment grows significantly to \$7:\$1.

## EQUITABLE COMMUTE

Equitable Commute Projects across the world have shown to provide outcomes that benefit all residents within the population and builds on the single incentive outcomes.

The Equitable Commute Project concept as delivered in New York has a simple vision –

### **E-BIKES FOR ALL WILL INCREASE ECONOMIC OPPORTUNITY WHILE REDUCING CONGESTION, CARBON EMISSIONS, AND TRAFFIC FATALITIES.**

While Sydney has a public transit network, many lower-income Sydney residents live in areas underserved by transit and face long, complex commutes, creating barriers to employment and harming overall well-being. Unreliable transportation limits opportunity and keeps people in poverty.

Hundreds of billions of dollars have gone to support electric car incentives and charging infrastructure, but EVs have limitations: they're expensive and out of financial reach for many, and they still contribute to traffic and road safety issues.

E-bikes are an ideal option for around one-third of urban trips. More convenient and less polluting than a car and cost-competitive with transit, e-bikes appeal to users of all ages and fitness levels. They don't require new charging infrastructure and take up little space.

E-Bike incentive programs across the globe have shown that expanding access to them will have immediate benefits.

The development of an Equitable Commute Project will support access to e-bikes for under-resourced communities in Sydney by overcoming the financial, social, and logistical barriers to e-Bike purchase and upkeep. The development of a comprehensive e-Bike equity program, the development of ECP would combine a purchase subsidy with access to low-cost microloans, including for individuals without credit.

Discounted access to e-Bike share schemes, increase transportation access and reduces demand for government support services.

Along with incentives, an ECP should also include workforce training to ensure Sydney residents are first in line for jobs in the multibillion LEV industry; safety and maintenance training to prepare riders, and strategic communications to engage the community and maximize program impact.

This program would also increase access to quality bicycles to reduce risk of Lithium-ion battery fires due to poor quality products.

## SAFE ROUTES TO SCHOOL

We need safe routes to school! Why? Because our children have stopped moving! This is currently expressed in a broad consensus across expert research groups and the outcomes of much research that provides a clear insight into the current lack of active travel and physical activity of our children.

In a recent report by the Australian Health Policy Collaboration, 'Active School Travel: Pathways to a Healthy Future', the authors stated that in 1971 3 of every 4 children walked or cycled to school and forty years later only 1 in 4 do so, a decline of around 42% in young people's use of active transport.

Today, more than 70% of primary school children are driven to and from school every day.

Alarminglly

- Nearly 71% of Australian children from the ages of 5 – 11 years are not meeting recommended levels of physical activity. This rises alarmingly to 91.5% of young people (12 – 17 years)
- Children and adolescents in 2014–15 were also significantly more likely to be overweight or obese at ages 10–13 and 14–17 than those of the same age 20 years earlier.

The 2016 Report Card on Physical Activity for Children and Young People, using globally agreed and evidence-based metrics and gave Australia's children a "D-minus" for physical activity and a "C minus" for active transport. Travelling to and from school could contribute significantly to overall levels of physical activity.

Since 2011 We Ride Australia, in partnership with the Heart Foundation, has conducted national market research into the barriers that prevent greater uptake of active travel. From the first national adult cycling perception survey in 2011, the barriers, incentives and perceptions of why Australians choose not to ride have been the subject of the research.

The 2012 national survey 'Active Travel to School' specifically looked at the barriers and issues facing the decision of parents and children to cycle to school. While the vast majority of parents surveyed have a bicycle in their household and nine in ten parents agreed that it is important for children to learn to ride a bike, close to half do not believe that it is safe for children to ride a bike to school and 60% drive their children to school.

Increasing the use of e-bikes for parents has been proven to increase active travel to school and instil active travel 'habits' in children.

Models such as RideScore on the Sunshine Coast which have shown an increase of over 50% of riding to school across the year in 9 pilot schools identify the opportunity that we have.

Critical to the change is the change of 'family' behaviour and parents riding more – supporting the transition onto e-bikes increases children's riding to school.

## Industry training

The development and delivery of training packages for bicycle mechanics in NSW and across Australia has been poorly supported by Government for a significant period of time.

Under the Australia and New Zealand Standard Classification of Occupations (ANZSCO) rating for skills/careers, bicycle mechanic is 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 is described as ‘may require some on the job training’.

The Australian Bureau of statistics released an interim report and recommendations from its review of the ANZSCO rating program in June 2024.

These interim recommendations include the movement of bicycle technicians to a level 3, placing it on a par with automotive mechanics based on the identification that bicycle mechanics must be trained in electronic, hydraulic and mechanical systems, and now may include working with batteries that are declared dangerous goods.

The historical rating (has not been updated in 20 years) has been a significant factor in many governments reducing and providing minimal support for bicycle mechanic training in Australia.

As a result of the lack of supported training, the development of training units within the packages has failed to be maintained to reflect the requirements of the qualification with regards to Lithium-ion battery powered products.

NSW does not currently provide training funding to support Cert II bicycle technicians’ courses, limiting school-based apprenticeships and entry into the industry.

Due to the lack of state and federal support for accredited training, there has been limited investment in accredited training facilities and course development, the course numbers in NSW reflect this.

The state needs to urgently review training packages to support career pathways for technicians.

## Handling of batteries

The industry has developed a series of resources for bicycle retailers and wholesalers to support the safe storage and handling of batteries within the industry.

These include:

- Standard operating procedures
- Storage systems
- Handling procedures
- Transport
- Recycling

Under a Green Wheels program funded by NSW EPA, each NSW bicycle retailer is evaluated for its ability to reduce its carbon footprint.

The safety and security of collecting and storing damaged or end of life batteries was identified as a high priority but extreme risk.

The result of this assessment has been that many retailers are not willing to collect end of life batteries, leading to 'dumping' of batteries from consumers in general waste (these batteries cannot be collected in general battery deposit bins at Bunnings (or similar) due to the energy capacity).

The Government needs to support local collection and storage programs for industry.

## Data / what is really happening?

The collection of accurate data on e-Bike and e-scooter incidents (including lithium-ion battery) is an issue that many authorities across Australia have identified as critical in planning future direction.

There is no agency in Australia that has accurate data on LEV lithium battery fires.

- Number of light electric vehicle lithium-ion battery fires
- Type of fire (scooter/hoverboard/e-Bike)
- History/damage of system/battery/charger
- Brand of system
- Modifications to system
- Was it road legal?
- Other reason for overheating

In a presentation to the bicycle industry on the 19th of January 2024, a Senior Fire Investigator of the SA Metropolitan Fires Services said,

‘it is overwhelmingly the case that the fires occur when users are tampering..... or importing online and making their own homemade systems, overwhelmingly they are the cause of the fire.’

‘It is quite uncommon if users purchase all of the components together and they are used in accordance with the manufacturer’s instructions, it is very rare that there is an instance when they fail.’

<https://www.bikeoz.org/batteryforum>

‘Based on experience we ‘know’ what are the types of batteries that are burning, but we do not have the data to support future decisions.’



## Insurance

The bicycle industry is facing a critical issue associated with insurance for manufacturers, importers, distributors and retailers.

Retailers selling e-bikes have reported an average 250% increase in premiums, along with importers reporting up to 600% increase premiums.

This is leading to a number of businesses choosing to self-insure or not insure, exposing both the industry and riders should an issue arise.

Critical issues include a lack of data and information for insurers to base information, fragmentation of regulations (including lack of alignment with world best practice), lack of enforcement of regulations (at each level of government) and a lack of prioritisation of active travel across Australia.

The NSW Fire and Resue report identified brands responsible for e-Bike and e-scooter lithium-ion battery fires.

<https://www.fire.nsw.gov.au/gallery/resources/SARET/FRNSW%20LiB%20fire%20data%202022-23.pdf>

In the list of brands responsible for fires, there was not a single brand that would be recognised as a 'quality complete bike brand'.

As a result of the lack of data, poor reporting and lack of controls, the ongoing impact of insurance will force considerable increase in product costs to consumers or lead to businesses 'cutting corners' and exposing riders and the sector to significant liability risk.

## RESPONSE TO THE TERMS OF REFERENCE

That Portfolio Committee No. 6 - Transport and the Arts inquire into and report on the use of e-scooters, e-bikes (including shared schemes), related mobility options, and in particular:

### **(a) the current and anticipated role of all three levels of government in enabling and encouraging safe electrified active transport options**

#### FEDERAL

The Federal Department of Infrastructure Vehicle Safety Policy and Partnerships, Road and Vehicle Safety Division indicated that as e-bikes, whether road legal or not, have been removed from the Road Vehicle Standards Act due to the above-mentioned amendment, the department no longer has a role in the management of e-Bike imports. As the e-bikes that are overpowered are not illegal to import for private use, this process has 'opened' the door for unregulated product.

The federal government needs to correct the issues created through the introduction of the [Motor Vehicle Standards \(Road Vehicles\) Amendment Determination \(No 1\) 2021](#) and the [ROVER import portal](#).

The lack of 'checks' and border controls has allowed the import of poor quality and dangerous products.

The federal government needs to demonstrate leadership and create a harmonised framework for the import, sale and use of e-bikes across Australia.

Lead a coordinated approach to the collection of data on e-Bike sales, issues, fires and incidents

Review international best practice for speed and power limits on e-bikes and introduce limits that increase the use of e-bikes for transport and for freight movement.

The Australian legislation is currently aligned with European standards EN15194, 250w / 25kmh limit. The federal government should fully align with the European regulations, introducing speed pedalecs, and cargo bike specific categories L1e-a and L1e-b to promote increased use of e-bikes for last mile freight.

Introduce tax subsidy parity with e-vehicles to promote e-Bike use for transport. E-cars and E-bikes must have aligned FBT regulations and subsidies.

## STATE

The critical focus of the state government must be to work with the federal, and other states and territories to achieve harmonised e-mobility definitions and laws, to allow a single approach to import, sale and use of e-bikes, ensuring that all bikes sold align to the national standard.

Introduce a statewide subsidy program to incentivise the growth in e-Bike purchase and usage and introduce Australia's first Equitable Commute program.

Address default local speed limits to prioritise safe speeds to increase the safety and perceived safety of all road users.

Invest in safe connected active transport infrastructure that prioritises the movement of people and freight over private motor vehicles.

Invest in safe routes to schools' programs that promotes the movement of families to school through active transport.

Legalise private e-scooters to promote greater use of e-mobility solutions across the state. Support shared e-mobility schemes across the state.

Develop parking best practice guidelines for public facilities and work with private providers to promote active transport through e-mobility.

Invest in secure parking facilities for e-Bike users to promote greater use of active transport across NSW.

The final factor is clear regulation of after market kits. This includes the extension of the EN15194 regulations to ensure that all e-bikes, whether complete kits or fitted aftermarket are compliant and marked appropriately.

## LOCAL

Introduce local subsidy program to incentivise the growth in e-Bike purchase and usage across each council area.

Address default local speed limits to prioritise safe speed limits to increase the safety and perceived safety of all road users.

Invest in safe connected active transport infrastructure that prioritises the movement of people and freight over private motor vehicles.

Invest in safe routes to schools' programs that promotes the movement of families to school through active transport.

Invest in secure parking locations in activity and job centres to allow for the storage of e-mobility

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**(b) opportunities to reform the regulatory framework to achieve better and safe outcomes for riders and the community**

As highlighted in the document, there has been a complete lack of coordinated approach and harmonisation to e-bikes and e-scooters across Australia in the past 5 years.

NSW, by acting against industry advice has exacerbated the problem.

Australia is a small e-Bike market by world standards, and individual states adopting unique power and speed restrictions to any other jurisdiction in the world has further highlighted the lack of market size.

With NSW adopting a unique power/speed combination, e-bikes which are sold at the 500w max continuous rated power to align with road legislation cannot meet the current Australian standard for EPACS AS15194:2016, nor can they be legally imported as road legal e-bikes.

The updated Office of Fair Trading approach has looked to address issues associated with battery safety but cannot address issues associated to a lack of alignment between federal import and state sale and use legislation.

**DO NOT create unique legislation!**

The key regulatory change would be lead a national conversion to once again harmonise the sectors legislation.

## IMMEDIATE CHANGES

### Medical exemption

The 2021 changes to the NSW legislation regarding e-bikes removed the ability for any e-Bike to have throttle only activation over 6kmh. This change adversely impacted those that needed it the most, people with medical needs, for either physical or mental health reason.

To support this market that needs support, the NSW State Government needs to introduce a medical exemption for those with needs that suffer from medical conditions to allow a throttle control e-Bike.

A medical exemption would include a capacity to utilise throttle only up to 25kmh to continue to provide social connection, physical activity and independence.

### 200W category

Remove the Power Assisted pedal category

- At 200w **max power**, the e-bikes have a **continuous rated power** significantly less than the 500w EPAC category – giving far less assistance.
- The 200w power category is governed by significantly less ‘controls’ and safety regulations, with no specific battery safety standard.
- At less power, and no specific benefits (except for less safety standards – to allow easier sale) it is a category that adds minimal benefit to the sector while adding higher risk.

By removing the category, there will be minimal impact on the road legal e-Bike sector, with significant capacity to increase the quality of products, especially batteries.

### Overpowered e-bikes for private use only

Introduce identification symbols/stickers/plates that are easily recognised by authorities for e-bikes that have been sold or legally modified for ‘use on private land only’.

Any e-Bike that features speed allowances or power limits over the legal road limit must be conspicuously marked as private use only.

## **(c) local council, industry and stakeholder perspectives on the utilisation and impact of e-mobility devices in the community**

### Last Mile Freight

Local Governments must prioritise space to support the delivery of last mile freight by e-cargo bikes.

Getting packages from a centrally located warehouse or distribution centre to customers' homes — is far more carbon intensive and logistically complicated than other stretches of the transport chain, when products are packed neatly in shipping containers or freight boxes all going to the same location. Emissions from the last-mile delivery can account for [as much as 50%](#) of total delivery carbon emissions.

After aviation, the electrification of local last mile pickup and delivery and line haul is probably the second biggest piece to the carbon footprint that we have

Electric cargo bikes deliver about 60% faster than vans in city centres, according to a study. It found that bikes had a higher average speed and dropped off 10 parcels an hour, compared with six for vans. The bikes also cut carbon emissions by 90% compared with diesel vans, and by a third compared with electric vans, the report said.

The identification of and partnerships between Government, industry and stakeholders for space, both centrally located collection/distribution centres and road space must be a priority to reduce emissions and cut local congestion.

### Safe spaces for food delivery e-Bike charging

A critical factor for food delivery riders is the capacity of the batteries which they use. This may include feeling 'forced' to purchase a second battery which is often of 'inferior' quality.

A key option driving this behaviour is the inability to charge batteries during a shift.

A centralised safe location for charging and/or swapping of charged batteries will assist in ensuring riders are using quality products.

### Safe Routes to School

We need safe routes to school! Why? Because our children have stopped moving! This is currently expressed in a broad consensus across expert research groups and the outcomes of much research that provides a clear insight into the current lack of active travel and physical activity of our children.

Parents behaviour is critical to this change

We need more parents riding for transport, including riding with their children to school, and a critical element to support this is greater use of e-bikes for parents.

Safe Routes to school promote active travel in children and their parents to ride, reducing congestion around schools and promoting healthy families.

### Equitable Commute

Through subsidies, incentives, micro loans and training will have enormous economic, benefits, while reducing congestion, carbon emissions and traffic fatalities.

The development of an equitable commute project will support filling transport 'deserts' and support lower socio-economic communities while providing transport solutions and employment pathways.

The NSW Government has the opportunity to lead the nation and deliver a truly equitable transport that supports residents which need support.

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### **(d) opportunities to improve mobility, the customer experience, safety for users and the community**

The critical factors to improve customer experience and safety include:

Prioritise vulnerable road users over private motor vehicles. Reduce interaction with motor vehicles – safe separated infrastructure – low speed neighbourhood streets

The road hierarchy should always prioritise moving people and goods, not private motor vehicles

- Pedestrian
- Bicycle/Scooter
- Public transport
- Freight
- Private motor vehicles

#### **Infrastructure**

Safe separated bike LEV infrastructure for bikes and scooters to provide both the safety and the perception of safety for riders.

Separated bike infrastructure from pedestrians in high use areas.

Shared paths are valuable in low use areas but are poor solutions in highly used areas often creating significant conflict.

#### **Speed limits**

In July 2023, the NSW speed limit guidelines were updated to include recommendations on 30km/h speed zones.

The NSW Government needs to expand the 30kmh speed limit to default for neighbourhood streets.

This limit would make streets safer for all road users, especially vulnerable road users, and increase the uptake of light electric vehicles.

**(e) the potential benefits and risks of existing regulatory and policy settings, including the Roads Act 1993, Road Rules and Road User Space Allocation Policy and other related legislation regarding safety, traffic, and personal convenience**

Safe infrastructure is essential. Cities must continue to adapt to accommodate better, more space efficient, low emission, sustainable transport.

- the reallocation of road space away from parked and moving vehicles to create more room for bikes, pedestrians and a full range of micromobility devices.
- reduced speed limits on local roads, town centres, around schools and other areas with high pedestrian activity so more riders are comfortable to use the road
- generous separated bike paths on busier roads

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**(f) the extent that e-mobility devices have positive community benefits such as encouraging mode shift, relieving congestion, addressing social disadvantage and tourism**

The 2023 Cycling economy report identified that in NSW, cycling contributed \$5.6B to the state's economy, contributing over 19,640FTE jobs servicing riders and their supporters across the state.

Across the country, numerous reports have identified that amongst riders in Australia, the average gender split of participants is 20% female: 80% male.

It has been identified though these reports that the ratio is shifted to 40% female: 60% male amongst e-Bike riders.

E-bikes break down barriers to participation and open up the cycling market, for commuting, for tourism, for family and for fun to more women.

E-bikes get more Australians riding, and this significantly benefits the Australian health system. In 2022 bicycle riders contributed just under \$1billion in savings to the health system and social benefits

With a national contribution of almost \$1billion to the national economy in health and social benefits, these are critical benefits to the NSW economy.

Bicycle commuters also prevented over 500,000 tonnes of CO2 from being emitted into the atmosphere, the equivalent of taking over 200,000 cars off the road for a full year, or over 50,000 cars being taken of the road in NSW alone.

These numbers were achieved by bicycle commuters completed 2.8billion km, trips that would otherwise have required the use of private motor vehicles.

Other key stats, to the NSW economy, cycling contributes;  
\$327.8million in tourism  
19,640 FTE jobs  
\$5billion in economic activity

**(g) opportunities across government to improve outcomes in regard to e-scooters, e-bikes, and related mobility options**

The critical factor to improve outcomes for the state government is to prioritise moving people and freight over moving private motor vehicles.

In September 2023, the NSW Minister for transport announced from the 2023/24 budget that the NSW Government was investing \$72.3Billion in improved transport infrastructure.

In the same release, the minister announced \$60million in active transport infrastructure.

This equates to active transport, or walking, cycling and PMD's of less than 0.1% of the transport investment.

The Transport for NSW website identifies that 'The NSW Government wants walking and bike riding, known as active transport, to be the preferred way to make short trips and a viable, safe and efficient option for longer trips.'

NSW Governments for many years have identified the benefits of active travel but failed to invest.

If the Government is serious about improving outcomes in regard to e-scooters, e-bikes and other mobility options, it must prioritise and invest appropriately.

#### **(h) best practice in other Australian and international jurisdictions**

Australia is a small jurisdiction for the industry in the delivery of e-mobility devices. The greatest error is that the NSW Government providing a fractured national approach to regulations.

The Australian Government has identified the European framework as the best practice for use in Australia. Therefore, the Government should support the adoption of the entire framework, including Speed pedalecs and the L1e-a and L1e-b categories.

Further to the regulations relating to the import, sale and use of e-bikes, the current best practice for parking guidelines for public and private buildings, is being led by the West Australian Government.

The NSW Government needs to develop guidelines for the use of LEVs in Government buildings and public transport along with guidelines to promote the ongoing use and access to LEV in academic facilities, units, hotels, and strata-controlled facilities across Australia.

The adoption of EN15194 2017+A1:2023 as a national standard will introduce stricter controls on batteries, antitampering, and mechanical elements of the bikes.

As an extension of the standard the national adoption of the EU battery regulation (2023/1542), increasing the outcomes of batteries in key categories

**Sustainability and Safety: Carbon Footprint and Restrictions on Hazardous Substances**

**Supply Chain Management: Due Diligence Requirements**

**Digital Battery Passport**

**Labelling and Information**

**Recycling – End of Life Management**

The adoption of the EU guidelines will promote full lifecycle of the battery, improving safety, sustainability and management.

#### **(j) any other related matters.**

Mentioned earlier, but to emphasise, as highlighted by the NSW Office of Fair Trading, work with the federal government to increase safety relating to kits and aftermarket products.

There are currently no practical restrictions to importing, selling and using poor quality, substandard kits including batteries. Enforcement of the full compliance with EN15194, including kits and EN50604 for all batteries would reduce these concerns.

## RECOMMENDATIONS

1. Harmonise road laws with the rest of the country, to allow a single approach to import, sale and use of e-bikes, ensuring that all bikes sold align to the national standard.
  - a. Support a national alignment project of regulations, managed through either Cycling Walking Australian New Zealand, WeRide Australia or the BIA.
2. Lobby the federal Government to review and improve the management and policing of the ROVER import portal to require written evidence (testing reports) that all e-mobility devices meet national standards (i.e. EN15194 for e-bikes).
3. Increase the size and conspicuity for compliance plates on all EPAC's
4. Withdraw Power Assisted Pedal Cycle category
5. Fund a coordinated program that provides a safe storage solution at bicycle retailers and distributors to hold damaged and end of life batteries e-Bike batteries until transport to an appropriate recycling centre.
6. Promote safe charging, storage and disposal guidelines for e-Bike users.
7. Undertake communication campaign to law enforcement to ensure knowledge of current legislation
8. Fund a centralised data collection project to identify accurately the number and cause of all lithium-ion battery fires.
9. Introduce purchase incentive schemes to support the NSW residents to transition to e-bikes as a transport solution and support Equitable Commute Programs
10. Fund the delivery of fee for service specific training units on the management, storage and handling of lithium-ion batteries in the bicycle industry.
11. Expand allowable European standard e-bikes to include Speed Pedalecs and L1e-a category e-bikes.
12. Introduce state-based incentives for the purchase of e-bikes utilising a platform and structure that the NSW government introduced for e-vehicle purchase incentives
13. Lobby the federal government for the introduction of tax incentives for e-bikes bringing parity with e-vehicles.
14. Fund Safe Routes to school programs including active engagement of parents through LEV's
15. Increased enforcement for non-compliant bicycles/scooters.
16. Fast track the adoption of EN15194 2017+A1:2023 as the required standard for NSW road laws (removing reference to EN15194:2009 or AS15194:2016)
17. To assist in defining gap between moped and e-Bike
  - a. Introduce an additional requirement for an adjustable seat height on all e-bikes
  - b. Introduce a required marking on non-road legal or private use only e-bikes
18. Require all batteries sold or utilised in NSW on e-bikes to have met battery requirements in EN15194