

Inquiry into e-mobility safety and use in Queensland

Submission No:	1017
Submitted by:	Bicycle Industries Australia
Publication:	Making the submission and your name public
Attachments:	See attachment
Submitter Comments:	

Dear Mr McDonald
Chairperson
State Development and Works Committee

RE: SUBMISSION TO THE QLD INQUIRY INTO THE E-MOBILITY SAFETY AND USE IN QLD

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

Consumer and industry safety is 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 contribution¹ -

- \$16.9billion to the Australian economy
- 514,096 tonnes of carbon dioxide (tCO2e) 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)

¹ 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 Australian Treasury figures, providing direct incentives for the purchase of e-bikes returned between a \$3 and \$7 return on investment for every dollar invested².

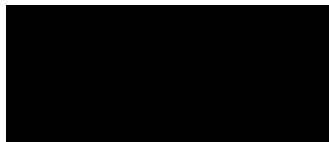
These benefits have been highlighted through the current costs of living crisis, with many families benefiting from the ability to achieve their transport tasks utilising e-bikes as a cost-effective substitute reducing the requirement for a primary or secondary motor vehicle.

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



² 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.

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 – (national) - 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

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 maximum power of 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 units³ and the number of ebikes imported continues to grow.

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).

³ The Australian Cycling and E-Scooter Economy in 2022

In 2018, the federal government effectively introduced a 5% tax on imported e-bikes, by withdrawing 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 most impacted 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), modifying the two definitions of an e-bike, Pedalecs became EPACS and modified the definition of a Power assisted pedal cycle.

This created a new definition and process for the importation of e-bikes, REMOVING the requirement for an e-bike entering to the country to meet an e-bike specific safety standard.

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 an application providing evidence of the bike meeting minimum safety standards EN15194. 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.'*⁴

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.

⁴ <https://www.infrastructure.gov.au/departments/media/news/importing-e-scooters-made-easy#:~:text=While%20you%20don't%20need,is%20not%20a%20road%20vehicle>.

When consulted, the industry has advised against changes to state and federal regulations, with our main concerns that it would promote confusion and increase the risk of poor-quality, higher-powered units across the country.

The change to state 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 (import/sale/use).

This change has created the situation that there will be e-bikes that are legal to sell in Qld, but illegal to use on Qld roads, those same bikes will be illegal to sell in NSW, but legal to use on NSW roads.

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

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.

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 active and sustainable transport will have significant impact on household spending. Replacing the primary or secondary motor vehicle should be encouraged and supported by the QLD Government.

Along with cost savings for individuals and households, the transition to LEV will have a positive impact on the QLD economy, through reduced congestion, increased productivity cost savings to the health system and reduced carbon emissions⁵

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The 2022 Cycling Economy report identified that in QLD, cycling contributed \$3billion to the state's economy while contributing over 110,500FTE jobs servicing riders and their supporters across the state.

Through the use of bikes for commuting and car trip replacement, riders avoided almost 100,000 tonnes of CO₂ emissions being released into the atmosphere from car travel, the equivalent of taking almost 40,000 cars off Qld roads for a full year.

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.

⁵ The Australian Cycling and E-Scooter Economy 2022

Last Mile Freight

Local Governments are challenged every day by managing and prioritising limited space for freight delivery, especially last mile freight.

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 approximately 60% faster than vans in city centres. Research has 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 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.

Harmonisation

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.

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.

NSW highlighted this problem with unique power and speed combinations along with unique sales regulations (neither of which align with any other jurisdiction in the world). These individual variations are exacerbating the problems and increasing the risk to consumer and general public.

Its actually simple, enforce import standards, align the same standards to sale requirements and include them in the road laws.

The current standard that is most widely accepted around the world is EN15194.

As with all standards, this standard will evolve, and it is expected that ISO4210 will replace EN15194 as the leading world standard in the next five years. The Qld Gov cannot wait for this timeframe but must ensure it has a system in place to update in an appropriate timeframe.

Key item - DO NOT create unique legislation!

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

Federal lobbying

The Federal Minister for Infrastructure and Transport, along with the Federal Office 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 previously-mentioned amendment, the department no longer has a role in the management of e-Bike imports (correspondence from the office of the Federal Minister for Infrastructure and Transport August 2024).

As the e-bikes that are overpowered or of poor quality are not illegal to import, this process has 'opened' the door for unregulated product.

Once they are in the country the challenge to address the problem is significantly multiplied, both in costs and resources.

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.

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.

While we lobby for a harmonised approach to speed and power, we do call for a complete review of all regulations relating to ebikes.

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.

The Qld Government announced an e-mobility rebate scheme on the 23rd of September 2024 and concluded on the 25th of October 2024 with 4,774 Queenslanders benefiting from the rebates.

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 promotes the sale of road legal bikes from reputable dealers.

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

When this modelling was updated with federal figures released in 2023, 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 Brisbane has a public transit network, many lower-income Qld 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 Qld 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 Qld 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.

RideScore, delivered as a partnership between Sunshine Coast Council and We Ride Australia, has shown a 55% increase in ride and scoot to school across the year with 20% of children engaging in the program.

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.

Bike infrastructure

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

The previous Qld Government released a budget in 2024 of \$315million for active transport over 4 years. In releasing this budget, the Government highlighted a return of between \$5 and \$13 for every dollar invested.

The amount announced was less than 0.9% of the Qld 4-year transport infrastructure budget of \$37.4billion.

The Transport for Qld media release identified that 'It's not only cheaper than using a car but it's much better for your health and we think Queenslanders deserve world class active transport facilities.'

QLD 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.

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 was rated as a level 5, on a par with a shopping trolley collector and an usher at the movies.

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

The Australian Bureau of statistics released an updated rating framework (OSCA has replaced ANZSCO) of skill requirements and has now identified bike mechanic as a level 3 skill, placing it on a par with car mechanics. In identifying the change, the federal government identified requirements to work on electrical, mechanic, hydraulic and electronic components while working on items identified as dangerous goods.

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

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 QLD reflect this.

The state needs to urgently promote an increase in training and incentives to attracts skilled mechanics to Qld.

Battery management

The key to reducing battery fires is 'stopping them at the border'.

Although outside of the control of the Qld Government, a priority must be to lobby the federal government to re-establish border controls and requirements to identify that product entering the country is of a minimum standard.

This standard must be EN15194 or the Australian equivalent AS15194.

The quality controls required to meet this standard include stringent Battery Management Systems (BMS) and anti-tampering requirements which significantly reduce the risk of battery fires.

RETAIL NETWORK

The bicycle 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

A program undertaken in NSW, identified that 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.

Conversion kits

The growth in the import and use of conversion kits has been significant across Queensland. A high number of these are higher power and would not meet road regulation requirements.

Many of the analogue bikes that these motors are attached to do not feature the safety requirements which would allow the use of this kits in a safe and acceptable manner.

The current mandatory Australian standard for bicycles is AS/NZS1927:1998.

This mandatory Australian bicycle standard is over 27 years old and does not feature up to date safety requirements.

The ACCC is currently in its 9th year of a '12 month' review of this standard.

It is widely acknowledged that the current standard is not of an appropriate level and has been updated twice (updated 2010 and amended in 2014) through Standards Australia prior to the ACCC review commencing in 2016. The ACCC is yet to adopt an updated mandatory standard.

Therefore, many riders are fitting motors that feature higher power and speed levels to bikes that likely do not meet the required standards for frame strength or braking strength.

Due to the lack of safety or control of the bicycle frame and braking system, the fitting of a higher-powered motor, even for private property use would not be considered safe.

Therefore, the Qld Government must ban the sale and use of all higher-powered conversion kit motors.

Overpowered e-bikes for private use only

The greatest lop hole for the sale of over-powered or overspeed ebikes is the sale of product for 'private use only'. These bikes can look the same and have no discernible difference for police attempting to manage safe and legal use of ebikes.

The inclusion of EN15194 with sale and road regulations will make it illegal for manufacturers to allow consumers to modify their bikes through anti-tampering requirements.

For products that are sold specifically as private use only, or modified by the manufacturer for private use only, the Qld Government must Introduce identification symbols/stickers/plates that are easily recognised by authorities from a distance 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.

Data / what is really happening?

The collection of accurate data on e-Bike and e-scooter incidents (including lithium-ion battery fires) 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

There is no agency in Australia that has accurate data on emobility device use.

- Number of trips
- Type of trips
- Location of trips
- Speed of trips
- Type of device used
- Type on infrastructure used

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.’

<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.’

INJURIES

No serious injury or death is acceptable, and there are several reports that have been released on the increase in hospital admissions from e-mobility incidents. These reports do not identify exposure or product quality.

Between 2017 and 2022 there was a 2200% increase in e-bike sales, which in the absence of usage numbers, reflect a significant increase in use.

We need better data on where and how these devices are being used.

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.

A NSW Fire and Rescue 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.

Medical exemptions

The 2019 changes to the QLD 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 QLD 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.

RECOMMENDATIONS

1. Insert EN15194 into the required definition of an e-bike in the the Qld Road regulations.
2. Insert EN15194 into the required definition of an e-bike in the Qld sales regulations.
3. Prioritise the harmonisation of emobility road laws across Australia including the definition of an ebike and an e-scooter.
4. Lobby for a single standard 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.
5. 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).
 - a. RE-insert EN15194 in the definition of an e-bike in the Road Vehicle Standards Act
 - b. RE-insert EN15194 in the definition of an e-bike in the National Road Regulations.
6. Introduce a compulsory marking requirement that is highly identifiable and non-removeable for any ebike that is sold as private use only or is modified to become overpowered/overspeed for private use only.
7. Increase the size and conspicuity for compliance plates on all EPAC's under EN15194
8. Withdraw Power Assisted Pedal Cycle category from Qld Road regulations (reducing number of ebike definitions to one)
9. Fund a coordinated program that provides a safe storage solution at bicycle retailers and distributors to hold damaged and end of life e-Bike batteries until transport to an appropriate recycling centre.
10. Promote safe charging, storage and disposal guidelines for e-Bike users.
11. Undertake communication campaign to law enforcement to ensure knowledge of current legislation
12. Fund a centralised data collection project to identify accurately identify critical data for emobility products;
 - a. Sale
 - b. Usage – where and what
 - c. Injuries (and cause)
 - d. Battery fires (including history of bike)
13. Introduce purchase incentive schemes to support QLD residents to transition to e-bikes as a transport solution
14. Lobby the federal government for the introduction of tax incentives for e-bikes bringing parity with e-vehicles.
15. Expand allowable European standard e-bikes to include Speed Pedalecs
16. Fund Safe Routes to school programs including active engagement of parents through LEV's
17. Require all batteries sold or utilised in QLD on e-bikes to have met battery requirements in EN15194