

# Submission to the Climate Change Authority 2024 Issues paper; *Targets, Pathways and Progress*

Tuesday, 21 May 2024

## A submission from the Australian bicycle sector

The Australian bicycle organisations signing this submission are pleased to present responses and information in response to the Climate Change Authority 2024 Issues paper: *Targets, Pathways and Progress*.

We thank you for the opportunity to provide input to the consultation.

Kind regards,

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This submission is tendered on behalf of the following Australian bicycle organisations



**AusCycling**



**Bicycle Network**



**Bicycle NSW**



**Bicycle QLD**



**Bike SA**



**Pedal Power (ACT)**



**WeRide**



**WestCycle**

## Submission to the Climate Change Authority 2024 Issues paper: *Targets, Pathways and Progress.*

### Introduction

The Australian bicycle organisations co-signing this submission are pleased to provide a considered contribution to the urgent task facing us – the need to decarbonise our economy, starting with our fossil fuel-dependent transport sector. We are concerned by the current lack of consideration of active transport in the transport decarbonisation discourse in Australia.

Australia has the opportunity to rapidly transition to a low-emissions transport system if the mode share for public and active transport – walking and cycling – receives a significant boost in funding and support. Countries in Europe, Asia and beyond that have ramped up investment in recent years in active transport modes are already experiencing environmental, equity, accessibility and affordability benefits. Australia can learn from and use these success stories to inform our transport decarbonisation roadmap.

As AusCycling, Bicycle Network, Bicycle NSW, Bicycle Queensland, Bike SA, Pedal Power ACT, We Ride Australia and WestCycle, we represent a combined national membership of 141,500 as well as the 9.52 million Australians who rode a bike in 2023<sup>1</sup>. Importantly, we also represent the large cohort of Australians who would take up riding a bike for transport if provided with a safe, connected network of active transport infrastructure.

The Climate Change Authority's 2024 Issues paper: *Targets, Pathways and Progress*<sup>2</sup> outlines the over-sized emissions profile of road transport at 87% of transport emissions. Unfortunately, the paper ignores an entire class of vehicles that are familiar and accessible to most Australians and capable of supporting a significant proportion of trips undertaken in cities and towns.

Our response highlights the opportunity active transport provides for reducing emissions in the transport sector, while also improving population health and community amenity and addressing cost of living and equity concerns related to the existing transport system.

Making it easier for ordinary people to use low-cost, low-emissions, safe and broadly accessible transport modes for their daily travel is proven to be an economically rational response to the need to reduce emissions in the transport sector and transition towards a resilient, climate responsive transport system.

Contrary to the framing provided in the Issue Paper, we don't see the task of responding to climate change as being about ambition; rather, it's about necessity. The Authority has an opportunity to consider targets and actions that will ensure the impacts of climate change on the Australian community are minimised and result in a rapid reduction in emissions.

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<sup>1</sup> [https://www.cwanz.com.au/wp-content/uploads/2023/08/NWCPS\\_2023\\_report\\_v1.3.pdf](https://www.cwanz.com.au/wp-content/uploads/2023/08/NWCPS_2023_report_v1.3.pdf), accessed on 20 March 2024.

<sup>2</sup> <https://storage.googleapis.com/files-au-climate/cca/p/prj2d33336e5a90d264a70605/page/Issues%20paper%20-%20Targets,%20Pathways%20and%20Progress.pdf>, accessed on 8 May 2024.

This means setting targets based on the advice provided by the IPCC and undertaking actions to reduce emissions that simultaneously build community and individual resilience. Investing in active transport is clearly one such action.

## The context for active transport

Across Australia, investment in active transport infrastructure as a proportion of the overall transport spend is typically less than 2%.<sup>3</sup>

Unsurprisingly, this level of investment is reflected in the decline in children's active travel to school, from around 75% to 25% in the past 40 years. Only 4.5% of journeys to work are undertaken by riding a bike or walking.<sup>4,5</sup>

The good news is that these trends can be turned around with the right level of investment in active transport infrastructure and policies. While passenger vehicles contribute around 10% of Australia's total emissions, or around 26% of those from the transport sector, most trips undertaken by car in Australian cities are less than 5km. In Sydney, more than two million car trips are less than two kilometres,<sup>6</sup> while in Perth of 4.2 million daily car trips, 2.8 million, or around two thirds, are less than 5km.<sup>7</sup>

In Melbourne, trips for commutes, errands, leisure and more average 4.3km. In the ACT, the median distance for all trips is 4.9km.<sup>8</sup> These are distances easily accomplished by most people on bikes and e-bikes in 10 – 20 minutes.

The Climate Council has called for 'visionary thinking and planning' with investment to achieve a tripling of trips undertaken by active transport as the necessary scale for deep emissions reduction this decade in their paper 'Shifting Gear: the path to cleaner transport.'<sup>9</sup>

The United Nations suggests that 20% of the total transport spend should go towards supporting walking and riding bikes,<sup>10</sup> and the Heart Foundation's What Australia Wants Survey<sup>11</sup> shows us that people want to live in places where it's easy to access what they need in their daily lives by walking and bike. We also know that the majority of respondents (64%) in the Australian Cycling Economy's national survey<sup>12</sup> either agreed or strongly agreed that they don't

<sup>3</sup> <https://theconversation.com/cycling-and-walking-are-short-changed-when-it-comes-to-transport-funding-in-australia-92574>

<sup>4</sup> [https://www.transport.wa.gov.au/mediaFiles/active-transport/AT\\_P\\_Declining\\_Rate\\_walking\\_cycling\\_to\\_school\\_in\\_Perth.pdf](https://www.transport.wa.gov.au/mediaFiles/active-transport/AT_P_Declining_Rate_walking_cycling_to_school_in_Perth.pdf)

<sup>5</sup> <https://www.abs.gov.au/articles/australias-journey-work>

<sup>6</sup> Australian Infrastructure Audit 2019, quoted in Shifting Gear: The Path to Cleaner Transport, Climate Council of Australia Ltd 2023, page 10.

<sup>7</sup> <https://www.infrastructureaustralia.gov.au/map/perth-active-transport-improvements>

<sup>8</sup> [https://hdp-au-prod-app-act-yoursay-files.s3.ap-southeast-2.amazonaws.com/3717/0678/1087/Active\\_Travel\\_Plan\\_2024-30.pdf](https://hdp-au-prod-app-act-yoursay-files.s3.ap-southeast-2.amazonaws.com/3717/0678/1087/Active_Travel_Plan_2024-30.pdf), accessed on 21 May 2024.

<sup>9</sup> [https://www.climatecouncil.org.au/wp-content/uploads/2023/08/CC\\_MVSA0354-CC-Report-Road-to-Personal-Transport\\_V6-FA-Screen-Single.pdf](https://www.climatecouncil.org.au/wp-content/uploads/2023/08/CC_MVSA0354-CC-Report-Road-to-Personal-Transport_V6-FA-Screen-Single.pdf), page 20.

<sup>10</sup>

<https://wedocs.unep.org/bitstream/handle/20.500.11822/17030/globalOutlookOnWalkingAndCycling.pdf>

<sup>11</sup> [https://irp.cdn-website.com/541aa469/files/uploaded/What\\_Australia\\_Wants\\_Report\\_.pdf](https://irp.cdn-website.com/541aa469/files/uploaded/What_Australia_Wants_Report_.pdf)

<sup>12</sup> [https://www.weride.org.au/wp-content/uploads/2023/11/The\\_Australian\\_Cycling\\_and\\_e-scooter\\_Economy\\_in\\_2022\\_WeRide\\_and\\_EY\\_2023\\_Report\\_Final\\_web.pdf](https://www.weride.org.au/wp-content/uploads/2023/11/The_Australian_Cycling_and_e-scooter_Economy_in_2022_WeRide_and_EY_2023_Report_Final_web.pdf), Part 4, Cycling motivating factors, accessed on 16 May 2024.

feel safe riding bikes on the road with traffic and that there is not enough safe and connected road bicycle infrastructure.

Data backed by research Australian research shows women in particular need safe, separated infrastructure to take up riding a bike.<sup>13</sup>

In contrast to cities in Australia, active transport infrastructure is being rapidly delivered by major cities around the world:

- London's new Cycling Action Plan will grow the number of daily cycle journeys to 1.6 million by 2030, up by a third from 1.2 million in 2022. This comes after Transport for London and London boroughs have more than tripled the size of the London-wide strategic cycle network, from 90km in 2016 to more than 340km in 2023.<sup>14</sup> Ensuring that 40% of Londoners live within 400 metres of the Cycleway network by 2030, up from the current level of 22% in 2022, will help them achieve this goal.<sup>15</sup>
- Paris, according to a recent study by L'Institut Paris Region, has rapidly evolved into a city where more trips are undertaken by bike than car.<sup>16</sup> Having started in 2021, by 2026 the city will have added 182km of permanent protected bike lanes as part of its sustainable transport revolution.
- Beijing has already renovated 3,200km of bike lanes between 2016 and 2020 and is continuing to invest to transform transport in its major cities.<sup>17</sup>

Implementing measures and providing appropriate infrastructure to make bike riding easier and safer allows ordinary people to contribute to emissions reduction of the transport sector.

National governments are also committed to boosting transport cycling. In early 2023, the French Government announced plans<sup>18</sup> to spend €2 billion through to 2027 to improve infrastructure and assist people buy bikes in an effort to reduce car use and boost cycling.

This investment is expected to double the nations bike lane network to 100,000 kilometres by 2030 with priority given to provincial capitals and rural areas as major cities have already invested in complete active travel networks.

The French Government will also increase spending on bike parking facilities in railway stations and in cities, boost spending on anti-theft bike marking and provide bike training for all primary schoolchildren.

Integration of bike parking and connectivity at public transport stations is key to driving public transport use and reducing the need for private car use.

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<sup>13</sup> <https://theconversation.com/3-in-4-people-want-to-ride-a-bike-but-are-put-off-by-lack-of-safe-lanes-172868>

<sup>14</sup> <https://tfl.gov.uk/info-for/media/press-releases/2023/june/tfl-sets-out-vision-to-further-boost-cycling-by-making-it-more-diverse-than-ev>, accessed on 8 May 2024.

<sup>15</sup> Ibid.

<sup>16</sup> <https://www.institutparisregion.fr/mobilite-et-transport/deplacements/enquete-regionale-sur-la-mobilite-des-franciliens>, accessed on 15 May 2024.

<sup>17</sup> From comments on 14 June, 2023 by Sam Johnson, Sustainable Transport Specialist, and co-lead - Active Mobility Knowledge Group at World Bank from a webinar, <https://www.weride.org.au/events/what-can-we-learn-from-chinas-active-mobility-infrastructure-boom/>, accessed on 10 May 2024.

<sup>18</sup> <https://www.reuters.com/world/europe/france-spend-2-billion-euros-boost-bicycle-usage-2023-05-05/>, accessed on 16 May 2024.

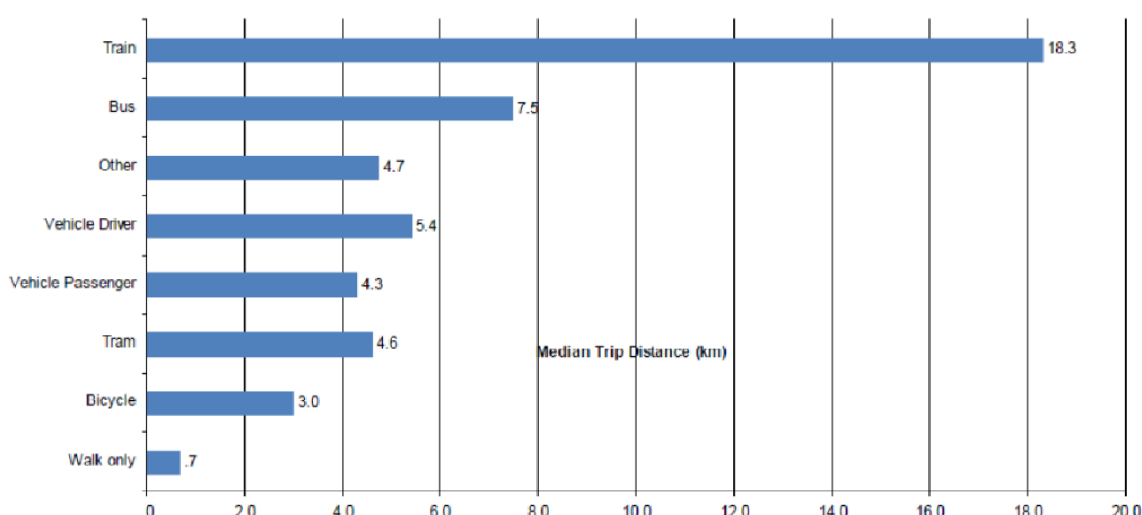
A European study<sup>19</sup> analysed longitudinal data on daily travel behaviour, journey purpose, as well as personal and geospatial characteristics in seven European cities to derive mobility-related lifecycle CO2 emissions over time and space.

The researchers found that even in European urban contexts with existing high walking and cycling shares, increases in cycling or walking consistently and independently decreased mobility-related lifecycle CO2 emissions.

To illustrate, they reported that “*an average person cycling 1 trip/day more and driving 1 trip/day less for 200 days a year would decrease mobility-related lifecycle CO2 emissions by about 0.5 tonnes over a year, representing a substantial share of average per capita CO2 emissions from transport*”.

Despite the low density of most of urban Australia, the average trip distance for travel by all road-based modes are less than 8km. In our capital cities, most car trips are less than 5km.

In Melbourne, the 2018 VISTA Survey shows the average trip by car is less than 5km, indicating there could be several other modes suitable to complete those trips if their use was supported and incentivised.



**Median Trip Length by Mode – Metropolitan Melbourne (Source: VISTA 2009)**

Above: slide from a presentation by Mr David Shelton, previously Executive Director, Strategy and Planning, VicRoads.

## Electric assist technology

E-bikes have the capacity to transform our transport system. Referencing this potential, the University of Oxford’s Christian Brand recently stated that ‘*cycling is ten times more important than electric cars for reaching net-zero cities*’.<sup>20</sup>

E-bikes and other small, light, electric personal mobility play a critical role in this transformation. Our joint submission to the National Electric Vehicle Strategy consultation in

<sup>19</sup> <https://doi.org/10.1016/j.gloenvcha.2021.102224>, accessed on 9 May 2024.

<sup>20</sup> <https://theconversation.com/cycling-is-ten-times-more-important-than-electric-cars-for-reaching-net-zero-cities-157163>, accessed on 28/10/22.

late 2022<sup>21</sup> argued that “boosting e-bike use is a significant opportunity as they provide a mobility option for the many Australians who would not otherwise consider riding a bike”.

Further, we also noted that “the annual sales of e-bikes confirm this opportunity growing over 800% to 75,000 annually in the 5 years to 2021-22.”<sup>22</sup> Global experience leads us to believe that this growth will continue.”

By comparison, passenger cars now represent just one-fifth of new vehicles sold in Australia — only 203,000 out of just over one million light vehicles sold in 2022.<sup>23</sup>

While zero tail-pipe emissions have made the electric vehicle (EV) a compelling focus for policymakers and climate advocates alike, transitioning the nation’s vehicle fleet to electric seems unlikely to result in the necessary reduction in emissions within the time we have.

EVs still require significant resources to manufacture and produce carbon emissions before the car even hits the road. While significantly cleaner than internal combustion engine (ICE) vehicles, research has found that EVs still produce high levels of carbon emissions in the production phase.<sup>24</sup>

For the first time, Polestar recently subjected its life cycle assessment (LCA) of the new Polestar 3 SUV to independent review.<sup>25</sup> The car’s cradle-to-grave carbon footprint, based on a life of 200,000km lifetime distance driven, varies between 28.5 – 44.5tCO<sub>2</sub>e depending on the electricity used to charge the vehicle during its lifetime.

While electric and hybrid vehicles still have lower carbon footprints than normal cars overall<sup>26</sup>, an accelerated replacement of ICE vehicles by EVs may lead to the perverse outcome of increasing CO<sub>2</sub> emissions in the short term, due to the ‘front-loading’ of emissions from their manufacture<sup>27</sup> which gradually decrease over time and use.

An additional complicating factor is that the second-hand cars replaced by new EVs enter the market and continue in use for some time. The average age of the fleet has been increasing from 10.4 years in 2021<sup>28</sup> to 11.3 years in 2023.<sup>29</sup>

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<sup>21</sup> <https://www.weride.org.au/policy-planning/australian-bicycle-organisations-join-with-weride-for-national-submission/>

<sup>22</sup> Bicycle Industries Australia figures.

<sup>23</sup> Article from the RAC, ‘Why are Aussies ‘supersizing’ their cars?’ <https://rac.com.au/car-motoring/info/australians-buying-larger-cars>, quoted in a submission by Pedal Power ACT in their submission to the ACT Government, [https://www.parliament.act.gov.au/\\_data/assets/pdf\\_file/0009/2395962/Submission-001-Pedal-Power-ACT.pdf](https://www.parliament.act.gov.au/_data/assets/pdf_file/0009/2395962/Submission-001-Pedal-Power-ACT.pdf), accessed on 14 May 2024.

<sup>24</sup> Article <https://www.theguardian.com/business/2023/dec/23/do-electric-cars-really-produce-fewer-carbon-emissions-than-petrol-or-diesel-vehicles>, also quoted by Pedal Power ACT in submission, [https://www.parliament.act.gov.au/\\_data/assets/pdf\\_file/0009/2395962/Submission-001-Pedal-Power-ACT.pdf](https://www.parliament.act.gov.au/_data/assets/pdf_file/0009/2395962/Submission-001-Pedal-Power-ACT.pdf), accessed 14 May 2024.

<sup>25</sup> <https://www.ricardo.com/en/news-and-insights/insights/ricardo-has-critically-reviewed-polestars-life-cycle-assessment-of-its-polestar-3-electric-vehicle>, accessed on 15 May 2024.

<sup>26</sup> <https://www.insnet.org/electric-cars-emit-more-co2-than-traditional-cars-at-production/>, accessed on 15 May 2024.

<sup>27</sup> Ibid.

<sup>28</sup> <https://www.abs.gov.au/statistics/industry/tourism-and-transport/motor-vehicle-census-australia/latest-release>, accessed on 15 May 2024.

<sup>29</sup> <https://www.bitre.gov.au/sites/default/files/documents/BITRE-Road-Vehicles-Australia-January-2023.pdf>, accessed on 15 May 2024.



The longevity of vehicles on the road and time to turn the fleet over is significant and is likely to prevent a rapid reduction of vehicle emissions if the only focus is on replacing ICE vehicles with EVs.

Additionally, the vehicle fleet is expected to continue to increase at an average annual growth rate of 2.1% a year with passenger vehicles expected to reach 20 million by 2034.<sup>30</sup>

A parallel focus on mode shift to lighter electric vehicles such as e-bikes and other light electric vehicles is vital to accelerate a reduction in passenger/personal transport emissions. A multi-modal approach that leverages the accessibility, cost-effectiveness and ultra-low or zero emissions of light electric vehicles (LEVs) will result in the best outcomes – whether EV, e-bike, or other micro-mobility such as e-cargo bikes for first and last mile freight deliveries.

E-bikes and micro-mobility are increasingly popular as car-replacements for daily commuting trips. Subscription schemes are making load carrying e-bikes more accessible.<sup>31</sup> E-bikes address the cost-of-living crisis through significantly lower acquisition and running costs than EVs, they are viable for the short transport trips that make up half of all trips each day in Australia and their use contributes to health and community benefits in addition to reducing PM2.5 and NOx particulate pollution and carbon emissions.

A study by Cairns *et al.*, *Electrically-assisted bikes: Potential impacts on travel behaviour*<sup>32</sup>, reports that a non-trivial proportion of the trips made by e-bikes are a replacement for car trips. Analysis of work in Austria, France, Germany, the Netherlands, Norway, Sweden, Italy and the UK shows reported proportion of substituted trips varies substantially, but that four of the studies show that at least 50% of trips by e-bike replaced car trips.

E-bikes also do not require any dedicated charging infrastructure and are globally compatible with existing domestic electricity supplied to dwellings, public facilities and workplaces.

As a means of avoiding transport-related congestion and pressure on the existing transport network, promoting light electric vehicles is also a sensible response to expected population growth, with 'our population projected to grow by 24% to reach 31.4 million by 2034'.<sup>33</sup>

## Resource use

Promotion of e-bikes for local trips (where appropriate) is also an appropriate response to make better use of the critical resources used to produce batteries.

A typical e-bike battery uses about 30 cylindrical lithium-ion cells which weigh about 3.3kg. A Tesla 3 uses 4,416 cells for the long-range model which weigh about 530kg, indicating that the resources used in the Tesla battery are the equivalent of around 147 e-bike batteries.

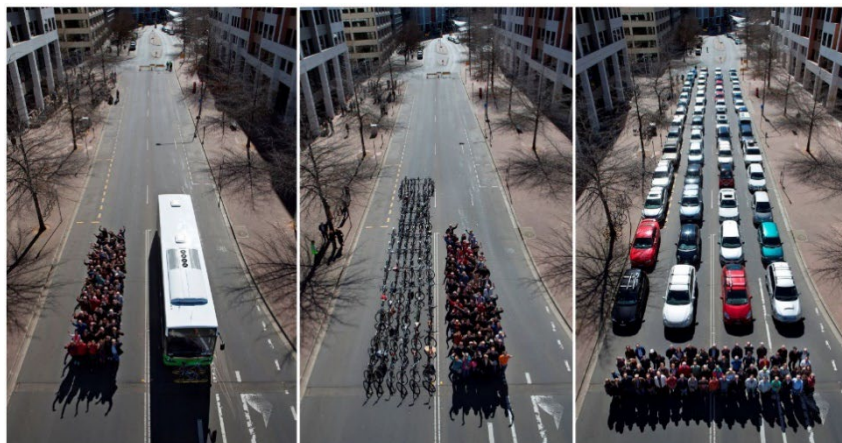
<sup>30</sup> AAA-ECON [Benefits-of-reducing-fleet-age-full-report\\_Dec-2017.pdf](#), accessed on 15 May 2024.

<sup>31</sup> See for example Lug+Carrie, <https://lug-carrie.com/> and See for example Lug+Carrie, <https://lug-carrie.com/> and Sparque <https://www.sparque.au/>.

<sup>32</sup> <https://www.sciencedirect.com/science/article/pii/S0965856415301865#s0060>, accessed on 14 May 2024.

<sup>33</sup> Infrastructure Australia, *Record infrastructure spend the new normal, 2019 Australian Infrastructure Audit warns*, media release 13 August 2019, accessed on 8/11/2019 at [www.infrastructureaustralia.gov.au/sites/default/files/2019-08/media-release-audit\\_0.docx](http://www.infrastructureaustralia.gov.au/sites/default/files/2019-08/media-release-audit_0.docx)

With average vehicle occupancies in this country sitting at around 1.15 persons per trip, not dissimilar to one person travelling on each bike, we argue that LEVs warrant serious consideration and support for the potential they provide for moving people more efficiently.



Above: the Canberra Transport Photo illustrates the space taken by 69 people and 69 bikes, one bus and 60 cars, WeRide (2012).<sup>34</sup>

An e-bike or LEV is of course not appropriate for all uses, but certainly provides a low-cost option that is accessible to a wide range of people. Due to factors ranging from disability to age, personal preference and cost, many people<sup>35</sup> have limited transport options because they don't drive. E-bikes and LEVs offer flexible transport options that are available to almost everyone.<sup>36</sup>

## Freight

During and after the COVID19 pandemic, the use of eCommerce and resulting home delivery caused an explosion in diesel delivery vans in cities across the world. In Australia, Australia Post says<sup>37</sup> the online share of retail is up from 10 percent at the start of the pandemic to 16.8 percent now. They delivered 526 million parcels in 2022 and growth of 5 percent is expected to 2030.<sup>38</sup>

A recent white paper by WSP<sup>39</sup> quoted that a significant proportion of the total cost of a freight delivery – 53% – is in just the 'last mile'.

It is also concerning that, for the transition to a NetZero transport system, the paper predicts the growing freight task and deliveries in the top 100 global cities will result in:

- A rise in the number of delivery vehicles of 35%
- An increase in the daily commute of 11 minutes, and

<sup>34</sup> <https://www.weride.org.au/events/the-power-of-an-image-the-canberra-transport-photo/>

<sup>35</sup> Around 70% of Australians have a licence, [https://www.bitre.gov.au/sites/default/files/is\\_084.pdf](https://www.bitre.gov.au/sites/default/files/is_084.pdf), accessed 17 May 2024.

<sup>36</sup> See examples in this short article: <https://www.weride.org.au/events/weride-takes-accessible-bikes-and-trikes-into-parliament/>, accessed on 9 May 9, 2024.

<sup>37</sup> <https://auspost-report.s3.ap-southeast-2.amazonaws.com/eCommerce+Industry+Report+2024+-+Trends+in+eCommerce+section.pdf>, accessed on 17 May 2024.

<sup>38</sup> <https://www.mordorintelligence.com/industry-reports/australia-courier-express-and-parcel-cep-market>, accessed on 17 May 2024.

<sup>39</sup> [https://www.wsp.com/-/media/insights/australia/documents/report\\_future-of-delivery\\_uber\\_final\\_feb22-\(1\).pdf](https://www.wsp.com/-/media/insights/australia/documents/report_future-of-delivery_uber_final_feb22-(1).pdf), accessed on 9 May 2024.



- An increase in congestion of over 21%.<sup>40</sup>

The use of e-cargo bikes and other LEVs is increasingly being deployed offering comparable or better delivery times and cargo capacity than traditional delivery modes. Australia Post, for example, now has 5,000 light electric delivery vehicles in their national fleet.<sup>41</sup>

One study of the viability of LEVs for freight deliveries in London<sup>42</sup> has found that electric cargo bikes delivered about 60% faster than vans in city centres, 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.

Clearly local conditions will determine their suitability, but while vans can travel along clear stretches of road at higher speeds than e-cargo bikes, they are slowed by congestion and the search for parking. E-cargo bikes bypass traffic jams, take shortcuts through streets closed to through traffic and ride to the customer's door.<sup>43</sup>

### The economic contribution of cycling

The bicycle sector is a significant contributor to the national economy contributing \$16.9 billion in estimated direct and indirect output from cycling expenditure in 2022<sup>44</sup>. It is also estimated that 3.9 billion kilometres of driving was replaced by bicycles over the year, avoiding the equivalent of 514,096 tCO<sub>2</sub>e and 2.2 million kilograms of air pollutants in the same period.

Provision of active transport infrastructure results in significant returns on investment due to the broad range of benefits that users get. Encouraging mode-shift to active transport also provides benefits for increasingly limited road capacity from reductions in motor vehicle traffic through decreased congestion.

The Australian Transport Assessment and Planning guide, Part M4<sup>45</sup>, provides specialist mode-specific guidance on active travel. As part of the guidance, the assessment of benefits includes external benefits from reductions in external cost to third parties such as road decongestion, reduced emissions and improved air pollution, reduced health system costs.

Modelling conducted in 2017-18 showed that Queensland could expect almost \$5 in economic benefits for every \$1 invested in cycling infrastructure.<sup>46</sup>

In the UK, assessments of the 11 largest projects funded under the 'Local Sustainable Transport Fund.'<sup>47</sup> revealed very high value for money at a benefit-cost of 5.2 – 6.1, based on available data. Carbon emissions were estimated by the UK Department for Energy and Climate

<sup>40</sup> [ibid.](#)

<sup>41</sup> <https://auspost.com.au/community-hub/sustainability/largest-electric-delivery-fleet>

<sup>42</sup> [Active Travel Academy | The Promise of Low Carbon Freight: Benefits of cargo bikes in London | Open Studio Westminster](#), study quoted in Guardian article, accessed on 9 May 2024.

<sup>43</sup> <https://www.theguardian.com/world/2021/aug/05/cargo-bikes-deliver-faster-and-cleaner-than-vans-study-finds>, accessed on 9 May 2024.

<sup>44</sup> [https://www.weride.org.au/wp-content/uploads/2023/11/The\\_Australian\\_Cycling\\_and\\_e-scooter\\_Economy\\_in\\_2022\\_WeRide\\_and\\_EY\\_2023\\_Report\\_Final\\_web.pdf](https://www.weride.org.au/wp-content/uploads/2023/11/The_Australian_Cycling_and_e-scooter_Economy_in_2022_WeRide_and_EY_2023_Report_Final_web.pdf), accessed on 16 May 2024.

<sup>45</sup> <https://www.atap.gov.au/mode-specific-guidance/active-travel/index>, accessed on 14 May 2024.

<sup>46</sup> <https://www.tmr.qld.gov.au/Travel-and-transport/Cycling/Cycling-investment-in-Queensland>, accessed on 9 May 2024.

<sup>47</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/886152/local-sustainable-transport-fund-impact-summary-report-document.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/886152/local-sustainable-transport-fund-impact-summary-report-document.pdf), page 37, accessed on 9 May 2024.

Change to have fallen by 6.9% per person for the large projects against 4.7% in a comparator group, for a statistically significant reduction of 2.2%.<sup>48</sup>

## Propensity to cycle for transport

This submission outlines in some detail the opportunity represented for transport emissions abatement through boosting investment in active transport.

While we acknowledge that ‘*mode shifting to active and public transport can be impeded by consumer preferences, safety concerns, weather conditions and service improvements*’<sup>49</sup>, extensive evidence and global experience attests to the fact that mode shift to active transport is effective, rapid and transformative in cities and regions across the globe.

Investment to achieve mode shift is not only required in technically challenging (expensive) CBD environments but involves a very wide range of interventions in local streets, mode filters, safe crossing and very low-cost but effective measures such as lowering local speed limits. It will require many years to transform our motor vehicle fleet to EVs with the average age now over 10 years, but active transport uses technologies that are cost effective, available and rapidly deployable.

Perhaps the greatest opportunity available to governments at all levels, is that large numbers of Australians are positively disposed to riding bikes for transport.

In one of the most cited publications of the interest of Australians in bike riding, *the potential for bike riding across entire cities: quantifying spatial variation in interest in bike riding (2022)*<sup>50</sup>, Pearson *et al.* found that the interest in bike riding in a significant Australian population was higher than previously thought.

The Geller typology classifies individuals as either: ‘Strong and Fearless’, ‘Enthusied and Confident’, ‘Interested but Concerned’, or ‘No Way No How’.

The ‘Interested but Concerned’ participants are those who would ride a bike if protected infrastructure were provided. This cohort is normally quoted as two-thirds of urban populations.

The study of almost four thousand people across all 37 local government areas of Metropolitan Melbourne found that the globally recognised Geller typology of the ‘Interested but Concerned’ cohort was a very high 78%, creating a lot of interest and re-drawing the boundaries of the opportunity to build cycling with the right infrastructure and incentives.

This interest was high across all LGAs and all demographic sub-groups. Even though the frequency of riding a bike was lower in women, interest in riding a bike was high and comparable to men.

The National Cycling and Walking Participation Study in 2023<sup>51</sup> found that two thirds of Australians want to ride or ride more. The major limiting factors are access to a working bicycle, and safe places to ride.

<sup>48</sup> Ibid, page 38.

<sup>49</sup> <https://www.climatechangeauthority.gov.au/sites/default/files/documents/2024-04/Issues%20paper%20-%20Targets%2C%20Pathways%20and%20Progress.pdf>

<sup>50</sup> <https://doi.org/10.1016/j.jth.2021.101290>, accessed on 9 May 2024.

<sup>51</sup> National Walking and Cycling Participation Survey 2023, [https://www.cwanz.com.au/?s=National+Walking+and+Cycling+Participation+&id=5268&post\\_type=resource](https://www.cwanz.com.au/?s=National+Walking+and+Cycling+Participation+&id=5268&post_type=resource), accessed on 16 May 2024.

## Application of the Climate Change Authority's Charter

Inclusion of active travel in the considerations by the Climate Change Authority for future recommendations to government on 2035 emissions reductions targets is directly relevant to the Charter of the Authority under Section 12.

Investment in active transport as part of national climate mitigation action is:

- Highly economically efficient.
- An environmentally effective strategy to reduce personal transport emissions.
- Responsive to significant equity, accessibility and affordability issues inherent in the current passenger transport system.
- In the public interest as changes required to boost active travel also result in more liveable communities and reduce the cost of living.
- An appropriate response given Australia's travel behaviour patterns and characteristics where a very large number of daily trips are just five or even three kilometres.

## Relationship of active transport to other sectors

Increasing the proportion of active transport within the transport sector positively impacts the development of a circular economy and reduces the demand for fuel and other resources needed for private car usage. As bikes and other forms of micromobility become viable alternatives to car travel, we can expect a significant decrease in both car purchases and the fuel required to operate them.

Building on the benefits of active transport, there are direct positive effects on waste reduction and recycling, fostering greater opportunities within the circular economy. With fewer cars on the road, there is naturally less waste generated from vehicle disposals, including tyres, batteries, and other non-biodegradable components that pose significant environmental hazards. Additionally, bicycles require low inputs for maintenance compared with private vehicles and have a greater proportion of easily recycled components at end of life.

Noting the insight from the International Transport Forum<sup>52</sup> (ITF) that 'If *urban mobility were based on shared and electric vehicles, CO2 emissions from traffic could fall by 60%*', there is a role for planning policy to assist in reducing carbon emissions. Initiatives in local and state planning policy such as the removal of minimum mandated parking requirements for developments will reduce the need for cars in cities and cut the cost of construction, making housing more affordable and reducing building carbon footprints.

Active transport modes provide a viable alternative to car use, particularly in high-density inner-city areas of Australian cities. Whilst there have been planning policy initiatives such as the mandating of end-of-trip facilities in certain commercial and residential developments, in practice this has been sporadic and has not been enough to significantly reduce car dependence and carbon emissions.

However, this is not to say that such initiatives are not successful at a local level. To be more effective, planning policy favouring active and public transport needs to be more comprehensive in its application and mandate strong policy outcomes such as removal of minimum parking requirements which will complement Australian government climate change policy outcomes for reduction of vehicle emissions.

<sup>52</sup> <https://www.itf-oecd.org/sites/default/files/docs/cop24-urban-mobility.pdf>, accessed on 16 May 2024.

Brisbane City Council's recent announcement of policy in this regard is welcome. Lord Mayor Schrinner will introduce a new *Inner-City Affordability Initiative*.<sup>53</sup> to improve housing affordability and supply which removes mandatory minimum car parking requirements. His media statement says the Initiative will be '*in designated inner-city areas close to high-frequency public transport, active travel options and amenities*'.

### All else being equal, invest nationally for health, access and equity!

As organisations representing the 9.52 million Australians who rode a bike in 2023, we ask the Climate Change Authority to include the case for investment to boost active transport in all transport and wider decarbonisation strategies and policies.

A 2022 study by Maizlish, Rudolph and Jiang<sup>54</sup> analysed health benefits and carbon emissions from two transport scenarios that contrasted optimum levels of physical activity from active travel to minimal air pollution from electric cars.

By encouraging people to walk or cycle instead of driving for about 150 minutes per week (which is 30 minutes, five days a week), the Active Travel Scenario predicted that by 2050 it could:

- Prevent about 167,000 deaths
- Contribute up to 2.5 million more years without disability across the population
- Provide \$1.6 trillion of economic benefits
- Reduce carbon emissions by 24% from baseline.

In the electric car scenario, they found it would:

- Prevent about 1,400 deaths
- Contribute 16,400 more years of healthy living without disabilities across the population
- Provide about \$13 billion of economic benefits
- Produce no direct emissions.

Their conclusion was the '*to achieve carbon neutrality in transportation and maximize health benefits, active travel should have a prominent role along with electric vehicles in national blueprints*'.

## Questions and responses

**Positions, comments and actionable suggestions are made below in response to the questions posed by the Climate Change Authority**

**1.** How should the authority take account of climate science and Australia's international obligations in considering possible emissions reductions targets for 2035?

- Take note of international experience in reducing transport emissions through active transport, refer examples in introduction.

**2.** How should the authority weight the goals of ambition and achievability in considering possible emissions reductions targets for 2035?

<sup>53</sup> <https://www.adrianschrinner.com.au/media-announcements/more-affordable-inner-city-homes-under-new-initiative/>, accessed on 16 May 2024.

<sup>54</sup> Am J Public Health. 2022;112(3):426–433. <https://doi.org/10.2105/AJPH.2021.306600>

- Refer to our concerns above regarding the framing of the task as one of ambition rather than necessity.
- Our international commitments provide a logical platform to grow Australia’s capability in adoption of sensible solutions for low- and zero-carbon emissions transport modes.
- Substantial evidence exists to strongly support greater investment in active transport.
- Active transport can be assessed on economic and social factors to support greater investment. Modelling of incentives for e-bike purchases by the Institute for Sensible Transport<sup>55</sup> revealed a \$3 return for every \$1 invested. With updates to the Australian Transport Assessment Program since then, the model is returning up to \$7 for every \$1 invested in purchase incentives.
- In achieving transport emissions reductions targets, the government must also consider the impact of these choices in other areas, including road safety, economic impact of congestion and cost to the health sector.
- Weighting of any outcomes must acknowledge the full and ongoing impacts of climate change on the Australian community.

### 3. How can Australia further support other countries to decarbonise and develop sustainably?

- Adoption of progressive policies to boost the mode share for active transport demonstrates to other countries that good public policy and practice can result in greater outcomes in reducing emissions and car dependence in Australian cities.
- The decarbonisation task is an opportunity for Australia to develop novel methodologies for tackling difficult problems such as how to retrofit low-density suburban sprawl so that active transport is supported. Australia can then demonstrate international leadership by sharing this knowledge to benefit and hasten emissions reductions in other countries with similar urban environments and high levels of car dependency.

### 4. What technologies are important for each sector’s pathway to net zero and why?

- Too much of the focus of decarbonisation of the transport sector to date has been on expensive, emerging technologies such as hydrogen, or infrastructure to support the uptake of electric cars. This approach is negatively impacting consideration of the full range of sensible, affordable solutions for mobility. Micromobility is a low cost, largely established technology that supports the decarbonisation of transport at the local level. Noting that most journeys in Australian cities are less than 5km, and that around half the total cost of freight is in the final kilometre, micromobility has enormous, unrealised potential to transform freight and passenger transport.
- E-bikes, e-scooters and other light electric vehicles support the normalisation of active transport by making it an option for a larger and more diverse segment of the community and play a critical role in facilitating the uptake of cycling and mode shift to active transport.
- In addition, e-bikes and LEVs are increasingly popular as car-replacements for daily commuting trips, they address the cost-of-living crisis through significantly lower

<sup>55</sup> <https://www.weride.org.au/policy-planning/new-data-on-e-bike-incentives-released/>, accessed on 10 May 2024.

acquisition costs than EVs and they are viable for the short transport trips that make up half of all trips each day in Australia. Their use contributes to health and community benefits and reduces PM2.5 particulate/air pollution and emissions.

- E-bikes and LEVs also do not require any dedicated charging infrastructure and are supported by ubiquitous charging infrastructure through existing electricity supplied to dwellings, public facilities and workplaces.

**5. How can governments use mandates, rules, and standards to accelerate Australia's decarbonisation? Is more planning by governments needed? If so, how should this be coordinated and how can this be done while making the transition inclusive, adaptive, and innovative?**

- Adopt a national approach for all new significant infrastructure projects to result in a reduction in emissions. For decarbonisation of the transport system this should result in an assessment of both the passenger transport requirements and impact on emissions. This approach must focus on the overall efficient movement of people and goods over individual private vehicles.
- Apply a nationally consistent positive provision for bike infrastructure in conjunction with all new transport and infrastructure projects.
- Develop and implement consistent standards and legislation relating to light electric vehicles throughout the lifecycle of the vehicle within Australia, including the federal ROVER import portal, national sales regulations and each state and territory road legislation.
- Update and deliver consistent building planning regulations to prioritise access, storage and charging for bicycles and light electric vehicles.
- Introduce dedicated power and speed guidelines for light electric vehicles undertaking specific 'last mile freight' delivery tasks – these guidelines to reflect L1e-a European guidelines to promote greater use of light electric vehicles for city freight tasks.
- Introduce subsidies and incentives to support greater use of light electric vehicles for the delivery of freight for businesses within city precincts.
- Existing state and territory plans for principal bicycle networks should be funded and delivered in accelerated time frames across major cities to reduce barriers to cycling for transport, increase uptake and encourage rapid mode shift.
- Commonwealth and state jurisdictions should collaborate, agree and prioritise delivery of significant active transport infrastructure as projects of national significance.
- New road and housing development projects should be subject to mandates to ensure active transport facilities are funded and provided at the outset. This includes direct access to active transport networks in new and brown-fields housing developments, lower minimum parking mandates to encourage cost savings and use of active transport and all new and redeveloped roads should prioritise travel by active and public transport and maintain clear rights-of-way for principal active transport corridors.
- The transition to a low-emissions transport system that allows people to choose active transport will ensure a more rapid and equitable outcome for all. Increased options in transport provide system resiliency when roads are congested or impacted by blockages. And more inclusive, adaptive options for more users and a multi-modal transport system helps deliver climate-resilient communities.



<ul style="list-style-type: none"> <li>• The introduction for a star rating of each road category in Australia must include an active travel evaluation and assessment component. Funding for educational facilities and infrastructure should include an assessment and plan for the infrastructure to be accessible by active and public transport.</li> <li>• Establish an active transport portfolio within the Commonwealth Department of Infrastructure, Transport, Regional Development, Communications and the Arts.</li> </ul>
<p><b>6.</b> How can governments stimulate private finance needed for the net zero transition – are there innovative instruments that could be deployed or new business models that governments could support? Is there a bigger role for governments to play in coordinating the investment needed to transition the economy?</p>
<ul style="list-style-type: none"> <li>• Consideration of the relative benefit-cost of low emissions transport modes should be an integral part of advice provided to the government. An important aspect of financing climate adaption is getting outcomes for lowest cost – and in transport terms, active transport provides significant options to deliver climate savings for much lower cost and faster than other modes.</li> </ul>
<p><b>7.</b> How can governments better support markets, including carbon markets, to deliver emissions reduction outcomes?</p>
<ul style="list-style-type: none"> <li>• Nil.</li> </ul>
<p><b>8.</b> What further actions can be taken by governments (e.g. through public funding), the private sector and households to accelerate emissions reductions, including in relation to the deployment of technologies and access to new opportunities in the transition to net zero? What barriers stand in the way and how could they be overcome?</p>
<ul style="list-style-type: none"> <li>• Provide e-bike purchase incentives.</li> <li>• Support micromobility and bike hire schemes in cities and regional centres.</li> <li>• Mandate and include in Commonwealth funding programs provision of secure bike parking facilities in cities and urban centres.</li> <li>• Provide a significant funding stream for bikeway investment in major Australian city networks, including radial “cycle superhighways” in capital cities.</li> <li>• Removal of the 5% import tariff on e-bikes, a tariff which due to current free-trade agreements, product mix and manufacturing location of lower-level e-bikes, generates minimal income while promoting the purchase of poorer quality products.</li> <li>• Fund the development of Austroads guidelines to support light electric vehicle delivery along with the use of light electric vehicles for commuting and transport, endorse international best practice street design guidelines to ensure nationally consistent delivery of quality, fit-for-purpose bikeways and infrastructure.</li> <li>• Incentivise ‘greening’ of active travel corridors and infrastructure to promote biodiversity corridors and carbon sequestration.</li> <li>• Develop a national approach to ride to school programs and integrate with skills training<sup>56</sup>, behaviour change programs<sup>57</sup>, safe infrastructure and curriculum to establish healthy, active travel habits in the next generation. Several ride to school</li> </ul>

<sup>56</sup> <https://www.auscycling.org.au/page/ausbike>, accessed on 17 May 2024.

<sup>57</sup> <https://bicyclenetwork.com.au/rides-and-events/ride2school/>, accessed on 17 May 2024.

programs exist and reveal strong support from parents and increased ridership of up to 55%.<sup>58</sup>.

#### PRIVATE SECTOR

- Provide tax incentives for businesses to transition the cost of parking included in ‘employee packages’ to active and public transport.
- Introduce parity of FBT tax exemptions with EVs to promote salary packaging for the use of bicycles and light electric vehicles for commuting to work purposes.
- Incentives to support incorporation of light electric vehicles into vehicle fleets.
- Provide accelerated depreciation for dedicated workplace end-of-trip facilities.
- Ensure national building standards for commercial developments include and prioritise parking for bicycles, e-bikes, e-scooters and light electric vehicles.
- Incentivise the use of light electric vehicles for delivery through subsidies and tax concessions.

#### HOUSEHOLDS

- Incentivise e-bike / micromobility charging in housing developments workplaces and public charging locations.
- Introduce purchase subsidies that provide parity with electric vehicle subsidies to overcome the purchase cost of e-bikes and encourage more people to purchase them in place of fuel-dependent vehicles.
- Abolish all nuisance tariffs on the import of zero emissions LEVs and e-bikes.
- Invest in a national network of e-bike/library programs to support access to quality products.
- Subsidise e-bike/e-scooter share programs in identified areas of high need and low access to public transport.

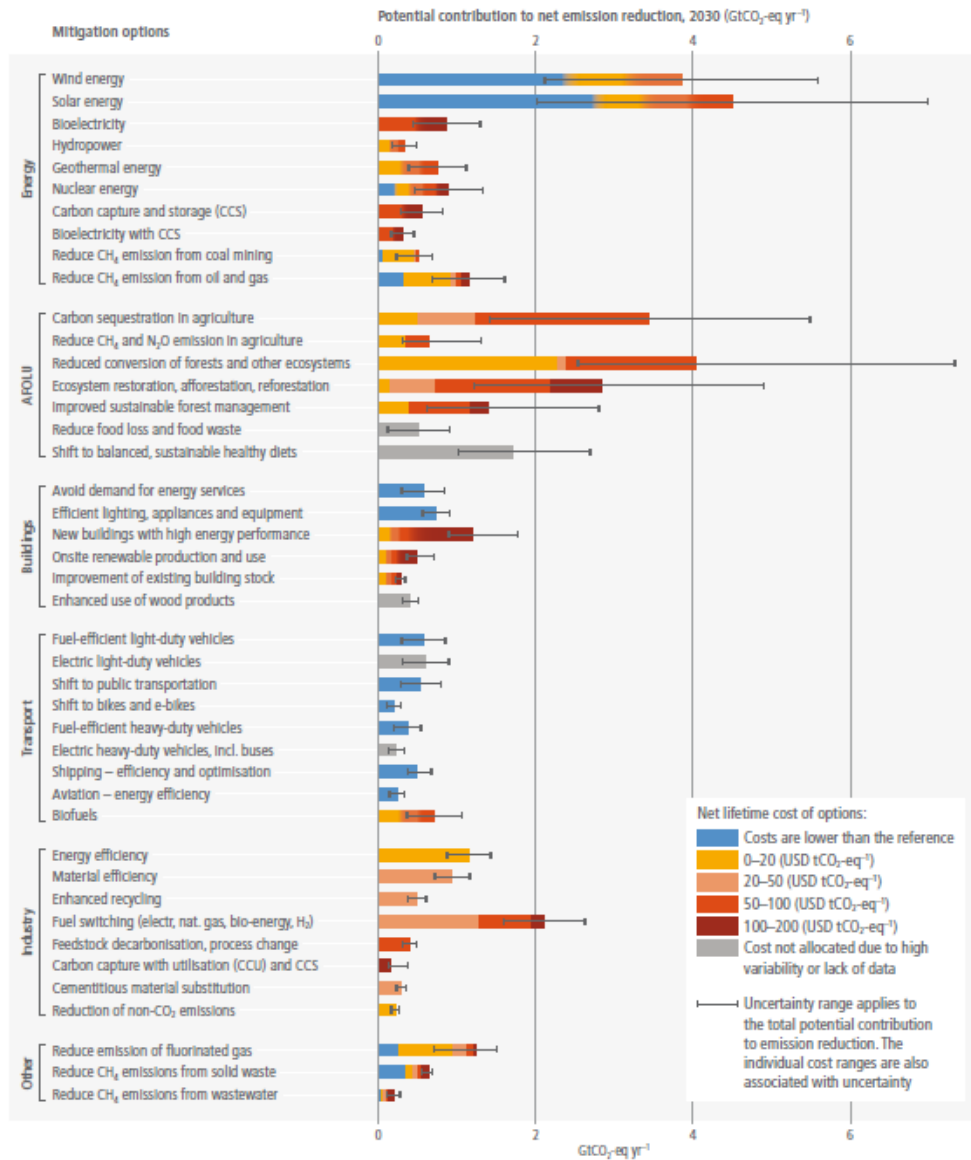
### 9. How should governments decide upon the appropriate allocation of resources towards reducing emissions, removing carbon from the atmosphere, and adapting to climate change impacts?

- The Intergovernmental Panel on Climate Change has provided a clear roadmap for governments to respond to climate change impacts while rapidly reducing emissions to meet science-based targets. The Sixth Assessment Report includes the following graph (from Working Group III contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change: Summary for Policymakers, 2022, page 50 “Figure SPM.7<sup>59</sup>: Overview of mitigation options and their estimated ranges of costs and potentials in 2030.), illustrating the options available to countries for reducing emissions and comparing the ease with which they can be implemented, as well as their level of impact. In particular, it The graph shows a shift to bikes and e-bikes is one of the lowest net lifetime cost options available across all sectors:

<sup>58</sup> Unpublished evaluation report of the RideScore Active Schools trial, see <https://www.weride.org.au/saferoutestoschool/>

<sup>59</sup> Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. H.-O. Pörtner et al (eds.). Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 37-118, doi:10.1017/9781009325844.002.

- Working Group III contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change: Summary for Policymakers, 2022, page 50 “Figure SPM.7.<sup>60</sup>: Overview of mitigation options and their estimated ranges of costs and potentials in 2030.” shows that a shift to bikes and e-bikes is one of the lowest net lifetime cost options available across all sectors:



**10. How can governments, businesses and people, including First Nations people, help ensure the benefits and burdens of the net zero transition are equitably shared?**

- Active transport has the potential to provide low-cost, healthy and safe travel options for all Australians, extending the value of our current public transport infrastructure

<sup>60</sup> Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. H.-O. Pörtner et al (eds.). Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 37-118, doi:10.1017/9781009325844.002.

and making transport networks more resilient and accessible to people of all ages and abilities.

- We reinforce our earlier comments that due to relatively low cost and the adaptive mobility machines available to many normally excluded cohorts, active travel options can lower barriers to accessible mobility and address cost of living concerns for vulnerable groups.

**11. How can governments better ensure First Nations people are empowered to play a leading role in the development and implementation of climate change policies and actions, including as they relate to the ongoing curation of the Indigenous estate?**

- We are not able to speak to the needs of First Nations peoples with regards to the provision of active transport or the transition of the transport sector to zero emissions. As such, we assume the Authority is engaging appropriately with First Nations communities to ensure their perspectives are given proper consideration.
- We note again that under-served communities' transport and mobility needs can be enhanced through active transport, however caution that vulnerable communities may need particular support and policies to ensure they are able to participate in and benefit from these transport modes

**12. How can Australian governments support the wellbeing of workers, communities and regions as the nation decarbonises, including in relation to cost of living, workforce and industry transition and access to low-emissions technologies and services?**

- Making the choice to ride a bicycle for local trips and for the work commute easier, safer and more convenient is a valuable cost of living measure for many, especially for those who have transport needs that are met by active transport.
- Supporting local and state governments in the creation of infrastructure that encourages active transport can ensure gaps in complete networks can be addressed to encourage increased participation in active transport.
- Providing e-bike subsidies, reducing import tariffs and helping fund loan programs are all measures that can help address cost of living and adoption of zero-emissions active transport.
- A focus on peri-urban and regional areas for these programs that target support and assistance to those in need.

**13. How can governments help Australians prepare for and respond to the impacts of climate change?**

- By transforming our transport system – decarbonise while increasing access, equity, health and the range of options for all.
- Transport is something all Australians participate in every day and having low- or zero-emissions modes available that also improve health and are affordable makes adapting to climate change easier and contributes to a liveable community.

**14. What else should the authority be considering in its advice to government?**

- Prioritise access to active transport solutions and connections to public transport in ‘transport deserts’ within cities to provide alternatives to private motor vehicles.
- Ensure equitable and accessible zero emissions mobility options are available for everyone living in Australia, regardless of disadvantage or location.
- Consider demand side management and behaviour change measures in all investments and policy. The Sixth Assessment Report from the IPCC includes measures nations can take to reduce the need for travel, such as planning interventions and policies that facilitate higher density, mix-use developments.

END OF SUBMISSION

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