

# Submission to ‘Transport and Infrastructure Net Zero Consultation Roadmap’

Tuesday, 6 August 2024

## A submission from the Australian bicycle sector

The Australian bicycle organisations co-signing this submission are pleased to present feedback in response to the Consultation Roadmap, which sets out the potential pathways for transport and transport infrastructure to contribute to Net Zero by 2050.

This submission is additional and complementary to earlier contributions from the Australian bicycle sector to the following consultations and inquiries. Copies of the following are attached:

- March 2024 – Standing Committee on Climate Change, Energy, Environment and Water **Inquiry into the transition to electric vehicles**
- May 2024 - Submission to the **Climate Change Authority 2024 Issues paper; Targets, Pathways and Progress**
- July 2024 – Submission to ‘**A National Urban Policy for Australia**’ consultation.

We thank you for the opportunity to provide input to the future of transport in Australia.

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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 Transport and Infrastructure Net Zero Consultation Roadmap

## Introduction

The Australian bicycle organisations co-signing this submission are pleased to provide their considered feedback to the *Transport and Infrastructure Net Zero Consultation Roadmap* ('The Roadmap') and:

- Respond to the questions posed about the guiding principles, individual transport sectors, partnerships and measuring success.
- Identify and suggest actions that can be implemented quickly and economically to reduce our transport emissions and provide equitable and accessible options that are economically responsible for Australia
- Provide data, case studies and rationale for active transport to figure much more prominently in the Net Zero transport and infrastructure roadmap and action plan.

Our organisations 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.

We welcome the overall intent of the Roadmap to re-think our transport network and systems and decarbonise Australia's transport using the Avoid – Shift – Improve framework. While rapidly reducing emissions is a necessary response to climate change, it also presents an opportunity for the federal government to support a transformation in the movement of people and goods. This transformation will lead to a more accessible and equitable transport system and foster more resilient, healthy, and prosperous communities.

## Active transport is a valuable tool for reducing road transport emissions

Transport accounts for 21% of Australia's emissions<sup>2</sup> and without further action transport will be the largest source of emissions in 2030. Around 60% of those emissions are from light vehicles.

Given between a half to two-thirds of all trips in Australia's cities are less than 5km, distances easily covered by most people on a regular or electric bicycle, there is huge scope for leveraging active transport to rapidly reduce emissions from road transport in the short term, particularly if paired with improvements in public transport access.

We are therefore deeply concerned that The Roadmap's suggested pathway for reducing road transport emissions does not include mode shift away from car driving towards active modes like walking and bike riding for local trips, or public transport for longer journeys.

We propose that a specific group of zero/low emissions light vehicles, bikes, e-bikes and micromobility, should be expressly identified as a subset of the light vehicles category in The Roadmap and Action Plan.

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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> Transport and Infrastructure Net Zero Consultation Roadmap, p.2

## EVs aren't a silver bullet for emissions reduction

The Roadmap correctly identifies electrification as the best way to decarbonise the current road transport fleet, however this action alone is not enough to reduce emissions from road transport or meet 2030 targets.

While zero tail-pipe emissions have made electric vehicles (EV) a compelling focus for policymakers and climate advocates alike, emissions associated with EVs are “front-loaded” in the production phase, especially in the production of batteries. Attempts to rapidly transition the currently vehicle fleet with EVs may, therefore, lead to the perverse outcome of increasing CO2 emissions in the short term – precisely in the critical period to 2030 where reducing emissions is imperative for maintaining global temperature rises below 1.5 degrees.<sup>3,4</sup>

As the recently released National Electric Vehicle Strategy notes, transition of the fleet to electric vehicles may take decades.<sup>5</sup> Other emissions reduction strategies are critical, particularly for those action requiring immediate implementation.

## Responses to Have Your Say questions

### QUESTION 1. Do you agree with the proposed guiding principles?

Yes, we are supportive of the guiding principles.

### Maximising emissions reduction

*‘Without decisive action, transport is set to become Australia’s highest emitting sector by 2030.’<sup>6</sup>*

Reductions of transport emissions to 2030 through rapid mode shift to active transport presents a significant opportunity but it must be explicitly funded and planned for as part of the national Roadmap Action Plan. Active transport initiatives and interventions are available immediately and can be deployed quickly to achieve a rapid mode shift by 2030. This is a rapid pathway to reduce carbon emissions from road transport.

- A major study of travel habits in seven European cities<sup>7</sup> has shown that regular cycling was most strongly associated with reduced life cycle CO2 emissions for commuting and social trips and that cyclists had 84% lower CO2 emissions from all daily travel than non-cyclists. The authors also said that ‘life cycle emissions from cycling can be more than ten times lower per passenger-km travelled than those from passenger cars’.

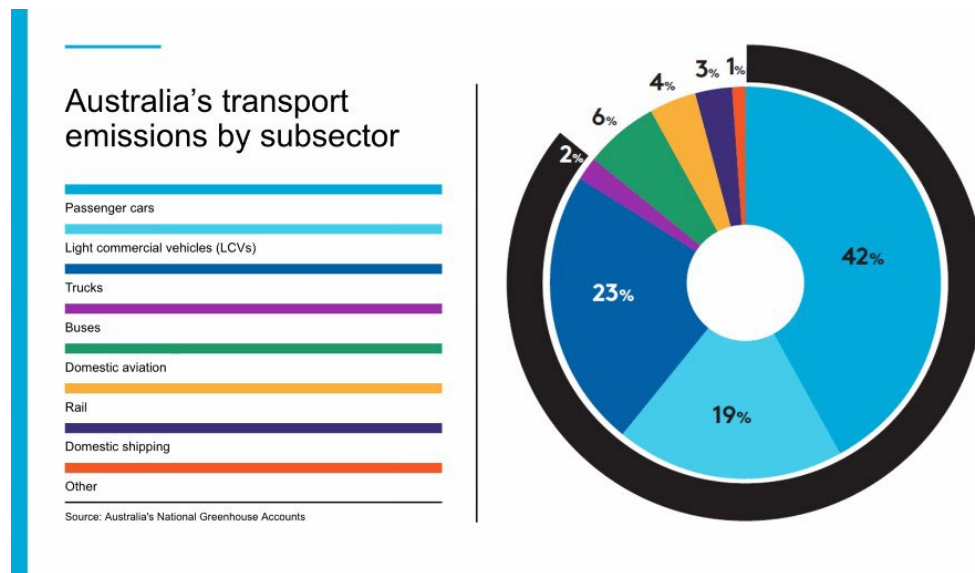
<sup>3</sup> <https://www.insnet.org/electric-cars-emit-more-co2-than-traditional-cars-at-production/>, accessed on 15 May 2024.

<sup>4</sup> Ibid.

<sup>5</sup> <https://www.dcceew.gov.au/sites/default/files/documents/national-electric-vehicle-strategy.pdf>, accessed on 4 August 2024.

<sup>6</sup> DCCEEW 2023, Australia’s emissions projections 2023 <https://www.dcceew.gov.au/sites/default/files/documents/australias-emissions-projections-2023.pdf>, accessed 18 July 18, 2024.

<sup>7</sup> The climate change mitigation effects of daily active travel in cities (2021), <https://www.sciencedirect.com/science/article/pii/S1361920921000687>, accessed on 10 July 2024.



Above: slide from online presentation by the Climate Council showing relative importance of emissions from passenger cars and light commercial vehicles, 10 July 2024.

- Infrastructure Australia's *'Infrastructure Policy Statement'*<sup>8</sup> sets out its guidance for 'nationally significant projects' that are aligned with Government priorities. These include productivity where urban transport systems are impacted by population growth, sustainability and equity (emissions reduction) and connectivity in our communities – all of which are related to our transport options. It states the Victorian Government will *'support commuters to choose more efficient, affordable and sustainable modes of transport, including walking and cycling'*<sup>9</sup>.
- Infrastructure Victoria's 2021 – 2051 Infrastructure Plan<sup>10</sup> recommendations include prioritising and progressing a continuous network of high quality, safer cycling corridors in its major cities as one of the cheapest, cleanest and most space efficient modes.
- A 2023 Sustrans modelling report<sup>11</sup> based on the 2019 Scottish Household survey suggests that replacing 40% of car trips under five kilometres with active transport would have reduced 2019 carbon emissions from cars by 9-11%. It also found that carbon emissions would decrease a further 7% if 10% of trips over 5km were swapped to a combination of more sustainable modes, public and active transport.

<sup>8</sup> <https://www.infrastructure.gov.au/sites/default/files/documents/infrastructure-policy-statement-20231114.pdf>, accessed on 10 July 2024.

<sup>9</sup> Ibid.

<sup>10</sup> Victoria's Infrastructure Plan 2021-2051, p120

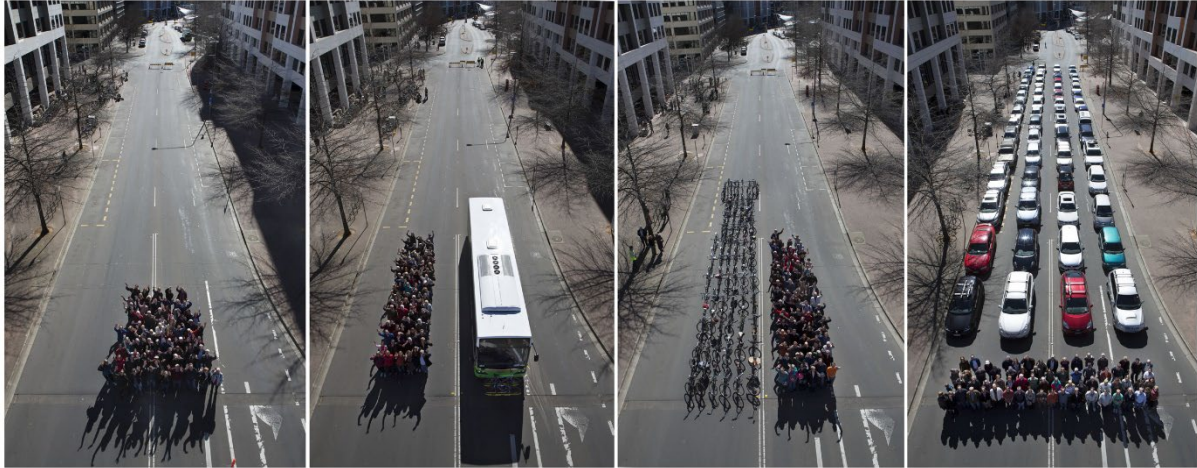
<https://www.infrastructurevictoria.com.au/viewer?url=/assets/Resources/1.-Victorias-infrastructure-strategy-2021-2051-Vol-1-web.pdf&page=120>, accessed on 10 July 2024.

<sup>11</sup> Reaching Net Zero – the role of active travel (2023).

<https://www.sustrans.org.uk/media/12853/reducing-carbon-emissions-through-active-travel-blog-copy-1.pdf>

## Value for money

The benefits of the lower costs associated with shifting trips to active transport are significant. National and international experience demonstrates that infrastructure costs, exceptionally low emissions per kilometre travelled, and an array of health and social benefits provide a compelling case for vastly greater investment nationally in active transport.



**Above:** the Canberra Transport Photo, with 69 people, 69 bikes, one bus and 60 cars, reveals space advantages of active transport in cities. ©We Ride Australia.

- Bicycles have consistently outsold cars each year in Australia for more than two decades<sup>12</sup>, with sales of new bikes growing to 1.7 million units during COVID (this does not include scooters or other LEV).
- Sales of e-bikes have now grown to be 20% of all annual bike sales and if international trends are repeated in Australia, it is expected this number will grow to 50% of annual sales in coming years.
- Modelling utilising figures from the 2022 Australian Transport Assessment and Planning guidelines commissioned by We Ride Australia also revealed that providing direct incentives for the purchase of e-bikes returned \$7 for every dollar invested.<sup>13</sup>
- In Melbourne alone, Infrastructure Victoria says<sup>14</sup> over 200,000 daily car and public transport peak-hour trips could be cycled or walked to National Employment and Innovation Clusters (NEICs) and to central Melbourne.
- Infrastructure Victoria also points out that active transport is also efficient – high-quality cycling infrastructure can accommodate 4,600 cyclists per hour compared to 1,900 cars.<sup>15</sup>
- National and international experience leads us to be confident that infrastructure costs, exceptionally low emissions per kilometre travelled and a significant array of wider benefits provide a compelling case for vastly greater investment nationally in active transport.
- The Roadmap consultation document statement that ‘current infrastructure investments support public and active transport modes.<sup>16</sup>’ ignores that there is a

<sup>12</sup> Figures communicated to authors from Bicycle Industries Australia.

<sup>13</sup> E-bike Subsidy for Australians (2022), [https://www.weride.org.au/wp-content/uploads/2022/04/WeRide\\_e-Bike\\_Subsidy\\_Report\\_FINAL-lores.pdf](https://www.weride.org.au/wp-content/uploads/2022/04/WeRide_e-Bike_Subsidy_Report_FINAL-lores.pdf), accessed on 30 July 2024.

<sup>14</sup> Infrastructure Victoria, Five-year focus: immediate actions to tackle congestion, Melbourne, Infrastructure Victoria, 2018, p. 53, <https://assets.infrastructurevictoria.com.au/assets/Resources/Five-year-focus-Immediate-actions-to-tackle-congestion-April-2018.pdf>, accessed on 19 July 2024

<sup>15</sup> Ibid, page 52.

<sup>16</sup> Transport and Infrastructure Net Zero Consultation Roadmap, p.23

significant difference between funding for public transport (bus and rail) and walking and cycling. Public transport benefits from investment that is much higher than active travel. In Southeast Queensland cycling mode share is close to public transport at 2% of all trips compared to just 3% for public Transport<sup>17</sup>.

- The dearth of funding for active transport continues to prevent a meaningful role for walking and cycling in assuming more of the passenger transport task in the Australian transport system. As an example, the transport budget in Queensland<sup>18</sup> is \$37.4bn. Of this, direct cycling projects account for \$315 million over four years – less than 1%. This is not even commensurate with current mode share for cycling in Australian cities. The Australian Government's \$100m Active Transport Fund is an early positive measure but falls vastly short of meeting transport emissions objectives of the Net Zero Roadmap.

### **Maximise economic opportunity**

The economic benefits to Australia and Australians when the option to use active transport is easier and more accessible – both directly from lower transport costs and reduced congestion, and more generally from additional wider benefits that provide significant value for money for federal investment in active transport

In 2022, the Australian bicycle sector

- Contributed \$16.9bn to the Australian economy
- Supported 60,000 FTE equivalent jobs
- Generated \$954m in health and social benefits, and
- Provided \$1.9bn in cycle tourism (mainly to regional economies).<sup>19</sup>

In addition, in 2022, bicycle commuters avoided the emission of 514,096 tonnes of carbon dioxide (tCO<sub>2</sub>e) through mode shift. This is equivalent to taking 207,000 cars off the road for a year, a figure ten times greater than the number of electric cars sold that year.<sup>20</sup>

### **Inclusive and equitable**

There are significant benefits for increased transport equity and accessibility associated with mode shift to active transport. Many Australians do not have a driving license, and public and active transport modes are the sole means of mobility for many. Lower costs associated with provision and use of public and active transport also address cost of living pressures, lowering the overall cost of transport, both in infrastructure (Capex) costs and use and maintenance (Opex) costs.

### **Evidence based**

While Australia has some good evidence, most data on transport emissions reduction through active transport comes from international experience. Not only are many countries ahead of

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<sup>17</sup> Queensland Household Travel Survey, series 2020-2023, pooled SE QLD dataset. Communication from Bicycle Queensland, July 2024.

<sup>18</sup> Queensland Transport and Roads Investment Program 2023, Fast Facts brochure, <https://www.publications.qld.gov.au/dataset/queensland-transport-and-roads-investment-program-qtrip-2024-25-to-2027-28/resource/985eeec-c7ff-440e-9820-5b61b6c921bd>, accessed on 5 August 2024.

<sup>19</sup> The Australian Cycling and E-Scooter Economy in 2022, [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)

<sup>20</sup> <https://www.fcai.com.au/news/index/view/news/787>

Australia in deployment of active modes of transport, their studies and data are also more mature and can inform approaches that could be adopted as part of The Roadmap.

- The recently released Austroads Report ‘Prioritising Active Transport’<sup>21</sup> provides consolidated evidence on infrastructure and non-infrastructure measures for developing active transport participation.
- Modelling active transport is difficult. Traditional transport modelling is poorly suited to active modes, and this negatively impacts business cases for investment. Both benefits and disbenefits due induced travel demand and resultant higher emissions must be considered in all future project business cases.
- With good connections to the network, major active transport projects can exceed expectations for use. The Breakfast Creek Bridge, opening in Brisbane in early 2024, was built on the basis of a business case predicting less than 1,000 users per day and an expected BCR of 1.7:1.<sup>22</sup> In just the first month since opening, use has exceeded expectations by 250% at 2,600 users per day.
- The Report cites the case of Seville<sup>23</sup> where investment of €32 in a complete urban cycling network over just five years resulted in a rapid increase in participation in cycling to a mode share of 9%.

**QUESTION 2:** Do you support the use of the avoid-shift-improve framework as a tool to identify opportunities for abatement?

Yes. Further comment.

The avoid, shift, improve framework provides a tool to identify and prioritise opportunities for emissions reduction. The Roadmap does not however provide a comprehensive evaluation of strategies for Avoid and Shift. Instead, the ‘Timeline of transport decarbonisation technology pathways’<sup>24</sup> to 2030 focus on ‘Improve’ such as developing technologies for hydrogen fuel, LCLF and other technologies that are overwhelmingly ‘*under development*’, ‘*demonstration*’ only, require ‘*certification*’ to ‘*stimulate demand*’, or require ‘*R&D*.’

Initiatives for a shift to active transport modes as an abatement strategy are immediately deployable and could start to have a significant impact by 2030.

As this submission noted earlier, the CSIRO report, *Pathways to Net Zero Emissions*<sup>25</sup>, states ‘road transport is the most material category and within this subsector light vehicle transport has the greatest opportunity for near-term decarbonisation.’

It also states that switching to lower emissions mobility such as public transport, walking and cycling is a key lever for reducing emissions.

Noting that demand for urban passenger transport could grow 60-70% by 2050, the International Transport Forum states ‘shared vehicles, powered by clean electricity, integrated

<sup>21</sup> Prioritising Active Transport (2024). Austroads Research Report AP-R711-24, [https://austroads.com.au/\\_data/assets/pdf\\_file/0031/653368/AP-R711-24\\_Prioritising\\_Active\\_Transport.pdf](https://austroads.com.au/_data/assets/pdf_file/0031/653368/AP-R711-24_Prioritising_Active_Transport.pdf).

<sup>22</sup> Data communicated from Bicycle Queensland following a conversation with the Brisbane Lord Mayor, Cllr Adrian Schrunner, July 2024.

<sup>23</sup> Transport and Infrastructure Net Zero Consultation Roadmap, p.25

<sup>24</sup> Transport and Infrastructure Net Zero Consultation Roadmap, p.7

<sup>25</sup> Pathways to Net Zero Emissions, (2023), CSIRO. <https://research.csiro.au/ieem/pathways-to-net-zero-emissions/>, page 49.

with existing public transport' is the most effective way to decarbonise urban passenger transport.<sup>26</sup>

The Climate Council's report '*Seize the Decade*' has modelled the changes needed to reduce carbon pollution across the economy by 75%. This would require shifting 30% of projected private vehicle kilometres to shared and active travel, away from private vehicles.

This will mean shifting existing kilometres travelled by private car to shared and active transport at the rate of around 5% a year and seeing all growth in passenger travel this decade taken up by these modes.

The report recommends that governments encourage Australians to switch their second vehicle for an e-bike through cash payments or other incentives and that priority infrastructure for shared and active transport become a requirement for all road project proposals submitted for federal funding.

**QUESTION 3.** *Do you agree the development of a national policy framework for active and public transport will support emissions reduction?*

**QUESTION 3.1.** *Please add details to your response.*

**QUESTION 4.** *What should be included in a national policy framework for active and public transport and how should it be developed?*

Yes, conditionally support.

Rethinking our transport networks and approach to reducing emissions is vital and necessary, however a detailed action plan for how this will be done is required, with explicit inclusion of public and active transport as key modes to be encouraged.

The Transport and Infrastructure Roadmap needs to clearly recognise that responsibility for many of the solutions rests largely at the local government level to operationalise, at the state and territory government level to plan and at federal government level to lead with supporting measures, policy and investment.

The development of a complementary National Urban Policy must recognise the importance of land use/transport integration and provides a supporting framework for states and local governments to develop planning and transport policy to guide urban development that recognises the critical role of increasing active transport.

The National Health and Climate Strategy<sup>27</sup> promotes active transport however this needs to be realised in meaningful action plans that compel governments to invest in active transport projects across Australia.

The statement "*...it has been a challenge for governments to drive their (public and active transport) uptake*"<sup>28</sup> belies the fact that governments have, since the 1960's, invested heavily in roads and motor vehicle transport as a priority over public and active transport.

There is no mystery therefore why this has resulted in today's overwhelming car-based mode shares in Australian cities. There are numerous examples of where targeted investments in active and public transport projects have resulted in positive outcomes that have NOT been a

<sup>26</sup> <https://www.itf-oecd.org/sites/default/files/docs/cop24-urban-mobility.pdf>, accessed 30 July 2024.

<sup>27</sup> <https://www.health.gov.au/sites/default/files/2023-12/national-health-and-climate-strategy.pdf>, p.102, accessed 5 August 2024.

<sup>28</sup> Transport and Infrastructure Net Zero Consultation Roadmap, p.25



challenge to governments. For example, light rail on the Gold Coast, Brisbane's investments in cycling corridors such as the bicentennial bikeway and other projects.

A national policy framework should include:

- A plan with all actions articulated as responsibilities and assessment and data requirements clearly stated.
- Federal leadership for moving people in a national policy framework and endorsement of globally recognised street design principles for the movement of people regardless of mode and location.
- A clear articulation of the vision for Net Zero transport that is nationally developed, federally led and articulated and delivered by all state and territory jurisdictions through a public awareness and information campaign.
- A positive provision policy applied for inclusion of consideration for public and active travel modes in all transport projects funded by the Australian Government.
- A comprehensive approach to planning and urban design based on a user hierarchy with pedestrians at the top, then active travel and public transport, freight and shared vehicles followed by private motor vehicles last.
- A comprehensive commitment to disability standards in all transport projects, stations and infrastructure to guarantee equitable and accessible mobility for all.
- Promotion of uptake of e-bikes and e-cargo solutions for local transport trips and last mile delivery with tax incentives, parity of FBT provisions for bikes and e-bikes with EVs and purchase incentives for light electric vehicles and bicycles.
- A national scheme for walking and riding to school with skills training to boost participation, and
- A national safe speeds framework to guide adoption of low-speed neighbourhoods and zones that create safer conditions for walking, wheeling and cycling.

**QUESTION 5:** *What additional actions by governments, communities, industry and other stakeholders need to be taken now and, in the future, to ensure the movement of people contributes to transport emissions reduction?*

We support additional actions that ensure movement of people contributes to emissions reductions.

The primary pathway to ensure movement of people contributes to emissions reduction is to make active and public transport more convenient, safer, more attractive and accessible for all, regardless of ability or age.

- Provide separated and safe infrastructure for people to use zero emissions modes such as walking and cycling and/or low speed zones in highly pedestrianised zones and local streets.
- Incentivise state and local jurisdictions to implement 30km/h speed limits more broadly to reduce vehicle emissions and a range of wider benefits including reducing vehicle crashes.
- Ensure land use and road design facilitates walking and cycling, including by environmental measures such as tree cover which also contribute to emissions reduction by drawing down carbon through provision of shade trees.
- Ensure appropriate disincentives to driving are applied to encourage mode shift to active alternatives and public transport – these include low speed streets, modal filters

to stop rat running, signalisation and narrower designs to change perception of appropriate driving speeds.

- Reference new Austroads report – Prioritising Active Transport – as a comprehensive guide on infrastructure, programs and policies that encourage active transport. The report reinforces that mode shift is difficult and must be combined with disincentives to driving vehicles such as road pricing, some reductions in parking, road space reallocation and low speed limits.
- The latest Transport for NSW Road User Space Allocation Policy<sup>29</sup> has been updated following a review and now provides governments with a stronger mandate to balance movement and place, considering all road users with priority given to people walking, cycling and using public transport. Recommendations include mandating that road space reallocation decisions must be documented with evidence and reasons, and outcomes assessed against strategic intent. Projects must aim for an overall reduction of the mode share of private motor vehicle trips within built-up areas.

**QUESTION 6.1.** *What additional actions by governments, communities, industry and other stakeholders need to be taken now and, in the future, to ensure that the movement of goods contributes to transport emissions reduction?*

**QUESTION 6.2.** *How would these actions address the identified challenges and opportunities for emissions reduction in the movement of goods?*

We offer a case for the contribution that e-cargo bikes and micromobility can make to emissions reduction.

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>30</sup> the online share of retail is up from 10% at the start of the pandemic to 16.8%. Australia Post delivered 526 million parcels in 2022 and growth of 5% is expected to 2030.<sup>31</sup>

A recent white paper by WSP<sup>32</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 WSP 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
- An increase in congestion of over 21%.<sup>33</sup>

The use of e-cargo bikes and other Light Electric Vehicles (LEVs) is increasingly being deployed offering comparable or better delivery times and cargo capacity than traditional delivery

<sup>29</sup> [https://www.transport.nsw.gov.au/system/files/media/documents/2024/road-user-space-allocation-policy\\_july-2024.pdf](https://www.transport.nsw.gov.au/system/files/media/documents/2024/road-user-space-allocation-policy_july-2024.pdf)

<sup>30</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>31</sup> <https://www.mordorintelligence.com/industry-reports/australia-courier-express-and-parcel-cep-market>, accessed on 17 May 2024.

<sup>32</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.

<sup>33</sup> [ibid.](#)

modes. Australia Post, for example, now has 5,000 light electric delivery vehicles in their national fleet.<sup>34</sup>

One study of the viability of LEVs for freight deliveries in London<sup>35</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>36</sup>

**QUESTION 7: Do you agree with the proposed Net Zero pathway for light road vehicles?**

Not supported as outlined.

We do not support the limited discussion of alternatives to light motor vehicle transport in The Roadmap and propose e-bikes, micromobility be explicitly included in all parts of The Roadmap.

We propose that a specific group of zero/low emissions light vehicles, bikes, e-bikes and micromobility, should be expressly identified as a subset of the light vehicles category in The Roadmap and Action Plan, as they provide unique advantages as part of the transport system.

The Roadmap correctly identifies electrification of road transport as the best way to decarbonise the current fleet, however this action alone is not enough. 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 is highly unlikely to result in the necessary reduction in emissions within the 2030 time frame.

EVs still require significant resources to manufacture, and this produces carbon emissions before the vehicle even hits the road. While significantly cleaner than internal combustion engine (ICE) vehicles during their operation, research has found that EVs still produce high levels of carbon emissions in the production phase.<sup>37</sup>

For the first time, Polestar recently subjected its life cycle assessment (LCA) of the new Polestar 3 SUV to independent review.<sup>38</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>39</sup>, an accelerated replacement of ICE vehicles by EVs may lead to the perverse outcome of

<sup>34</sup> <https://auspost.com.au/community-hub/sustainability/largest-electric-delivery-fleet>

<sup>35</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>36</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>37</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>38</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>39</sup> <https://www.insnet.org/electric-cars-emit-more-co2-than-traditional-cars-at-production/>, accessed on 15 May 2024.

increasing CO2 emissions in the short term, due to the ‘front-loading’ of emissions from their manufacture.<sup>40</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>41</sup> to 11.3 years in 2023.<sup>42</sup>

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>43</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>44</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>45</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>46</sup>

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<sup>40</sup> Ibid.

<sup>41</sup> <https://www.abs.gov.au/statistics/industry/tourism-and-transport/motor-vehicle-census-australia/latest-release>, accessed on 15 May 2024.

<sup>42</sup> <https://www.bitre.gov.au/sites/default/files/documents/BITRE-Road-Vehicles-Australia-January-2023.pdf>, accessed on 15 May 2024.

<sup>43</sup> [AAA-ECON\\_Benefits-of-reducing-fleet-age-full-report\\_Dec-2017.pdf](https://www.aaa-econ.com.au/wp-content/uploads/2017/12/AAA-ECON_Benefits-of-reducing-fleet-age-full-report_Dec-2017.pdf), accessed on 15 May 2024.

<sup>44</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>45</sup> <https://www.sciencedirect.com/science/article/pii/S0965856415301865#s0060>, accessed on 14 May 2024.

<sup>46</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)

**QUESTION 8.1** *What additional actions by governments, communities, industry and other stakeholders need to be taken now and, in the future, to reduce light vehicle emissions?*

**QUESTION 8.2** *How would these actions address the identified challenges and opportunities to reduce light vehicle emissions?*

- The Roadmap and Action Plan must establish an agreed framework to ensure investment is for lowest cost abatement irrespective of the mode. All investment should be aligned consistent with the targets for mode share as established on the basis of both wider benefits and disbenefits of each mode. Investment should also assist in fully transitioning ICE vehicles to EVs.
- Establish safe speeds on streets.
- Reduce tax and financial incentives for high polluting vehicles.
- Introduce FBT concessions and financial incentives for e-bikes and micromobility.
- Introduce actions in The Roadmap Action Plan to support mode shift away from car use and reduce the need for travel as a priority
- Consider a date to implement a phase out of ICE vehicles.
  - Under the CSIRO's Rapid Decarbonisation (CRD) scenario<sup>47</sup>, based on a rapid but plausible decarbonisation pathway to Net Zero for Australia aligned with the IEA's NZE global 1.5°C carbon budget, it is assumed the sale of ICE vehicles would cease by 2035.
  - A second scenario, CSIRO Stated Policies (CSP), based on stated policies internationally and within Australia, which projects a 2.6°C temperature increase by 2100, projects that the sale of ICE vehicles will not end until after 2050, and emissions do not reach zero until after 2050.

**QUESTION 25.1** *What are good domestic or international examples of partnership and collaboration on transport and transport infrastructure emissions reduction that could inform the final Roadmap and Action Plan?*

**QUESTION 25.2** *What opportunities can the government leverage to show leadership in Australia and internationally?*

The Government must play a role as a Leader and an Investor and work collaboratively with industry, business, governments and communities for a future Net Zero transport system.

As Ministers King and Bowen state in the introduction to the Consultation Roadmap, it 'sets out decarbonisation pathways for transport and transport infrastructure across our transport systems, all transport modes and the enabling inputs and policies'.

We have set out reasons above for a much greater investment in active transport to replace light vehicles as part of the decarbonisation of road transport. This is due to the majority of emissions coming from this sector.

A nationally agreed Action Plan and a collaboration framework is therefore needed that clearly outlines objective emissions reduction actions to achieve legislated emissions reduction,

<sup>47</sup> 20231117\_CSIRO\_Technical Report\_Pathways to Net Zero Emissions\_CORRECTION#1\_20240215.pdf, pages ix and 32, accessed at <https://doi.org/10.25919/gdxj-vv11> on 5 August 2024.

agreed responsibilities for actions, measures for each level of government to undertake and a data and reporting framework that makes evaluation possible.

### **The Government as Leader**

We propose an independent Net Zero Transport and Infrastructure Roadmap delivery agency or group be established with the appropriate expertise and representative industry and expert membership to oversee the transition to Net Zero Transport.

An independent agency can ensure:

- The Roadmap clearly articulates the vision for Net Zero transport and outlines ways that the government can work with all states and territories to deliver emissions reduction through a public awareness and information campaign.
- That established mode share targets for active and public transport are supported and matched by establishing financial investment targets for these modes. We believe an immediate increase in funding should be made to meet 2030 emissions targets and increased as appropriate to meet Net Zero by 2050.
- Road pricing reforms are supported, hypothecating revenues into public and active transport projects
- That as technological innovations in active transport are already occurring, the rise of micromobility is not ignored
- That the transformative nature of e-bikes is encouraged to extend range and provide commuter comfort.
- Subsidisation of e-bikes is put on the agenda to make them more affordable across a broader section of the community.

### **The Government as Investor**

We support the expansion and electrification of public transport services. But the Roadmap's Action plan must provide financial support for e-bikes and micromobility.

Active Transport infrastructure investment and improvements are supported by The Roadmap; however, the wording is not sufficient to achieve change. To say that "the government could collaborate with state territory and local governments to deliver safe and accessible cycle lanes" does not recognise that a '*step change*' is required.

The Australian Government has a role in providing guidance for funding to state (and local) governments, to strongly incentivise them to invest in public and active transport. The term "collaboration" does not match the immediate need for actions to reduce transport emissions.

We strongly support active transport infrastructure improvements. The Australian government should (co-)fund, both directly and indirectly through grants to states, large-scale active transport infrastructure projects and programs in Australian cities.

Examples are the "Cycle Superhighway" projects successfully introduced in Paris and London, which have seen a rapid increase in mode share in those cities. The example of Seville's bikeable city in the Consultation Roadmap is a good one and has clearly articulated the costs and outcomes.

Arguments made previously in this submission indicate that a substantial increase or '*step-change*' in the level of government investment currently attributed to active transport is required. For example, the Active Transport Fund announcement of \$100m over four years is microscopic and must increase to billions of dollars.

The planning has largely been done for such projects (for example the Queensland Principal Cycle Network, Sydney CBD and Melbourne networks previously included on the Infrastructure Australia Priority List) – all that is required now is the political will and subsequent funding.

Integration of active transport with public transport is strongly supported, however the examples cited for bike parking in the Consultation Roadmap are inappropriate. Secure bike parking provision should be compulsory at all major public transport stations.

Carriage of bikes on trains needs to be mandated. The Western Australian PTA provides best-practice bike parking and seamless integration with the Principal Bicycle Network at the majority of its suburban rail stations. Victoria has a network of more than 145 Parkiteer facilities across suburban and metropolitan train stations, which encourage active travel to public transport services.

**QUESTION 26** *What measures and metrics should be used to evaluate the final Transport and Infrastructure Net Zero Roadmap and Action Plan?*

**QUESTION 26.1** *What other data and evidence could governments use and how could this offer further insights on the pace, scale and location of transport emissions reduction pathways?*

The total estimated paved road length in Australia in 2022 was 427,000 kilometres<sup>48</sup>. The vast majority of the network is owned by local government, with state government also controlling a major share. With substantial funding flowing from the Australian Government for all roads and transport projects, every level of government shares an interest in sustainable and equitable outcomes.

As new active transport infrastructure networks are built, governments must work together to calculate the kilometres they cover.

- A series of accurate data and infrastructure measures is needed to establish a baseline for future assessment and evaluation of progress.
- Ongoing calculation to chart Australia's total network of bike lanes and separated infrastructure offering active transport alternatives for bikes, e-bikes and micromobility is therefore also needed.

## Contacts

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## Close of submission

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<sup>48</sup> Australian Infrastructure and Transport Statistics – Yearbook 2023, BITRE.  
<https://www.bitre.gov.au/publications/2023/australian-infrastructure-and-transport-statistics-yearbook-2023/road>, accessed on 1 August 1, 2024.