

POLICY BRIEF

THREE SUSTAINABLE TRANSPORT WINS FOR AUSTRALIAN STATES AND TERRITORIES:



Allocate appropriate budget for public transport, walking and bike-riding in line with best practice and the public's needs. Page 2



Encourage electric bike uptake. Page 4



Convert the state's bus fleet to clean, quiet and zero-emission buses. Page 6

Australian states and territories have the opportunity to be a leader in addressing the nation's fastestgrowing source of emissions: personal transport.¹

Implementing our three priority policies will deliver significant health, economic and employment benefits - while helping states achieve their emissions-reduction targets.



1. ALLOCATE APPROPRIATE BUDGET FOR PUBLIC TRANSPORT, WALKING AND BIKE-RIDING IN LINE WITH BEST PRACTICE AND THE PUBLIC'S NEEDS

What does this look like?

- Increase the state budgetary spend on active transport in line with best practice as soon as possible: allocating 20% of the total transport budget.²
- > Ensure spending for public transport is at least 50% of the total state transport budget.
- > Fund projects and implement policies that increase public and active transport use see the Climate Council's sustainable transport policy recommendations.³

Why?

- Personal road transport (cars and other forms of road transport focussed on moving people, rather than freight) - contributes to around half the transport sector's greenhouse gas pollution.⁴
- > To better serve communities and achieve climate targets, Australia's personal transport system must shift from the current car-centric, polluting model to one that prioritises walking, cycling and public transport options. This can only be achieved with an appropriate budget commitment.
- > It is estimated that for every \$1 of public funding invested in active transport infrastructure there is a \$2 return for the community.⁵
- Sustainable transport is a major job creator, with 12-15 jobs created for every \$1 million invested in active transport and Electric Vehicle (EV) charging infrastructure.⁶
- > Cars are the most expensive mode of travel, costing society 86c for every passenger kilometre, compared with rail (the cheapest) at 47c and buses at 57c.⁷ Note: this is even lower in the case of zero-emission buses.
- > Australia has some of the widest roads in the world, which are perfect for retrofitting bike lanes.⁸
- > Road congestion costs the Australian economy \$38.8 billion annually.⁹ Encouraging people towards active and public transport, and away from private vehicles, is a more effective solution to congestion and associated costs than road expenditure.^{10 11}
- > Replacing polluting internal combustion vehicles with EVs is important but by itself will not solve our transport challenges.

CASE STUDY: INVEST IN WALKING AND CYCLING INFRASTRUCTURE, AND BEHAVIOUR CHANGE WILL FOLLOW

In releasing its 2021 budget, Ireland legislated that 10% of the transport budget would be spent on cycling infrastructure and 10% on pedestrian infrastructure annually for the government's lifetime.¹² The funding increase on active transport has already resulted in 800 new projects being approved in 2021, including a series of one-way traffic systems and contraflow cycle lanes, 70km of new or improved cycle lanes, 47km of new or upgraded footpaths and 10km of additional greenways.¹³ Greenways are car-free pathways stretching across the landscape, connecting towns or landmarks, enjoyed by cyclists and walkers.¹⁴ Further, more than half the transport budget (53%) will be invested in public transport, to improve journey times and enhance reliability, and electrifying the urban rail and buses fleets.¹⁵ ¹⁶ The boost in active and public transport investment is expected to result in an additional 500,000 walking, cycling and public transport trips this decade.¹⁷

Australian states spend less than 2% of their transport budget on active transport (walking and cycling),¹⁸ which is well below international standards and community expectations. States and territories have a chance to set themselves apart by bringing expenditure in line with United Nations standards and the public's needs.



2. ENCOURAGING ELECTRIC BIKE (E-BIKE) UPTAKE

What does this look like?

- > Offer a 30% rebate (up to \$1500) for the purchase of an e-bike (including e-cargo bikes) for personal use, applied at the point of purchase to enable e-bikes to be accessible to more people.
- > Provide zero or low interest loans, made possible through a <u>concessional financing</u> <u>scheme</u> with a finance partner. This is a low-cost approach, removing the upfront capital barrier for purchases on not just e-bikes but home energy efficiency upgrades and EVs as well.
- > Partner with councils to operate e-bike borrowing programs (see case study in box below).
- > Introduce free or cheap access to an e-bike community library to social housing estates.

Why?

- > E-bikes and e-cargo bikes can be used by more social groups (including women, children, people aged over 40 and people in outer suburbs) compared to non-motorised bikes.¹⁹ Further, they can be used for a greater variety of trips such as the school drop-off and grocery shopping. This is because e-bikes enable riders to overcome barriers of conventional bikes, including long distances, steep hills and greater physical effort from carrying heavier loads such as equipment, groceries, and kids.
- > Current Australian rebates on EVs exclude e-bikes²⁰ but purchase price remains one of the main barriers to e-bike uptake.²¹
- > E-bikes help reduce congestion, road traffic crashes, and parking frustration.
- > E-bikes help create connected, agile and physically active communities.
- > E-bikes produce only a tenth the greenhouse gas emissions of electric cars²² and can support states and territories to transition from fossil fuel dependent cars to an e-fleet.
- Recent modelling shows a return on investment of \$2.61 and \$3.11 for each dollar invested in \$1000 and \$500 e-bike rebates respectively.²³
- > Purchasing e-bikes via a rebate is accessible and affordable for lower-income earners.

STATE GOVERNMENTS CAN SET THE WHEELS IN MOTION FOR HIGH E-BIKE OWNERSHIP

ACT residents can try an e-bike before they buy, thanks to the Canberra Electric Bike Library (supported by the ACT Government).²⁴ Within 12 months of launching, several hundred Canberrans had participated in the trial, with 82% indicating their intention to purchase an e-bike, and 37% buying one almost immediately after their loan period.²⁵ Due to popular demand, the library service has been extended 12 months.²⁶ Each e-bike prevents up to 50 kilometres of car trips a week per rider, demonstrating a simple and effective way the ACT can significantly reduce congestion, pollution and emissions.²⁷ Around the world, government incentives to drive e-bike uptake across Sweden, Germany, Austria, and the UK have seen increased rates of active travel, reduced rates of transport-related emissions, and increased participation from new female riders.²⁸





3. CONVERT THE STATE'S BUS FLEET TO CLEAN, QUIET AND ZERO-EMISSION BUSES

What does this look like?

- > Ensure **all new buses** are zero-emissions by 2024 (battery electric buses (BEB) powered by renewable energy).
- > Replace the **state / territory entire bus fleet** with zero-emission buses by 2030, partnering with councils and private operators where required.
- > Contract local manufacturers wherever possible by working with industry to support local electric bus manufacturing capabilities.

Why?

- > Zero-emission buses are quieter, smoother and do not impact local air quality with dangerous pollution, unlike their diesel counterparts. This change would save governments millions in health and environmental damage.^{29 30}
- > Zero-emission buses are significantly more cost-effective to run due to lower maintenance and refuelling costs (totaling 72% less annual expenditure compared to conventional buses).³¹ For example, the Chicago Transit Authority found the estimated savings in fuel costs for each zero emission bus is approximately AUD\$36,000 annually, or AUD\$430,000 over each bus' 12-year lifespan.³²
- Replacing just one conventional bus with a zero-emission bus saves approximately 73 tonnes of carbon dioxide emissions per year.³³
- > States and territories can spearhead local electric vehicle manufacturing by investing in zero emission buses. Establishing facilities that can be retooled for future electric vehicle production and maintenance will support local economies and create jobs.
- > Ordering in bulk (or facilitating an aggregation model between local governments and manufacturers) will lock-in the benefits of economies of scale including: reducing the cost per unit, boosting private investor confidence, and establishing supply chains and network economies early. Historically, Australian manufacturers have been assemblers and body-builders, with key parts imported. Ramping up local manufacturing provides states the opportunity to build and export components.³⁴
- Kick-starting zero-emission bus manufacturing also has the potential to stimulate domestic use of critical mineral deposits required for electric buses and electric vehicles.³⁵
- > The public is calling for electric buses. A 2021 Climate of the Nation Poll found that three in four people support fully electrifying the state bus fleet.³⁶

ZERO EMISSION BUSES ARE ROLLING OUT - AT HOME AND AROUND THE GLOBE

Zero emissions buses in Australia: the race is on

The QLD government has committed that all new buses in south east Queensland will be zero emissions from 2025 and will roll this out to all urban fleets by 2030.³⁷ At the local level, Brisbane City Council is introducing 60 electric buses as part of the Brisbane metro fleet, with services expected to commence from 2024.³⁸

Across the border, the NSW Government has committed to transition its entire bus fleet to zero emissions, prioritising local manufacturing.³⁹ The NSW Government predicts replacing all diesel buses will reduce Transport NSW's emissions by 78% and save \$1-2 billion in health and environmental costs - a benefit that other states can also realise.⁴⁰

More electric bus trials are underway across Australia - and the race is on for states and territories to set necessarily ambitious zeroemissions bus transition targets.

Bus users all over the world are going electric

Cities across the globe are switching to electric, with more than 600,000 zero-emission buses on the road today.⁴¹ In fact, Bloomberg anticipates that half the world's buses will be zero-emission by 2025.⁴² More than 34 cities have committed to only purchasing zero-emission buses from 2025, sending a clear market signal to accelerate electric bus manufacturing in the coming years.⁴³ Madrid, Athens, Mexico City and Paris have pledged to ban diesel buses from city centres by 2025.⁴⁴



Australian states and territories can be leaders in zero-emissions transport - or will risk missing the bus on emissions reductions and economic outcomes for communities.



REFERENCES

- 1 Australian Government, 2022. National Greenhouse Gas Inventory. [Online] Available at: <u>https://ageis.</u> <u>climatechange.gov.au/nggi.aspx</u> [Accessed 2022].
- 2 Jennings, Gail. (2016). UNEP Global outlook on Walking and Cycling: Policies & realities from around the world. DOI: 10.13140/RG.2.2.25892.88969.
- 3 Climate Council, 2022. Policy Package: Charging Ahead. State and territory transport policy recommendations to reach near- absolute zero emissions.
- 4 Australian Government, 2021. Australia's emissions projections 2021. [Online] Available at: <u>https://www. industry.gov.au/data-and-publications/australiasemissions-projections-2021</u> [Accessed 2022].
- 5 ClimateWorks, 2020. *Recover and Reduce*. [Online] Available at: <u>https://www.climateworksaustralia.org/</u> resource/prudent-investments-to-boost-the-economyand-lower-emissions/ [Accessed 2022].
- 6 ClimateWorks, 2020. *Recover and Reduce*. [Online] Available at: <u>https://www.climateworksaustralia.org/</u> <u>resource/prudent-investments-to-boost-the-economy-</u> <u>and-lower-emissions/</u> [Accessed 2022].
- 7 The Climate Council, 2018. Waiting for the Green Light: Transport Solutions to Climate Change. [Online] Available at: https://www.climatecouncil.org.au/ wp-content/uploads/2018/10/CC_MVSA0154-Report-Transport_V6-FA_Low-Res_Single-Pages.pdf [Accessed 2022].
- Pojani, D et al. 2018. Cycling and walking are shortchanged when it comes to transport funding in Australia.
 [Online] Available at: <u>https://theconversation.com/</u> cycling-and-walking-are-short-changed-whenit-comes-to-transport-funding-in-australia-92574
 [Accessed 2022].
- 9 Australian Infrastructure Audit, 2019. Transport. [Online] Available at: <u>https://www.infrastructureaustralia.</u> gov.au/sites/default/files/2019-08/Australian%20 Infrastructure%20Audit%202019%20-%205.%20 Transport.pdf?fbclid=IwAR1uN [Accessed 2022].
- 10 Australian Transport Research Forum, 2008. Evaluating the congestion reduction impacts of public transport – a comparative assessment. [Online] Available at <u>https://</u> www.australasiantransportresearchforum.org.au/sites/ default/files/2008_Aftabuzzaman_Currie_Sarvi.pdf [Accessed 2022].
- 11 Garrard, J. 2009. Active transport: Children and young people. [Online] Available at https://www. vichealth.vic.gov.au/~/media/resourcecentre/ publicationsandresources/active%20travel/active transport_children_and_young_people_final.pdf [Accessed 2022].

- Macmichael, S. 2020. 20 per cent of Ireland's transport budget to be spent on cycling and walking under new coalition agreement in massive boost to active travel.
 [Online] Available at <u>https://road.cc/content/news/20cent-irelands-transport-budget-active-travel-274541</u>
 [Accessed 2022].
- 13 Hilliard, M. 2021. Cycling, walking projects get bulk of transport spending in 2021. [Online] Available at <u>https://www.irishtimes.com/news/environment/cycling-walking-projects-get-bulk-of-transport-spending-in-2021-1.4673693</u> [Accessed 2022].
- 14 Greenways Ireland, 2022. *The Ultimate Guide to Ireland's Greenways*. [Online] Available at <u>https://</u> <u>greenwaysireland.org/waterford-greenway/ https://</u> <u>greenwaysireland.org/waterford-greenway/</u> [Accessed 2022].
- 15 Macmichael, Simon. 2020. 20 per cent of Ireland's transport budget to be spent on cycling and walking under new coalition agreement in massive boost to active travel. [Online] Available at https://road.cc/ content/news/20-cent-irelands-transport-budgetactive-travel-274541 [Accessed 2022].
- 16 RTE, 2021. At a glance: How €35bn transport fund will be spent. [Online] Available at https://www. rte.ie/news/2021/1004/1250721-ireland-ndptransport/#:~:text=The%20Government%20said %20its%20%E2%82%AC,routes%20receiving%20 %E2%82%AC4%20billion [Accessed 2022].
- 17 Ibid.
- 18 Pojani, D et al. 2018. Cycling and walking are shortchanged when it comes to transport funding in Australia.
 [Online] Available at: https://theconversation.com/ cycling-and-walking-are-short-changed-whenit-comes-to-transport-funding-in-australia-92574 [Accessed 2022].
- 19 Rérat, P., 2021. The rise of the e-bike: Towards an extension of the practice of cycling? [Online] Available at: https://www.tandfonline.com/doi/full/10.1080/17450 101.2021.1897236 [Accessed 2022].
- 20 ASPA, 2022. *Three Transport Asks*. [Online] Available at: https://aspactivity.org/three-transport-priorities/
- 21 MacArthur, J et al. 2018. A North American Survey of Electric Bicycle Owners. NITC-RR-1041. Portland [Online] Available at: <u>https://www.calbike.org/wpcontent/uploads/2019/02/A-North-American-Surveyof-Electric-Bicycle-Owners.pdf</u> [Accessed 2022].
- 22 The Conversation, 2021, Cycling is ten times more important than electric cars for reaching net-zero cities. [Online] Available at: <u>https://theconversation.com/</u> cycling-is-ten-times-more-important-than-electriccars-for-reaching-net-zero-cities-157163 [Accessed 2022].

- 23 Fishman, E. et al. 2021. *E-Bike Subsidy for Australians*, Institute for Sensible Transport (in press), as cited in ASPA, 2022. *Three Transport Asks*. [Online] Available at: <u>https://aspactivity.org/three-transport-priorities/</u> [Accessed 2022].
- 24 ACT Government, 2020. *Canberra's Electric Bike Library.* [Online] Available at: <u>https://www.climatechoices.act.</u> gov.au/policy-programs/canberras-electric-bike-library [Accessed 2022].
- 25 Brown, 2021. Canberra electric-bike library extended for 12 months. [Online] Available at: https://www. canberratimes.com.au/story/7323842/acts-e-bikelibrary-receives-an-extra-charge/ [Accessed 2022].
- 26 ACT Government, 2020. Canberra's Electric Bike Library. [Online] Available at: <u>https://www.climatechoices.act.</u> <u>gov.au/policy-programs/canberras-electric-bike-library</u> [Accessed 2022].
- 27 ACT Government, 2020. *Canberra's Electric Bike Library*. [Online] Available at: <u>https://www.climatechoices.act.</u> <u>gov.au/policy-programs/canberras-electric-bike-library</u> [Accessed 2022].
- 28 Bicycle Network, Backing the Bike 2022 Federal Election Policy Paper [Online] Available at: <u>https://www.bicyclenetwork.com.au/our-campaigns/federalelection-2021/</u> [Accessed 2022].
- 29 Clean Slate, 2022. Finding Western Australia's drive to introduce clean and quiet transport. [Online] Available at: <u>https://www.cleanstate.org.au/wa-made-electricbuses</u> [Accessed 2022].
- 30 NSW Government, 2022. Zero Emissions Bus Transition Strategy. [Online] Available at: <u>https://www.transport.</u> <u>nsw.gov.au/projects/current-projects/zero-emissionbuses</u> [Accessed 2022].
- 31 ClimateWorks Centre, *Electric Buses can reduce costs, improve air quality and support local industries.* [Online] Available at: <u>https://www.climateworksaustralia.org/</u> <u>news/electric-buses-can-reduce-costs-improve-air-</u> <u>quality-and-support-local-industries/</u> [Accessed 2022].
- 32 Electric Vehicle Council, Electric Vehicle Council submission: NSW Upper House Inquiry into electric buses in regional and metropolitan public transport networks in NSW. [Online] Available at: <u>https://</u> electricvehiclecouncil.com.au/wp-content/ uploads/2021/07/2019-Submission-to-NSW-Parliamenton-buses-1.pdf [Accessed 2022].
- 33 Transdev, 2020. Victoria's first electric bus saves 61.6 tonnes of CO₂ emissions. [Online] Available at: <u>https://www.transdev.com.au/press-release/victorias-first-electric-bus-saves-61-6-tonnes-of-co2-emissions/</u> [Accessed 2022].
- 34 Morris, C.2020. IEA case study: electric buses in Helsinki, Finland. [Online] Available at: <u>https://</u> chargedevs.com/newswire/iea-case-study-electricbuses-in-helsinki-finland/ [Accessed 2022].

- 35 The Climate Council, 2021. Smart Solutions to Supercharge QLD. [Online] Available at: <u>https://www. climatecouncil.org.au/resources/report-qld-smartsolutions/</u> [Accessed 2022].
- 36 The Australian Institute, 2021. Climate of the Nation 2021. [Online] Available at: <u>https://australiainstitute.org.</u> au/wp-content/uploads/2021/10/211013-Climate-of-<u>the-Nation-2021-WEB.pdf</u> [Accessed 2022].
- 37 QLD Government, 2022. Making the connection: plan to drive Queensland's transport future. [Online]. <u>https://</u> <u>statements.qld.gov.au/statements/92901</u> [Accessed 2022].
- 38 Brisbane City Council, 2022. The Metro. [Online]. Available at: <u>https://www.brisbane.qld.gov.au/traffic-and-transport/public-transport/brisbane-metro/the-metro</u> [Accessed 2022].
- 39 NSW Government, 2022. Zero emission bus transition enters new gear [Online]. Available at: <u>https://www.</u> transport.nsw.gov.au/news-and-events/media-releases/ zero-emission-bus-transition-enters-new-gear
- 40 NSW Government, 2022. Zero Emissions Bus Transition Strategy. [Online] Available at: <u>https://www.transport.</u> <u>nsw.gov.au/projects/current-projects/zero-emissionbuses</u> [Accessed 2022].
- 41 Sustainable Bus, 2022. ZE bus sales forecast to rise to 83% of the global market by 2040, BloombergNEF EVO 2021 says [Online] Available at: https://www. sustainable-bus.com/news/electric-bus-forecastbloomberg-evo-2021/#:~:text=98%25%20of%20 e%2Dbus%20sold,%2Dterm%20opportunity%20for%20 %5B%E2%80%A6%5D&text=By%20Editorial%20Staff-_600%2C000%20e%2Dbuses%20on%20the%20road%20 globally%20today%20(39%25,%25%20of%20the%20 global%20fleet).
- 42 Bloomberg, 2018. Electric Buses will take over half the world by 2025. [Online] Available at: https://www. bloomberg.com/news/articles/2018-02-01/electricbuses-will-take-over-half-the-world-by-2025 [Accessed 2022].
- 43 Climate Works Centre, *Electric Buses can reduce costs, improve air quality and support local industries.* [Online] Available at: <u>https://www.climateworksaustralia.org/</u> <u>news/electric-buses-can-reduce-costs-improve-air-</u> <u>quality-and-support-local-industries/</u> [Accessed 2022].
- 44 Clean Slate, 2022. Finding Western Australia's drive to introduce clean and quiet transport. [Online] Available at: https://www.cleanstate.org.au/wa-made-electricbuses [Accessed 2022].

IMAGE CREDITS

Cover Page: BRISBANE, AUSTRALIA - JULY 6, 2017: A bicycle chained to a lamppost beside Adelaide St in Brisbane City by Songsook, licensed via Shutterstock.

Page 5: "My daily commute to school" by KBO Bike, licensed via Unsplash.

Page 7: Electric bus stands at the charger by THINK A, licensed via Shutterstock

Page 8: Australian boy riding his bicycle on bike lane on a day, South Australia. By myphotobank.com.au, licensed via Shutterstock.

The Climate Council is an independent, crowd-funded organisation providing quality information on climate change to the Australian public.

The Climate Council acknowledges the Traditional Custodians of the lands on which we live, meet and work. We wish to pay our respects to Elders past, present and emerging and recognise the continuous connection of Aboriginal and Torres Strait Islander peoples to Country.

CLIMATE COUNCIL

- facebook.com/climatecouncil
- 灯 twitter.com/climatecouncil

info@climatecouncil.org.au

climatecouncil.org.au

