Transport and Infrastructure Net Zero Consultation Roadmap

RAC response to the Department of Infrastructure, Transport, Regional Development, Communications and the Arts

August 2024

RAC

For the better

6 August 2024

RAC response to the Department of Infrastructure, Transport, Regional Development, Communications and the Arts' *Transport and Infrastructure Net Zero Consultation Roadmap*

We thank the Department of Infrastructure, Transport, Regional Development, Communications and the Arts for the opportunity to provide feedback into the *Transport and Infrastructure Net Zero Consultation Roadmap* (the Consultation Roadmap). Establishing a clear pathway to decarbonise transport and transport infrastructure is necessary to reduce the negative impact of vehicles on our health and the environment.

About RAC

RAC is a purpose-led member organisation. Since our foundation in 1905, RAC has existed to be a driving force for a Better WA – this is our purpose. We act as a voice for more than 1.3 million members in more than 60 per cent of Western Australian households. We work collaboratively with government, industry, our members and all Western Australians to champion change that will deliver safer, sustainable, and connected communities – this is our 2030 vision. RAC's social and community impact activities seek to:

- reduce the number of people being killed or seriously injured on our roads;
- lower vehicle emissions for cleaner, healthier air; and
- ensure well-planned communities and transport that better connect people and places.

Introduction

RAC welcomes the Consultation Roadmap and the Australian Government's Net Zero Plan. A whole-of-economy strategy is necessary to ensure Australia maximises the benefits of the transition to net zero, provides long-term policy certainty to drive investment in low emissions and renewable technologies, and ensures that all sectors can manage trade-offs and take advantages of opportunities. **RAC is pleased a transport emission reduction strategy and action plan is being developed in the context of those from other sectors. RAC emphasises that this strategy should set ambitious targets for transport emissions, reflective of the sector's contribution to total emissions.**

Strong leadership and credible policy decisions on transport emissions should be at a minimum consistent with Australia's international commitments. To reduce the impact of vehicle emissions, there must be a clear strategic direction for Australian, and Western Australian, transport energy policy backed by appropriate investments that will protect the environment and health of our communities.

RAC acknowledges the planned and current actions to decarbonise the transport and infrastructure sectors, including (but not limited to) the *National Electric Vehicle Strategy* (NEVS), *New Vehicle Efficiency Standard* (NVES), and investments into clean energy and the electricity grid. RAC's submission focuses on key actions and current gaps that need to be addressed to decarbonise road transport in the context of Western Australia and Perth.

Recognising the importance of planning in reducing transport emissions

Even if all vehicles in our fleet were electric vehicles (EVs) today, private car use would still be a source of emissions. Not only because complete decarbonisation of the energy grid remains years away, but because emissions are produced throughout a vehicle's lifecycle – from fuel and electricity production, through to vehicle and battery recycling and disposal. In addition, beyond greenhouse gases, EVs still contribute other pollutants, such as particulate matter[1], which arises from wear and tear on brakes and wheels. While it is important to increase the uptake of EVs, **Australia's transport system must *shift* from being car and fossil fuel dependent to one that prioritises active and public transport, as well as the decarbonisation of vehicles beyond the passenger fleet (for example, buses and trucks), and associated infrastructure.**

RAC welcomes the Consultation Roadmap's emphasis on the *avoid-shift-improve* hierarchy, and the importance placed on *Infrastructure Policy Statement* themes - Productivity and Resilience; Liveability; and Sustainability. To support the *avoidance* of transport emissions, **the role and importance of integrated transport and land use planning needs to be recognised within the final Roadmap and Action Plan**. Compact mixed-use neighbourhoods help reduce pollution and according to the Victorian Department of Transport and Planning, locating neighbourhoods within a short walk of services and destinations (such as the 15- or 20-minute neighbourhood concept), is shown to reduce driving pollutants by as much as 40 per cent and carbon dioxide (CO_2) emissions by 10 per cent[2]. This is further backed by research into the 15-minute city model, whereby the higher density (of population and services) and diversity results in shorter travel distances and replaces motorised traffic journeys with active travel, leading to lower CO_2 and air pollution[3]. **Land use, development, and transport infrastructure planning and design should improve and enhance access by all modes to employment, leisure, social, health and/or recreation opportunities.** The retrofitting of existing, and the planning of new communities, must prioritise public transport and active travel for all ages and abilities, consider reduced car parking, co-locate trip generators, and increase density around activity nodes and transport hubs.

In making infrastructure decisions, we must look longer term as the impacts of these decisions will be felt for decades to come. In addition to encouraging integrated transport and land use planning, **where practicable, cost benefit analyses for road transport project business cases should account for the additional greenhouse pollution that projects are expected to result in over their lifetime (e.g. through increased road capacity), or pollution *avoided* (e.g. from public transport improvements).** To increase transparency, cost benefit analyses for significant projects should be publicly available.

Active transport

According to RAC members (who are broadly representative of the WA population), dissatisfaction with existing active transport infrastructure is high and fear of sharing the roads with motorists is the top reason for not cycling more often – they want more investment in off-road/shared path cycling, as well as improved on-road cycling, infrastructure. When asked which areas the government should prioritise to help encourage people to walk more often, building on/improving the network of footpaths and better planning of communities to provide more destinations/amenities/transport services within walking distance were the most commonly cited responses[4].

To facilitate travel by active modes, there must be a significant increase in funding for associated initiatives and investments. As a starting point, RAC welcomes the Australian Government's commitment of $100 million over four years (from 2025/26), to fund bicycle and walking paths to encourage the use of active

[1] Timmers, V. & Achten, P (2016). Non-exhaust PM emissions from electric vehicles. Atmospheric Environment. Retrieved from: https://www.sciencedirect.com/science/article/abs/pii/S135223101630187X

[2] Victoria State Government (2024). 20-minute neighbourhoods. Retrieved from: https://www.planning.vic.gov.au/guides-and-resources/strategies-and-initiatives/20-minute-neighbourhoods

[3] The Lancet Planetary Health (2022). The 15-minute city offers a new framework for sustainability, liveability, and health. Retrieved from: https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(22)00014-6/fulltext

[4] RAC (2023). Member Priorities Tracker - Active Transport (unpublished). 728 respondents across WA. Age, gender, and location sampling quotas were applied, and data has been post-weighted to be representative of RAC's membership (which is broadly consistent with the WA population profile) – the margin of error at total sample level is +/-3.6% at the 95% confidence level.

transport across Australia. However, this level of funding is insufficient to achieve mode *shift* across the country. Based on figures sourced from the State Government responding to questions asked at Parliament[5], $61 million was spent on cycling infrastructure and behaviour change programs in 2022/23. In the same year, Main Roads WA spent $3 billion on road-related services[6] (the $61 million for cycling represents just 2 per cent of this figure). Ongoing investment is needed, and government should set a minimum percentage allocation each year towards active transport. The 'UN Environment' recommends that for national policy makers to save lives, reduce pollution and get cities moving, they must set aside at least 20 per cent of the total transport budget to fund non-motorised transport programs[7].

The Australian Government should co-fund with the WA Government, a program of active transport infrastructure and programs (a *minimum* of $40 million each year in addition to existing funding spent on active travel). Specifically, funding should be directed to:

- Accelerate delivery of the Long-Term Cycle Network for WA, with a focus on primary routes, and strategic secondary and local routes that connect key local destinations (including schools, stations and neighbourhood centres) and activity centres.
- Optimise the existing shared path network by providing secure bike parking at strategic locations and by maintaining and upgrading shared paths, to improve surface and lighting quality.
- Incentivise local governments to deliver regionally significant active transport infrastructure routes and projects that are planned but require increased state funding and alternatives to the matched funding model currently in place.
- Enable cost-effective wide scale trials of innovative approaches to rapidly reallocate road space and create safer streets (including measures such as pop-up bike lanes and slower speeds).
- Build capacity and skills in active travel through travel behaviour change programs in parallel with major transport investment in public infrastructure and services (e.g. Your Move).
- Get more children riding by accelerating investment in the Active Travel to School Roadmap 2023-2030 initiatives.

A national active transport policy framework should not only prioritise infrastructure but also consider broader social-ecological factors including policy and regulation, individual attitudes and beliefs, and our social norms and shared values. Social-ecological models are used widely in health-related disciplines and behavioural sciences and recognise the variety of factors influencing an individual's behaviour. This approach is being used in WA to support the uptake of active transport and has been used by the national Office of Road Safety to develop the national road safety strategy[8].

Public transport

Despite more public transport services, including the rollout of the High Frequency Bus services in 2008 and 2014 and completion of the Airport Link in 2022, the number of trips taken per person in Perth has been declining when assessed as a proportion of population growth. In 2011/12, the number of trips per person was 83 per year, compared to only 53 in 2022/23. The relationship between boardings and population in Greater Perth is shown in Figure 1.

[5] Parliament of Western Australia (2023). Parliamentary Debates – Forty-first Parliament, First Session 2023. Retrieved from:
https://www.parliament.wa.gov.au/Hansard/hansard.nsf/0/101BCFCE1D34D10848258A47002A523B/$file/C41%20S1%2020231010%20All.pdf
[6] Main Roads Western Australia (2023). Main Roads Annual Report 2023 - Our Finances. Retrieved from: https://annualreports.mainroads.wa.gov.au/AR-2023/performance/our-finances.html
[7] UN Environment (2016). Global Outlook on Walking and Cycling. Retrieved from: http://www.spokes.org.uk/wp-content/uploads/2010/04/1610-UNEP-20-of-budgets-globalOutlookOnWalkingAndCycling.pdf
[8] National Road Safety Strategy (n.d.). Fact sheet: Social model approach to road safety. Retrieved from: https://www.roadsafety.gov.au/nrss/fact-sheets/social-model-approach
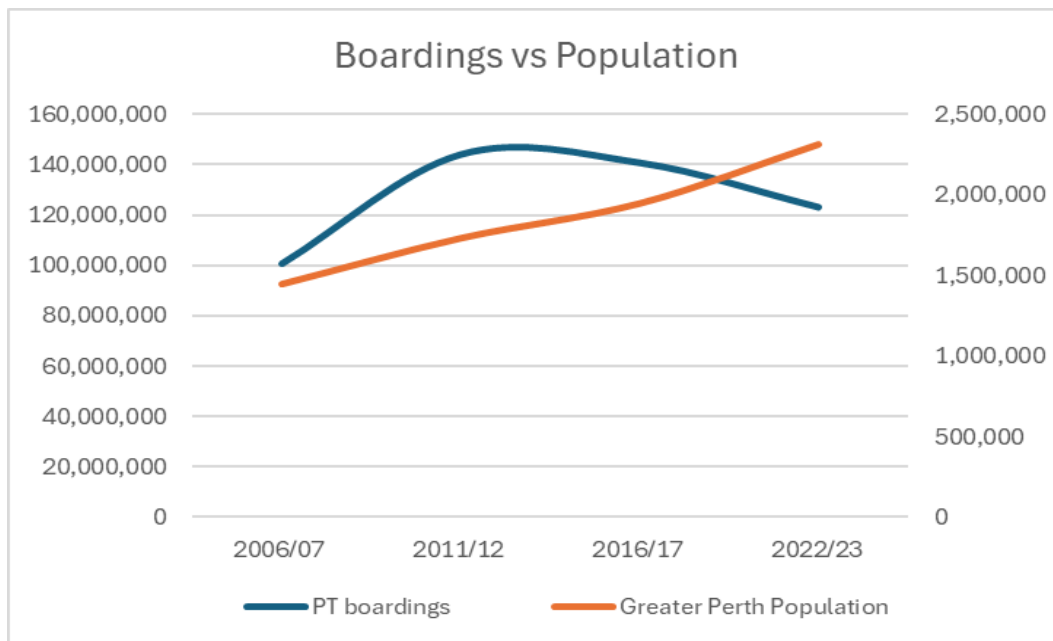
Figure 1 PTA boardings compared to Greater Perth population (source: PTA, ABS, Profile ID)

Consistently over the past five years, RAC members have identified their main barriers for not using public transport more often are availability (it doesn't go where they need it to go, or it is not frequent enough), needing the car (e.g. for work, other journeys, to carry items), and the time it takes for trips is too long[9]. **To increase ridership, any national policy framework should make convenience the primary outcome, addressing the current barriers to uptake while also taking action to make the public transport system more equitable, reliable, and affordable.** In addition, these outcomes should, as with active transport, be considered through the lens of a social-ecological model to support behaviour change.

There are a variety of policy and infrastructure-based initiatives which can increase public transport ridership. Most relevant to the role of the Australian Government in terms of supporting significant state infrastructure projects, **RAC would like to see funding put towards:**

- **a program to optimise Perth's heavy rail system (including lengthening platforms on the Midland/Fremantle/Armadale lines to accommodate 6-car train operations).**
- **a mid-tier rapid transit network, prioritising connections between the University of Western Australia/Queen Elizabeth II Medical Centre and Canning Bridge (via the CBD and Bentley/Curtin), and also between Scarborough Beach/Stirling to Glendalough and onto the Perth CBD.**

Connection of strategically important centres via a high-quality transit network supports the basic mobility needs of the community, contributes to social equity goals, supports reduced vehicle ownership, and facilitates more efficient land use development outcomes such as well-planned infill development[10].

More broadly, to reduce emissions from the public transport fleet, the ongoing investigation, trialling, and implementation of refuelling infrastructure to support a public transport fleet that uses the most environmentally sustainable energy sources (such as green hydrogen) is essential.

Passenger (light) vehicles

Reducing vehicle kilometres travelled, whether through reducing the need to take trips altogether (*avoid*), or enabling Australians to use active and public transport more (*shift*), are undoubtably the fastest and

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[9] RAC (2020-24). Member Priorities Tracker - Public Transport (unpublished). In 2024 alone there were 475 respondents across WA Age, gender, and location sampling quotas were applied, and data has been post-weighted to be representative of RAC's membership (which is broadly consistent with the WA population profile) – the margin of error at total sample level is +/-4.5% at the 95% confidence level.
[10] Victoria Transport Policy Institute (2024). Evaluating Public Transit Benefits and Costs – Best Practices Guidelines. Retrieved from: https://www.vtpi.org/tranben.pdf

most impactful ways to reduce emissions. For those trips that cannot be removed or substituted, Australians must be enabled to undertake them in low and, ideally, zero emissions vehicles (*improve*). While currently there is limited potential for further reducing emissions from internal combustion engine (ICE) vehicles, RAC welcomes the Australian Government's announcements to introduce mandatory fuel efficiency standards for new vehicles from January 2025, and *improve* fuel quality and tighten noxious emissions standards to Euro 6d from December 2025.

According to RAC members, 45 per cent would consider a hybrid for their next purchase and 33 per cent would consider an EV – that's compared to just 24 per cent for petrol vehicles and 16 per cent for diesel. Notwithstanding any increase in the supply of low and zero emissions vehicles which is expected to result from the NEVS and NVES, it is still imperative to ensure known barriers to purchase are reduced. For RAC members who wouldn't consider an EV (but would consider a hybrid) for their next purchase, cost is the major barrier (indicated by 62 per cent of respondents) and on average these members said they'd be willing to spend $7,640 extra (than a petrol or diesel vehicle) to buy one[11]. While the Consultation Roadmap notes it's expected that globally EVs will reach sticker price parity with ICE vehicles between 2025 and 2029, to accelerate uptake particularly in the near term, **the Australian and WA governments should scale-up incentives and taxation exemptions and subsidies, reflective of the reduced levels of emissions and the comparatively higher cost of purchase. At a national level, Luxury Car Tax, Goods and Services Tax, Fringe Benefits Tax treatments and vehicle customs duties should be considered. To encourage greater uptake by those that drive the most, incentive schemes should be informed by willingness to pay[12] and consumer choice modelling[13].**

The second most commonly cited barrier by RAC members to purchasing an EV is access to charging infrastructure. At a national level, Commonwealth Scientific and Industrial Research Organisation (CSIRO) modelling suggests that EVs[14] could account for just over 52 per cent of new passenger vehicle sales and almost 15 per cent of the total vehicle fleet in Australia in 2030[15]. **Given the anticipated uptake of EVs, urgent action and additional investment is needed to fill network gaps and install charging infrastructure in the areas where it is, and will be needed, most.** To maximise coverage and achieve equitable access for communities (particularly in regional locations), government intervention is needed to address any failings of the market. To ensure the ongoing security, reliability, and efficiency of our power system during the transition, the Australian and WA governments should continue to assess the existing capabilities of the network and take action to accommodate future demand, and work with industry to accelerate the integration of clean energies into the grid.

Not only will these key actions reduce barriers to uptake, they may also reduce the likelihood of current EV owners returning to ICE vehicles. McKinsey & Company's *McKinsey Mobility Consumer Pulse (2024)* report has shown that 49 per cent of the Australian EV owners surveyed indicated they'd be very likely to switch back to an ICE vehicle – globally, the top reasons were that public charging infrastructure was not yet good enough for them, that the total costs of ownership were too high, and that driving patterns on long distances trips were too impacted[16].

As acknowledged in the Consultation Roadmap, while electrification will be the main pathway to reducing light vehicle emissions, several other technologies and supporting actions can contribute to

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[11] RAC (2023). Member Priorities Tracker - Sustainability (unpublished). 526 respondents across WA. Age, gender, and location sampling quotas were applied, and data has been post-weighted to be representative of RAC's membership (which is broadly consistent with the WA population profile) – the margin of error at total sample level is +/-4.3% at the 95% confidence level.

[12] The maximum price a customer is willing to pay for a product or service. Willingness to pay is typically represented by a dollar figure or, in some cases, a price range. It can be affected by factors such as demographics, customer behaviour, the economy etc.

[13] Consumer choice modelling is designed to predict the likelihood of a customer selecting one product over alternatives. It is used to measure the value a customer places on particular changes in a product and helps marketers decide what product modifications will draw the most customers.

[14] Includes battery electric vehicles; plug-in hybrid vehicles; and fuel-cell electric vehicles.

[15] Commonwealth Scientific and Industrial Research Organisation (2023). Electric vehicle projections 2023: update to the 2022 projections report. Retrieved from: https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2023/2024-forecasting-assumptions-update-consultation-page/csiro---2023-electric-vehicle-projections-report.pdf?la=en

[16] McKinsey & Company (2024). McKinsey Mobility Consumer Pulse – Media Presentation (June 2024). Retrieved from: https://executivedigest.sapo.pt/wp-content/uploads/2024/06/Mobility-Consumer-Pulse-2024_Overview.pdf

decarbonisation. **Governments must encourage investment in low carbon automotive technologies** for example, green hydrogen fuelled transport.

Beyond tail-pipe emissions, vehicle end-of-life reuse, recycling, and disposal presents a significant opportunity. For example, Belgium has mandatory requirements for the recycling of end-of-life vehicles, including the amount of mass that needs to be captured from the recycling process. A recent report has found that in Belgium, on average more than 97 per cent of a vehicle can be recovered and recycled[17]. The European Union (EU) has also introduced new regulations which will ensure that, in the future, batteries have a lower carbon footprint, use minimal harmful substances, need less raw materials from non-EU countries, and are collected, reused, and recycled to a high degree[18]. It is positive that the Australian Government has committed funding towards developing a vehicle stewardship scheme and has recognised the importance of this within the NEVS and *National Battery Strategy*. **Government and industry must urgently *improve* vehicle and battery recycling and disposal, with the ultimate intent of achieving a circular economy to strengthen the resilience and sustainability of automotive supply chains and reduce primary resource requirements.**

Measuring success

In addition to the success measures suggested in the Consultation Roadmap, **governments should set targets for different modes of travel.** To track progress towards these targets, states and territories should be required to collect and make public a broader range of data relating to all modes of transport.

As noted in the Consultation Roadmap, the success of the Roadmap and Action Plan will ultimately be judged by the contribution of the transport sector to Australia's overall decarbonisation progress and the final success measures and metrics will only be determined after feedback on the Consultation Roadmap has been received. **RAC submits that the action plan and evaluation framework should be publicly released, and outline specific measures of success, actions, timeframes, and responsible agency(s), which link back to the Roadmap and Action Plan's, as well as the broader Net Zero Plan's, goals, and objectives.** This will enable effective implementation and monitoring of progress while strengthening accountability and transparency. RAC supports the proposed annual progress reports on the Roadmap and Action Plan being made public and feels the three to five year timeframe for review is appropriate given the general rate of change of technology.

Conclusion

The path to net zero will be complex. While it may not be possible to *fully* decarbonise transport and the associated infrastructure, it is imperative that all levels of government, sectors of the economy, and industry stakeholders and community, are genuinely engaged in the development and delivery of the Roadmap and Action Plan and broader Net Zero Plan. To accompany our journey to net zero and ensure the best possible decarbonisation initiatives are implemented to improve our air quality, we also need to understand any impacts beyond carbon. Improved local air quality monitoring, covering a broad range of pollutants, is necessary to provide richer data that aids decision making and increases community understanding of the health and environmental impact of transport emissions.

We trust RAC's submission is useful in preparing the Roadmap and Action Plan. In support of our submission please refer to our Public Policy, State and Federal Budget submissions, and RAC's previous submissions and publications at https://rac.com.au/about-rac/advocating-change/reports.

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[17] Febelauto (2023) Key figures. Retrieved from: https://www.febelauto.be/jaarverslag2022/kerncijfers-afgedankte-voertuigen.html
[18] European Commission (2023). Circular economy: new law on more sustainable, circular and safe batteries enters into force. Retrieved from: https://environment.ec.europa.eu/news/new-law-more-sustainable-circular-and-safe-batteries-enters-force-2023-08-17_en