# RAC State Budget Submission 2025-26

Priorities for a safer, sustainable and connected WA



RAC is a voice for over 1.3 million Western Australians. Since our foundation in 1905, RAC has existed to be a driving force for a better WA by championing change that will create a safer, sustainable and connected Western Australia.

## Purpose

The driving force for a better WA.

## Vision

2030: A safer, sustainable and connected future for Western Australians.

## **Mission**

Delivering great member services and experiences, while inspiring positive community change that makes life better in WA.

## RAC State Budget Submission 2025-26

# Priorities for a safer, sustainable, and connected WA

The 2025-26 State Budget is an opportunity to fund critically important programs and projects to save thousands of lives and serious injuries, reduce harmful vehicle emissions and better connect Western Australians. These initiatives will also create thousands of jobs and help safeguard WA's productivity and liveability into the future.

#### RAC's five priorities for the 2025-26 State Budget are:

- 1. Investing in low-cost safety treatments on country roads, building on the success of the Regional Road Safety Program but with a broader focus that also addresses the local government road network.
- 2. Enabling local governments to work with Main Roads WA to determine and then implement safer speed limits at scale across their networks.
- 3. Expediting the delivery of cycling infrastructure and enhancing streets and places for active travel.
- 4. Freezing motor vehicle licence (registration) fees and public transport fees for three years to make the cost of transport more affordable.
- 5. Scaling up electric vehicle charging infrastructure and extending financial support to accelerate the transition to sustainable vehicles.

## **Our key priorities**

### 1. Low-cost safety treatments on country roads

#### The challenge:

- Over five years, more than 500 people have been killed and over 2,750 seriously injured on WA's regional roads<sup>1</sup>.
- Regional WA has a fatality rate of 13.4 road deaths per 100,000 population, which is significantly higher than the WA and national averages of 5.5 and 4.8 road deaths per 100,000 people in 2023, respectively<sup>2</sup>. While other states have higher fatality rates in regional areas than in metro areas, WA's regional fatality rate is particularly high.
- Much of the regional road network is unforgiving of mistakes, with high-speed two-way traffic, roadside hazards such as trees and a lack of safety features.
- Almost half of deaths and serious injuries in regional WA occur on local government managed roads (accounting for approximately 300 deaths and serious injuries each year)<sup>3</sup>, meaning that both state and local roads need to be improved to deliver road safety targets.
- Infrastructure Australia has prioritised poor quality parts of Australia's regional road network<sup>4</sup> and more specifically single vehicle, run-off road crashes in WA<sup>5</sup>, as issues of national significance.

#### The opportunity:

The Regional Road Safety Program (RRSP) is a landmark WA Government initiative delivering effective, low-cost safety treatments such as sealing shoulders, installing audible edge lines, medians and/or centre lines. The RRSP, announced by the Government in August 2019<sup>6</sup>, was originally costed at \$900 million and modelled to reduce regional road trauma by 60 per cent. To date, over 9,000km of road has been treated and around 10,000km is to be completed by mid-2025. Importantly, an additional \$20 million was recently committed by the WA Government to expand the RRSP to local government roads.

RAC has welcomed the funding, but it is critical the program is rolled out in full (around 14,000km<sup>7</sup>), so that the safety benefits are realised across the whole state regional network.

Early evidence indicates that the RRSP is having a positive impact<sup>8</sup>. Crash reduction analysis (to December 2022), which was undertaken across 163 Regional Road Safety Program projects,

https://www.infrastructureaustralia.gov.au/map/regional-road-network-safety-improvements (accessed 3 September 2024).

initiative-20190801 (accessed 7 November 2023).

https://www.wa.gov.au/government/publications/road-safety-council-report-activities-2021-2022 (accessed 17 September 2024). <sup>8</sup> Main Roads WA. (2023). Success in Regional Road Safety Program. Retrieved from: https://annualreports.mainroads.wa.gov.au/AR-2023/welcome/our-stories/success-in-regional-road-safety-program.html (accessed 24 September 2024).

<sup>&</sup>lt;sup>1</sup> Road Safety Commission (2024). Western Australian Road Fatalities and Serious Injuries 2023. Retrieved from:

https://www.wa.gov.au/system/files/2024-09/ksi-report-western-australia-2023.pdf (accessed 24 September 2024). <sup>2</sup>Fatalities based on Road Safety Commission Western Australian Road Fatalities 2023 report (which adopts WA Police boundaries) https://www.wa.gov.au/system/files/2024-02/rsc-report-preliminary-summary-of-fatalities-2023.pdf. Population statistics based on population estimates by ABS remoteness area, 2023 https://www.abs.gov.au/statistics/people/population/regional-population/latestrelease#western-australia

<sup>&</sup>lt;sup>3</sup> Based on analysis of WA crash data provided by Main Roads WA.

<sup>&</sup>lt;sup>4</sup> Infrastructure Australia (2022). Regional road network safety improvements. Retrieved from:

<sup>&</sup>lt;sup>5</sup>Infrastructure Australia (2023). Regional and rural WA road network safety improvements. Retrieved from:

https://www.infrastructureaustralia.gov.au/map/regional-and-rural-wa-road-network-safety-improvements (accessed 3 September 2024). <sup>6</sup> WA Government (2019, 1 August). Federal backing sought for WA road safety initiative [Media statement]. Retrieved from: https://www.wa.gov.au/government/media-statements/McGowan-Labor-Government/Federal-backing-sought-for-WA-road-safety-

<sup>&</sup>lt;sup>7</sup> WA Government (2023). Road Safety Council – Report on Activities 2021-22. Retrieved from:

indicated a 50 per cent reduction in fatalities and a 35 per cent reduction in serious injuries when compared to the average of the five years prior. In the four years since the program commenced, there has been a 16 per cent reduction in fatal and serious injuries on state regional roads compared with the five years prior to the program commencing, whereas there has only been a 4 per cent reduction on local regional roads.

Local governments manage around 26,000km of sealed regional roads<sup>9</sup>, many of which would not be eligible for RRSP treatments due to having a narrow road seal and/or lack of line marking<sup>10</sup>. There is a need for a new low-cost program, akin to the RRSP, but tailored to local government roads.

In late 2022, RAC commissioned the National Transport Research Organisation to develop a business case to seek funding to improve the safety of sealed, high speed local government roads in WA. The WA Local Government Association and Main Roads WA were project partners, supporting the project through: a funding contribution; active participation in the project working group; and a joint commitment to use the project deliverables to improve road safety outcomes.

The review identified 8,208km across 439 local government roads in need of urgent upgrades using criteria including: high-speed limit (90km/h or more) sealed roads; routes providing a regionally significant function<sup>11</sup>; roads with a 'high' crash rate<sup>12</sup>; and high-speed peri-urban roads identified by Main Roads WA. The proposed treatments include lane widening, centrelines, edge lines, sealed shoulders, audio tactile line markings, wide centreline treatments and hazard removal/protection.

The impact of the local roads program has been assessed using Australian Roads Assessment Program (AusRAP)<sup>13</sup> and Main Roads WA crash reduction factors<sup>14</sup>. The program resulted in the AusRAP Star Rating Score reducing from 38.4 before the countermeasures to 29.1 after, with Star Rating improvements demonstrated for 950km of road and the number of km of road rated 2 stars or above increasing from 1,230km to 2,002km. Most importantly, the investment will realise an estimated reduction of 138 fatalities and 489 serious injuries over a 30-year lifespan.

Funding these programs will assist with the delivery of *Driving Change: A Road Safety Strategy for Western Australia 2020–2030 (Driving Change)* and the *National Road Safety Strategy 2021-30,* which have both identified making regional roads safer a priority to reduce road trauma. In addition, they respond to Infrastructure Australia's priority listing: *Regional Road Network Safety Improvements,* and also strongly align with other priority listings, including *Regional and Rural WA Road Network Safety Improvements,* and *Road Access Improvements to Remote WA Communities.* 

#### RAC calls on the WA Government to:

- Ensure that the existing Regional Road Safety Program is fully funded and delivered.
- Co-fund with the Australian Government a new \$552 million program applying low-cost safety treatments to over 8,200km of high speed sealed local government roads to save hundreds of lives and serious injuries.

<sup>&</sup>lt;sup>9</sup> Western Australian Local Government Association (2022). Report on Local Government Road Assets & Expenditure 2020-2021. Retrieved from: https://walga.asn.au/policy-advice-and-advocacy/infrastructure/roads/report-on-local-government-road-assets-and-expendi.aspx (accessed 7 November 2023).

<sup>&</sup>lt;sup>10</sup> Shoulder sealing and audible line treatments can only be applied to roads that already have centre lines and edge lines.

<sup>&</sup>lt;sup>11</sup> As identified in Roads 2040. See: https://walga.asn.au/policy-advocacy/our-policy-areas/infrastructure/roads/roads-2040-regional-road-development-strategies

<sup>&</sup>lt;sup>12</sup> Two or more mid-block KSI crashes or one or more mid-block KSI crashes and 5 or more mid-block crashes in total. Only mid-block crashes were considered since the mass-action nature of the treatments targeted mid-block crash types, predominantly run-off-road and head-on crashes.

<sup>&</sup>lt;sup>13</sup> AusRAP measures the level of safety built into a road based on its existing design and features.

<sup>&</sup>lt;sup>14</sup> A Crash Reduction Factor (CRF) is the percentage reduction in crashes resulting from the implementation of a treatment or countermeasure.

### 2. Network wide speed limit reviews for local government roads

#### The challenge:

- Travel speed affects reaction time and braking distance: With less time to react to hazards, driving at higher speeds increases both the likelihood of a crash and the impact speed if there is a crash. The human body is fragile and can only tolerate a certain amount of force, meaning that impact speed is arguably the most influential factor determining crash outcomes.
- Speed limits have historically reflected typical travel speeds rather than the human body's ability to tolerate the energy released during a crash. This means that most of them do not align well with the Safe System principles committed to by the WA Government in its state road safety strategy 2021-2030: *Driving Change*.
- Speed limit reductions have also traditionally been set on a case-by-case basis and considered at the road rather than network level, which limits opportunities for a more consistent approach.
- The time and resources required to undertake network wide speed limit reviews, coupled with the cost of purchasing and installing signage, are barriers to implementing safer speed limits at-scale, particularly if local governments are required to pay for signage.
- Driving Change identifies safe travel speeds as a priority and the strategy's targets (50-70 per cent reduction in people killed and seriously injured by 2030) are largely predicated on speed limit reductions<sup>15</sup>. However, the safer speed actions within the 2021-2023 action plan are limited and progress has been modest we need to act now in order to meet the 2030 targets.

#### The opportunity:

Speed limits should reflect the fragility of the human body and its ability to tolerate force in the event of a crash. Even the safest vehicles, road designs and the presence of proven, and often costly, road safety treatments are sometimes not enough to save lives and prevent the life-changing injuries that occur from crashes at higher speeds. It's also not feasible to wait for the billions in funding that would be required to upgrade local government roads to make them safer for the speeds drivers currently travel at.

Recognising the importance of speed reforms, *Driving Change* identified actions for 2021-23 relating to working with local governments to identify and implement safer speeds in local areas (Action 27).

Since June 2022, the City of Busselton, Shire of Augusta Margaret River and RAC, with support from Main Roads WA, have been working on a Safer Speeds Trial Project (the Trial), to test a new approach to assessing speed limits on local government roads within the Trial area, focusing on harm minimisation and analysing roads in a holistic, area-wide way, and ultimately create a Blueprint for Safer Speeds.

The design of the Trial has involved reviewing network data including traffic, speed, crash history, movement and place, and community nominations alongside a literature review of best practice speed limit setting. A set of principles for speed zoning, prioritising harm minimisation, were agreed to and helped guide the proposed speed limit reductions. Currently, there are many examples of local roads with vastly different risk profiles, but which have the same speed limit.

<sup>&</sup>lt;sup>15</sup> Road Safety Commission (2019). Imagine Zero: Consultation Paper. Retrieved from: https://communityconnect.rsc.wa.gov.au/driving-change (accessed 16 September 2024).

The Blueprint will provide a process for an approach to speed limit setting across a wide and varying road network and be able to be replicated for other local government areas. Further, early learnings from the Trial have highlighted that network wide assessment and implementation of new speeds and speed limit signage must be sufficiently resourced.

#### **RAC calls on the WA Government to:**

• Establish, fund and resource a \$5 million per year program led by Main Roads WA that enables local governments to assess their road network speed limits holistically and then implement safer speed limits.

## 3. Completion of the Long-Term Cycle Network within a decade

#### The challenge:

- In 2022, the Australian Government legislated net zero greenhouse gas emissions by 2050<sup>16</sup>. Transport is currently the third largest source of greenhouse gas emissions, and without action will be Australia's highest emitting sector by 2030<sup>17</sup>. WA's population is forecast to grow by 21 per cent, to just over 3.57 million, by 2036<sup>18</sup>, which will increase trips across the network. Most trips are currently made by car. Continuing to build and expand roads is incompatible with net zero goals<sup>19</sup> and will not solve traffic congestion.
- Active travel plays a fundamental role in achieving net zero by 2050<sup>20</sup>, but current rates of walking and riding remain low, even for short trips<sup>21</sup>. Around 4.2 million car trips are made each day in Perth and 2.8 million of these are under 5km<sup>22</sup>. According to RAC data, 48 per cent of car trips in Perth made between June 2023 and June 2024 were under 5km in distance and 10 per cent were under 1km<sup>23</sup>. Despite clear evidence of latent demand<sup>24</sup>, there has been little change to mode share for active travel<sup>25</sup>, highlighting the need for a step change in investment.
- RAC member sentiments point to high levels of dissatisfaction with active transport infrastructure where fear of sharing the roads with motorists is the main barrier to cycling more often<sup>26</sup>. Western Australians want more investment in off-road and shared path cycling infrastructure and projects to make local streets safer for people riding a bike<sup>27</sup>.
- Infrastructure Australia notes that the absence of high-quality active transport infrastructure forces people to rely on cars, which raises serious concerns relating to equity, inclusion, urban livability and health<sup>28</sup>. While the Australian Government announced a \$100 million National Active Transport Fund in 2024 and the WA Government proposes to invest an average of \$78 million each year between 2024 and 2028, this amount is inadequate to achieve widespread mode shift. The WA Government's planned annual investment in active travel infrastructure is only around 2 per cent of the 2022-23 combined capital expenditure of Main Roads WA, Public

<sup>23</sup> RAC (2024). RAC Go App Data (unpublished) Total of 2,908 users.

<sup>&</sup>lt;sup>16</sup> Department of Climate Change, Energy, the Environment and Water (2024). Climate Change Act 2022. Retrieved from: <u>https://www.legislation.gov.au/C2022A00037/latest/text</u> (accessed 6 September 2024).

<sup>&</sup>lt;sup>17</sup> Department of Climate change, Energy, the Environment and Water (2024). Transport and Infrastructure Net Zero Consultation Roadmap. Retrieved from: <u>https://consult.dcceew.gov.au/transport-and-infrastructure-net-zero-consultation-roadmap</u> (accessed 6 September 2024).

<sup>&</sup>lt;sup>18</sup> Western Australian Planning Commission (2024). Western Australia's Population Expected to Top 3.5 million people by 2036. Retrieved from: <a href="https://www.planning.wa.gov.au/news-and-media-statements/western-australia-s-population-expected-to-top-3.5-million-people-by-2036#:~:text=The%20State's%20population%20will%20reach,population%20will%20continue%20to%20increase">https://www.planning.wa.gov.au/news-and-media-statements/western-australia-s-population-expected-to-top-3.5-million-people-by-2036#:~:text=The%20State's%20population%20will%20reach,population%20will%20continue%20to%20increase</a> (accessed 19 September 2024).

 <sup>&</sup>lt;sup>19</sup> Australian Institute of Traffic Planning and Management (2024). The Path to Net Zero: Decarbonising Australia's Transport System. Retrieved from: <u>aitpm-decarbonisation-policy-issues-paper-consultation-final-09-08-2024-wfiwpjexhsaa.pdf</u> (accessed 27 August 2024).
 <sup>20</sup> Department of Climate change, Energy, the Environment and Water (2024). Transport and Infrastructure Net Zero Consultation Roadmap. Retrieved from: <u>https://consult.dcceew.gov.au/transport-and-infrastructure-net-zero-consultation-roadmap</u> (accessed 6 September 2024).

<sup>&</sup>lt;sup>21</sup> Department of Transport (2021). The declining rate of walking cycling to school in Perth. Retrieved from:

https://www.transport.wa.gov.au/mediaFiles/active-transport/AT\_P\_Declining\_Rate\_walking\_cycling\_to\_school\_in\_Perth.pdf (accessed 6 September 2024).

<sup>&</sup>lt;sup>22</sup> Infrastructure Australia (2022). Perth Active Transport Improvements. Retrieved from:

https://www.infrastructureaustralia.gov.au/map/perth-active-transport-improvements (accessed 30 August 2023).

<sup>&</sup>lt;sup>24</sup> Department of Transport (2023). People's Pulse Report 2022-23. Retrieved from: <u>https://www.transport.wa.gov.au/mediaFiles/active-transport/AT\_P\_PeoplesPulseReport\_ActiveTravelCommunityInsights\_2022\_23.pdf</u> (accessed 24 September 2024).

<sup>&</sup>lt;sup>25</sup> ABS data for ten SA2 suburbs between 2011- 2021 assessing proportion of car and public transport trips.

<sup>&</sup>lt;sup>26</sup> RAC (2023). Member Priority Tracker: Active Travel (Unpublished) Total of 724 responses. Data has been post-weighted to be representative of RAC's membership which is broadly consistent with the WA population profile.

<sup>&</sup>lt;sup>27</sup> RAC (2023). RAC Member Priorities Tracker: Cycling. Retrieved from: <u>https://rac.com.au/about-rac/advocating-change/reports/member-priorities-tracker</u> (accessed 6 October 2023).

<sup>&</sup>lt;sup>28</sup> Infrastructure Australia (2021). Reforms to meet Australia's future infrastructure needs - 2021 Australian Infrastructure Plan. Retrieved from: <u>https://www.infrastructureaustralia.gov.au/2021-australian-infrastructure-plan-implementation-and-progress/recommendation-4.3</u> (accessed 24 September 2024).

Transport Authority, and Department of Transport<sup>29</sup>.

- Cycling infrastructure is often funded as part of a road project, meaning that it does not always align with where it is most needed. While much of the network along rail corridors and freeways has been completed, Infrastructure Australia has identified as a priority the need to close gaps, as well as provide much needed infrastructure along major arterials<sup>30</sup>.
- Since the Perth and Peel Long-Term Cycle Network (LTCN) strategy was finalised, \$32.6 million has been provided to local governments for 139km of cycling infrastructure<sup>31</sup>. Based on current and projected rates of funding and construction and that only around 40 per cent of the LTCN has been completed<sup>32</sup>, it will take another 60 years to complete the network<sup>33</sup>.
- As of 2024, the Western Australian Bicycle Network (WABN) Grant Program has a narrow eligibility criterion where the funding stream for the Perth and Peel LTCN is largely only available for primary and secondary routes within 2km of METRONET stations. This program framework predominantly supports commuting trips as opposed to short local trips; it prioritises outer suburbs; and excludes many local governments from accessing funds. The current grant program framework is a shared cost between the WA Government and local governments with funding matched at a 1:1 ratio<sup>34</sup>, which places a significantly greater financial onus on local governments than car-based projects, where funding is available at a 2:1 ratio<sup>35</sup>.

#### The opportunity:

Transitioning short vehicle trips to active travel modes presents a big opportunity. Most people can cycle 5km in 20 minutes. Making it easier for people to travel by active modes reduces emissions, lowers household transport costs, manages congestion, reduces pressure on the health system<sup>36</sup>, and saves on road building and maintenance costs<sup>37</sup>. It increases physical activity, provides opportunities for social connectedness by humanising our streets and places<sup>38</sup>, and

https://www.transport.wa.gov.au/mediaFiles/active-transport/AT\_P\_WABN\_Annual\_Progress\_Report\_2022\_23.pdf (accessed 30 August 2024) and Western Australian Government (2023). WA Communities to Receive More than \$9 million in Bike Path Grants. Retrieved from: https://www.wa.gov.au/government/media-statements/McGowan-Labor-Government/WA-communities-to-receive-more-than-\$9-million-in-bike-path-grants-20230324 (accessed 30 August 2024)

<sup>32</sup> Calculation based on data provided by Department of Transport, Western Australia (2023).

<sup>33</sup> Western Australian Government (2024). New bike network grants to focus on public transport connections. Retrieved from: <u>https://www.wa.gov.au/government/media-statements/Cook-Labor-Government/New-bike-network-grants-to-focus-on-public-transport-connections-20240612</u> (accessed 30 August 2024).

https://www.transport.wa.gov.au/activetransport/wa-bicycle-network-and-grants.asp (accessed 5 September 2024).

<sup>35</sup> Main Roads WA (2022). State Black Spot Program Development and Management Guidelines. Retrieved from:

https://www.mainroads.wa.gov.au/globalassets/technical-commercial/road-safety/black-spot-program/development-and-managementguidelines.pdf?v=49701f (accessed 5 September 2024) *and* Main Roads WA (2020). State Road Funds to Local Government Procedures. Retrieved from: <u>https://www.mainroads.wa.gov.au/globalassets/technical-commercial/local-government-funding/state-road-funds-tolocal-government-procedures.pdf?v=4a8d41 (accessed 5 September 2024).</u>

<sup>&</sup>lt;sup>29</sup> Main Roads WA (2023). Main Roads WA Annual Report 2023. Retrieved from: <u>https://annualreports.mainroads.wa.gov.au/AR-</u> 2023/pdf/MRWA-Annual-Report-2023.pdf (accessed 23 July 2024) *and* Public Transport Authority (2023). Public Transport Authority Annual Report 2022-23. Retrieved from:

https://www.pta.wa.gov.au/Portals/15/annualreports/2023/Public%20Transport%20Authority%20Annual%20Report%202022-23.pdf (accessed 23 July 2024) *and* Department of Transport (2023). Annual Report 2022-23. Retrieved from: <u>2022-23 Annual Report</u> (transport.wa.gov.au) (accessed 7 October 2024).

<sup>&</sup>lt;sup>30</sup> Infrastructure Australia (2022). Perth's Active Transport improvements. Retrieved from

https://www.infrastructureaustralia.gov.au/map/perth-active-transport-improvements (accessed 1 October 2024).

<sup>&</sup>lt;sup>31</sup> Based on WABN reporting for 2022-23, and Media Statements from 2023 for the 2023-24 and 2024-25 grants. Department of Transport (2024). Western Australian Bicycle Network Plan - Annual Progress Report 2022-23 Retrieved from:

<sup>&</sup>lt;sup>34</sup> Western Australian Department of Transport (2024). WA Bicycle Network Grants Program. Retrieved from:

<sup>&</sup>lt;sup>36</sup> Giles-Corti, B., Foster, S., Shilton, T., Falconer, R. (2010). The Co-Benefits for Health of Investing in Active Transportation. Retrieved from: <u>https://www.phrp.com.au/wp-content/uploads/2014/10/NB10027.pdf</u> (accessed 30 August 2024).

<sup>&</sup>lt;sup>37</sup> Commonwealth Department of Infrastructure and Regional Development (2016). Australian Transport Assessment and Planning Guidelines: M4 Active Travel. Retrieved from: <u>https://www.atap.gov.au/mode-specific-guidance/active-travel/5-estimation-of-benefits</u> (accessed 30 August 2024).

<sup>&</sup>lt;sup>38</sup> Cycling Embassy of Denmark (2018). Cycling Recommendations. Retrieved from: <u>https://cyclingsolutions.info/cycling-recommendations/</u> (accessed 21 August 2024).

can improve mental health<sup>39</sup>.

Investing in active travel creates a stronger, more inclusive and sustainable economy by providing travel options for people of all ages and abilities, that are virtually emission free. In 2022, the Australian cycling and e-scooter economy was estimated to have directly contributed \$18.6 billion in economic, health and social benefits, which includes \$3.7 billion in direct value add<sup>40</sup>. International research shows that every kilometre cycled generates \$0.26 whereas every kilometre driven costs society \$0.24<sup>41</sup>.

A continuous and connected, low-stress network is essential for people of all ages and abilities to be able to travel safely, comfortably, and conveniently by active modes<sup>42</sup>. A complete network should not only be made up of paths and off-road facilities, but also the reallocation of space on existing streets, connections across side streets and intersections, and slower speed zones.

Internationally, governments have recognised the value of investing in active travel. The UN 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 (including walking and cycling)<sup>43</sup>.

In Ireland, the parties forming government in 2020 committed 20 per cent of the 2020 transport capital budget per year (€360 million, or \$588 million AUD) to cycling and walking for the fiveyear lifetime of the Government<sup>44</sup>. The Scottish Government recently committed 10 per cent of the transport budget to active travel in 2024-25<sup>45</sup>. In 2021, Paris invested €250 million (\$403 million AUD) across 2021-26 in their aim for all streets to be cyclable by 2026<sup>46</sup>. Their ongoing investment since 2015 has resulted in 11 per cent of all trips made by cycling in 2023 compared with only 3 per cent made in 2010, where cycling trips now outperform driving trips<sup>47</sup>. RAC recommends that the WA Government allocate 10 per cent of its transport capital budget to active transport as an interim step towards a 20 per cent target.

RAC recommends that the funding ratio for the WABN Grants Program for LTCN projects be amended from 1:1 to 3:1. This will firstly incentivise projects by providing a better value proposition than road building and secondly it will better support precinct wide delivery of the LTCN within the means of local government. A higher project value cap for metro and regional projects would also accelerate completion of the LTCN to a more acceptable timeframe than 60 years.

<sup>&</sup>lt;sup>39</sup> Berrie et al (2024). Does Cycle Commuting Reduce the Risk of Mental III-Health? An Instrumental Variable Analysis Using Distance to Nearest Cycle Path. Retrieved from: <u>https://academic.oup.com/ije/article/53/1/dyad153/7529101?login=false</u> (accessed 24 September 2024).

<sup>&</sup>lt;sup>40</sup> We Ride Australia (2023). The Australian Cycling Economy Report – Estimating the Size and Scope of the Australian Cycling Economy in 2022. Retrieved from: <u>https://www.weride.org.au/wp-content/uploads/2023/11/The\_Australian\_Cycling\_and\_e-</u>

scooter\_Economy\_in\_2022\_WeRide\_and\_EY\_2023\_Report\_Final\_web.pdf (accessed 29 August 2024).

<sup>&</sup>lt;sup>41</sup> Institute for Transportation Development and Policy (2022). Making the Economic Case for Cycling. Retrieved from: <u>https://itdp.org/wp-content/uploads/2022/06/Making-the-Economic-Case-for-Cycling 6-13-22.pdf</u> (accessed 24 September 2024).

<sup>&</sup>lt;sup>42</sup> National Association of City Transportation Officials (2017). Designing for All Ages Abilities - Contextual Guidance for High-Comfort Bicycle Facilities. Retrieved from: <u>https://nacto.org/wp-content/uploads/2017/12/NACTO\_Designing-for-All-Ages-Abilities.pdf</u> (accessed 6 September 2024).

<sup>&</sup>lt;sup>43</sup> UN Environment (2016). Global Outlook on Walking and Cycling. Retrieved from: <u>http://www.spokes.org.uk/wp-content/uploads/2010/04/1610-UNEP-20-of-budgets-globalOutlookOnWalkingAndCycling.pdf</u> (accessed 30 September 2024).

<sup>&</sup>lt;sup>44</sup> Programme for Government. (2020). "Our Shared Future". Retrieved from:

https://www.rte.ie/documents/news/2020/06/programmeforgovernment-june2020-final.pdf (accessed 30 September 2024). <sup>45</sup> Transport Scotland. (2023). Observations of Current Active Travel Delivery in Scotland. Retrieved from

https://www.transport.gov.scot/publication/the-ambassador-for-active-travel-s-final-report/part-one/ (accessed 9 October 2024). <sup>46</sup> City of Paris (2021). The Paris Bicycle Plan 2021-2026. Retrieved from: <u>https://www.paris.fr/en/pages/a-new-cycling-plan-for-a-100-bikeable-city-28350</u> (accessed 24 September 2024).

<sup>&</sup>lt;sup>47</sup> City of Paris (2024). Bicycles Outperform Cars in Paris and Its Inner Suburbs. Retrieved from <u>Bicycles outperform cars in Paris and its</u> <u>inner - Ville de Paris</u> (accessed 7 October 2024).

In parallel, the WABN Grants Program eligibility criteria for the Perth and Peel LTCN should be expanded to include schools, activity centres and all train stations, and include funding for local routes. These provide the ideal opportunity to replace short vehicle trips and support a diversity of users and trip purposes.

#### RAC calls on the WA Government to:

- Increase the proportion of the transport capital budget allocated to active transport infrastructure from around 2 per cent to 10 per cent in order to complete the Long Term Cycle Network within a decade.
- Amend the funding structure of the WABN Grants Program for LTCN projects so that for each dollar the local government spends, the WA Government contributes \$3 rather than \$1.
- Expand the WABN Grants Program funding criteria to include all LTCN routes within precincts such as schools, activity centres and all train stations.

## 4. Freezing motor vehicle licence and public transport fees

#### The challenge:

- More than seven in ten RAC members indicate they have acted in the last year to reduce their motoring costs, most commonly reducing the number of trips they take<sup>48</sup>.
- Australians incur a range of transport costs include car loan repayments, fuel, public transport, servicing and tyres, registration, compulsory third party and licensing, insurance and roadside assist. In the WA context, there are two main components to renewing a vehicle licence, namely motor vehicle licence (registration) fees and Motor Injury Insurance (MII) that is designed to cover the cost of injury that a motorist or their vehicle may cause in a crash (covering both compulsory third party and a no-blame catastrophic injury component).
- Perth and Bunbury households spend around 16 per cent of their income on transport, which equates to over \$24,000 per year for Perth households and almost \$23,000 per year for Bunbury households<sup>49</sup>.
- Transport costs are rapidly growing, with the Australian Automobile Association (AAA) indicating a 43 per cent increase<sup>49</sup> from June 2020 to June 2024 in the annual transport costs of a typical Perth household<sup>50</sup>, and a 53 per cent increase over the same time period for a typical Bunbury household.
- Motor vehicle licence (registration) fees have increased by around 70 per cent from 2013/14 to 2023/24, an increase around three times the rate of inflation<sup>51</sup>. These fees were increased again by almost four per cent in the most recent State Budget<sup>52</sup>.
- Public transport spending for Perth households is the third highest spend of household transport budgets, behind only car loan payments and fuel, where the cost of the weekly public transport spend in Perth is 17 per cent, or \$6.55, higher than the Capital City average<sup>53</sup>.
- In the last five years the typical Perth household has paid nearly \$14,000 for public transport. This is at least \$3,300 more than the average figure within Australian capital cities<sup>54</sup>.

https://data.aaa.asn.au/transport-affordability/ (accessed 3 September 2024).

<sup>54</sup> Australian Automobile Association (2024). AAA - Data Reports - Transport Affordability. Retrieved from: <u>https://data.aaa.asn.au/transport-affordability/</u> (accessed 21 November 2024).

<sup>&</sup>lt;sup>48</sup> RAC (2024). Member Priorities Tracker: Cost of Transport (unpublished). 342 respondents. Data has been post-weighted to be representative of RAC's membership which is broadly consistent with the WA population profile.

<sup>&</sup>lt;sup>49</sup> Australian Automobile Association (2024). Transport Affordability Index – Q2 2024. Retrieved from: <u>https://data.aaa.asn.au/transport-affordability</u> (accessed 5 September 2024).

<sup>&</sup>lt;sup>50</sup> Australian Automobile Association (2024). Who is the typical household - AAA - Data Dashboard. Retrieved from: <u>https://data.aaa.asn.au/insights/the-typical-household/</u> (accessed 29 September 2024).

<sup>&</sup>lt;sup>51</sup> RAC analysis of motor vehicle licence (registration) fees in WA based on State Budget papers and ABS data: State government (2024). WA State Budget 20224-25 – Budget Paper No. 3. Retrieved from:

https://www.ourstatebudget.wa.gov.au/2024-25/budget-papers/bp3/2024-25-wa-state-budget-bp3.pdf (accessed 5 September 2024) and Australian Bureau of Statistics (2024). Consumer Price Index, Australia – Transport component of CPI for Perth June 2024. Retrieved from: https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/latest-release#datadownloadshttps://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/latest-release (accessed 5 Sept 2024).

<sup>&</sup>lt;sup>52</sup> State government (2024). WA State Budget 20224-25 – Budget Paper No. 3. Retrieved from:

https://www.ourstatebudget.wa.gov.au/2024-25/budget-papers/bp3/2024-25-wa-state-budget-bp3.pdf (accessed 5 September 2024). <sup>53</sup> Australian Automobile Association (2024). AAA - Data Reports - Transport Affordability. Retrieved from:

#### The opportunity:

Almost seven in ten members believe it is very or extremely important for the government to take action to keep motoring costs down, yet less than one in ten have confidence in government to do this<sup>55</sup>. Eight in ten RAC members believe government action to ensure public transport is affordable is very or extremely important, yet only around one in five have confidence in the government to do this<sup>56</sup>.

RAC welcomed the decision by the WA Government to freeze motor vehicle related fees in 2020-21 and public transport fares from 2020-21 to 2021-22 – proving it can be done. In Queensland, motor vehicle registration fees have not only been frozen since December 2023, but also reduced by 20 per cent as of July 2024 as part of the 2024-25 Queensland state budget. This would see a 12-month registration bill for a private use four-cylinder vehicle reduce by almost \$85<sup>57</sup>. In June 2024, all public transport fares in Tasmania were halved until 30 June 2025 to deliver cost of living relief, reduce congestion, and encourage first time public transport users<sup>58</sup> and in August 2024, the Queensland Government implemented a six-month trial of 50c fares across their public transport network, which has since been committed to by both political parties to be made permanent<sup>59</sup>.

A single car household would have saved almost \$1,160 over the past decade if motor vehicle licence (registration) fees had increased at the rate of inflation<sup>60</sup> and more could have been saved had fee increases been kept below inflation.

The WA Government recently invested an unprecedented level of resources into the METRONET program of new train stations, new train lines, locally constructed trains, technological improvements, as well as planning upgrades for high-capacity signalling, corridors, precinct planning and place-making. It is important to keep public transport costs affordable to capitalise on the momentum of the METRONET investment as well as the level of public interest.

Given the projected \$2.6 billion operating surplus for 2024-25 reported in the latest WA State Budget, there is an opportunity for the WA Government to ensure transport remains affordable by implementing a three-year freeze on increases to motor vehicle registration fees and public transport fares.

#### RAC calls on the WA Government to:

• Commit to making transport in Western Australia more affordable by implementing a three-year freeze on increases to motor vehicle licence (registration) fees and public transport fares.

<sup>59</sup> Australasian Bus and Coach (2024). *50c fares here to stay on Queensland public transport*. Retrieved from:

<sup>&</sup>lt;sup>55</sup> RAC (2024). Member Priorities Tracker: Transport choices and priorities data (unpublished) 577 respondents. Data has been postweighted to be representative of RAC's membership which is broadly consistent with the WA population profile.

<sup>&</sup>lt;sup>56</sup> RAC (2024). Member Priorities Tracker: Transport Choices and Priorities Data (unpublished). 577 respondents. Data has been postweighted to be representative of RAC's membership which is broadly consistent with the WA population profile.
<sup>57</sup> The Queensland Cabinet and Ministerial Directory (2024). More Miles for Jess: Government cuts reap by 20 per cent. Betrieved from

<sup>&</sup>lt;sup>57</sup> The Queensland Cabinet and Ministerial Directory (2024). *More Miles for less: Government cuts rego by 20 per cent*. Retrieved from: <u>https://statements.qld.gov.au/statements/100526</u> (accessed 31 October 2024).

<sup>&</sup>lt;sup>58</sup> Tasmanian Government (2024). *Fares - Access information about public transport fares across*. Retreieved from: *Tasmania*.https://www.transport.tas.gov.au/public\_transport/fares (accessed 21 November 2024).

https://www.busnews.com.au/50c-fares-here-to-stay-on-queensland-public-transport/ (accessed 21 November 2024).

<sup>&</sup>lt;sup>60</sup> Based on the analysis referenced in footnote 51.

## 5. Scaling up Electric Vehicle (EV) charging infrastructure and extending financial support

#### The challenge:

- Tragically, modelling estimates more than 11,100 Australian adults die prematurely each year due to exposure to traffic emissions<sup>61</sup>.
- It's unsurprising therefore, that in 2021, Australia recorded the highest total oxides of nitrogen (NOx) emissions per capita of all OECD countries; its figure of 109kg per person was almost six and a half times the OECD figure<sup>62</sup>.
- As well as people's health, our environment is also impacted, a problem that is only worsening. In 2022, road transport contributed close to 18 per cent of national carbon dioxide equivalent (CO2-e) emissions, with cars alone accounting for almost 9 per cent of national emissions<sup>63</sup>.
- Over the last 30 years, road transport CO<sub>2</sub>-e emissions per person increased in WA by almost 12 per cent, whilst the national average declined by over 6 per cent<sup>64</sup>.
- In 2022, per person, Australia's carbon dioxide (CO<sub>2</sub>) emissions were almost double the Organisation for Economic Co-operation and Development (OECD) figure<sup>65</sup>.
- In 2023, battery electric vehicle (BEV) and plug-in hybrid electric vehicle (PHEV) sales represented 12 per cent of new vehicle sales in Australia, lagging behind the global average of 18 per cent<sup>66</sup>.
- Australia has a high number of EVs per public charging point compared with other countries, at nearly 70 per public charging point as of 2023 (compared with between 10 and 30 in most IEA member countries)<sup>67</sup>, leading to long wait times.<sup>-</sup> Australia has less than 0.5kW of public charging per EV, which is again low compared to other countries<sup>68</sup>.
- Infrastructure Australia has identified the need for more EV fast chargers on national highways as an issue of national significance<sup>69</sup>.
- According to our members who aren't considering an EV for their next vehicle purchase, the top barriers are cost and access to charging infrastructure<sup>70</sup>.

<sup>&</sup>lt;sup>61</sup> University of Melbourne (Melbourne Climate Futures) (2023). *Health Impacts Associated With Traffic Emissions In Australia*. Retrieved from: https://www.unimelb.edu.au/\_\_data/assets/pdf\_file/0006/4498161/Expert-Position-Statement\_Vehicle-emissions\_FINAL.pdf (accessed 24 July 2024).

<sup>&</sup>lt;sup>62</sup>Organisation for Economic Co-operation and Development (2024). OECD Data Explorer. Retrieved from: data-

explorer.oecd.org/vis?lc=en&df%5Bds%5D=DisseminateArchiveDMZ&df%5Bid%5D=DF\_DP\_LIVE&df%5Bag%5D=OECD&df%5Bvs%5D=&av =true&pd=2022%2C2022&dq=OECD%2BOAVG....A&to%5BTIME\_PERIOD%5D=false&vw=tb (accessed 12 September 2024).

<sup>&</sup>lt;sup>63</sup> Department of Climate Change, Energy, the Environment and Water (2024). *Australia's National Greenhouse Accounts*. Retrieved from: https://ageis.climatechange.gov.au/ (accessed 24 July 2024).

 <sup>&</sup>lt;sup>64</sup> Calculated by using emissions in 1993 and 2022 and Australian Bureau of Statistics – National, state and territory population statistics.
 <sup>65</sup> Organisation for Economic Co-operation and Development (2024). Air and GHG emissions. Retrieved from:

https://www.oecd.org/en/data/indicators/air-and-ghg-emissions.html (accessed 3 September 2024).

<sup>&</sup>lt;sup>66</sup> International Energy Agency (2024). *Global EV Data Explorer*. Retrieved from: https://www.iea.org/data-and-statistics/data-tools/global-ev-data-explorer (accessed 24 July 2024).

<sup>&</sup>lt;sup>67</sup> Federal Chamber of Automotive Industries (2023). VFACTs WA Report – New Vehicle Sales December 2022 [subscription].

<sup>&</sup>lt;sup>68</sup> WA Government (2024). Western Australia's Climate Action. Retrieved from: https://www.climateaction.wa.gov.au/wa-climate-action (accessed 3 September 2024).

<sup>&</sup>lt;sup>69</sup>Infrastructure Australia (2019). *National highway electric vehicle fast charging*. Retrieved from:

https://www.infrastructureaustralia.gov.au/map/national-highway-electric-vehicle-fastcharging (accessed 28 October 2022). <sup>70</sup> RAC (2023). *RAC Member Priorities Tracker: Sustainability (unpublished)*. 406 respondents from the Perth and Peel region and 115 from regional WA. Age, gender, and location sampling quotas were applied, and data has been post-weighted to be representative of RAC's membership.

#### The opportunity:

The broad adoption of EVs will reduce harmful vehicle emissions, help reduce reliance on fossil fuels, create employment in a new and developing industry, and reduce the cost of operating a vehicle<sup>71</sup>. Modelling by Aurecon<sup>72</sup> shows only BEVs and Fuel Cell EVs (FCEVs) have the potential to come close to the magnitude of life cycle CO<sub>2</sub>-e reductions<sup>73</sup> needed to meet 'Australia's climate commitments<sup>74</sup>. However, in the shorter term PHEVs can also support the transition towards lower-emission road transport, providing a smaller but significant contribution towards the achievement of Australia's emissions reduction targets while the infrastructure and technology for BEVs and FCEVs continue to develop.

Operating on WA's mixed grid<sup>75</sup>, the life cycle emissions of BEVs are already lower than a comparable petrol vehicle by 55 per cent, and as the electricity mix continues to decarbonise, this gap will increase on a fully renewable grid, the emissions of a BEV would be 86 per cent lower. The life cycle emissions of an FCEV powered by green<sup>76</sup> or grey<sup>77</sup> hydrogen would be 83 per cent or 50 per cent lower on a petrol equivalent, respectively. The life-cycle emissions of PHEVs are lower than a comparable petrol vehicle by 43 per cent.

The Electric Vehicle Strategy for Western Australia<sup>78</sup> has underpinned several initiatives such as: grants for charging infrastructure; a commitment to increase the number of EVs in the government fleet<sup>79</sup>; the WA EV network<sup>80</sup>; and providing \$3,500 rebates for purchasing an electric or hydrogen fuel cell vehicle<sup>81</sup>. However, some of these schemes are due to end including completion of the EV network program during 2024/25 and expiry of the Zero Emission Vehicle (ZEV) Rebate in May 2025.

According to Commonwealth Scientific and Industrial Research Organisation (CSIRO) EV projections for WA's Wholesale Electricity Market (WEM)<sup>82</sup>, the expected scenario<sup>83</sup> is that in 2030 there will be

https://www.dcceew.gov.au/sites/default/files/documents/national-electric-vehicle-strategy.pdf (Accessed18 September 2024) <sup>72</sup> Modifying the International Council on Clean Transport research/modelling for the Western Australia context in 2023. Using average vehicle characteristics and fuel and electricity consumption in real-world driving conditions. Scenarios considered the South West Interconnected System emission factors for 2021 grid mix (which is 0.68kg CO<sub>2</sub>-e/kWh) sourced from Clean Energy Regulator Emissions and Energy Reporting System (EERS) release, and a potential future where only renewable energy is used for electricity supply and hydrogen production.

<sup>&</sup>lt;sup>71</sup> Australian Government. (2023) National Electric Vehicle Strategy. Retrieved from

<sup>&</sup>lt;sup>73</sup> Accounting for the tailpipe emissions, fuel and electricity production, and vehicle manufacturing Assumptions include average vehicle lifetime of 240,000km; fuel economy; and emissions. Inputs include: fuel/electricity production; fuel/electricity consumption; maintenance; and vehicle, hydrogen tank and battery manufacturing.

<sup>&</sup>lt;sup>74</sup> Limiting global warming to below 2°C, preferably below 1.5°C, pre-industrial levels. United Nations Climate Change (2023). *The Paris Agreement*. Retrieved from: https://unfccc.int/process-and-meetings/the-paris-agreement (accessed 11 August 2024).

<sup>&</sup>lt;sup>75</sup> Assumptions based on 2021 grid mix (which is 0.68kg CO<sub>2</sub>-e/kWh). Clean Energy Regulator (2023). *EERS release 2021-22*. Retrieved from: https://www.cleanenergyregulator.gov.au/OSR/EERS/Archived-EERS-releases/EERS-release-2021-22 (accessed 11 August 2023).
<sup>76</sup> Green hydrogen is extracted using a method that does not produce GHG emissions.

<sup>&</sup>lt;sup>77</sup> Grey hydrogen is extracted from natural gas, or methane, typically using steam reformation. Emissions during this process are not captured or stored, and are released into the atmosphere.

<sup>&</sup>lt;sup>78</sup> Government of Western Australia. (2020). *State Vehicle Strategy for Western Australia*. Retrieved from:

https://www.wa.gov.au/system/files/2020-11/State\_Electric\_Vehicle\_Strategy\_for\_Western\_Australia\_0.pdf (accessed 16 September 2024)

<sup>&</sup>lt;sup>79</sup> Department of Transport Western Australia. (2024). Zero Emission Vehicle (ZEV) Rebate. Retrieved from:

https://www.transport.wa.gov.au/projects/zero-emission-vehicle-zev-rebate.asp (accessed 28 September 2024).

<sup>&</sup>lt;sup>80</sup> Department of Water and Environmental Regulation. (2024). *Transitioning to Electric Vehicles (EVs)*. Retrieved from:

https://www.wa.gov.au/service/environment/environment-information-services/transitioning-electric-vehicles-

evs#:~:text=In%20May%202022%2C%20the%20State,eligible%20vehicles%20licensed%20in%20WA. (accessed 30 September 2024).

<sup>&</sup>lt;sup>81</sup>Department of Transport Western Australia. (2024). Zero Emission Vehicle (ZEV) Rebate. Retrieved from:

https://www.transport.wa.gov.au/projects/zero-emission-vehicle-zev-rebate.asp (accessed 25 September 2024).

<sup>&</sup>lt;sup>82</sup> Australian Energy Market Operator (2024). WEM Electricity Statement of Opportunities. Retrieved from:

https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/wem-forecasting-and-planning/wem-electricity-statement-of-opportunities-wem-esoo (accessed 3 September 2024).

<sup>&</sup>lt;sup>83</sup> CSIRO has modelled four scenarios: Exploring Alternatives; Progressive Change; Step Change; and Hydrogen export. It has been noted that the tentative mappings for the 2023 WEM Electricity Statement of Opportunities indicate that Step Change is the expected scenario.

approximately 236,000 passenger BEVs within the SWIS area<sup>84</sup>. International Council on Clean Transport research indicates<sup>85</sup> that to service this many vehicles, at a minimum, around 12,000 workplace, 1,600 DC fast chargers and 8,000 public AC chargers would be required<sup>86</sup> and this would need to be scaled up to service the whole of WA. At a national level, CSIRO's modelling projects that EVs <sup>87</sup> will account for around 52 per cent of new passenger vehicle sales and almost 15 per cent of the total vehicle fleet in Australia in 2030<sup>88</sup>. In a 2023 survey, RAC members identified that the second most effective way for the government to reduce vehicle emissions is to invest in public EV charging infrastructure.

A key learning from operating the RAC Electric Highway<sup>®</sup> is that, for the public to have confidence in using public charging infrastructure, it is critical not only to invest in the chargers themselves but also in amenities that improve comfort and safety while waiting for an EV to charge. This includes lighting and CCTV, as well as access to facilities such as seating, shelters, bins and toilets, and is particularly important in remote locations where stopping to charge a vehicle also doubles as a rest stop for drivers.

The WA Zero Emission Vehicle (ZEV) Rebate has been popular, with 7,840 rebates paid out as of August 2024, leading to an additional \$5.2 million investment to remove the 10,000-application cap and meet all anticipated demand up until May 2025<sup>89</sup>. This scheme needs to be extended or replaced through the scaling up of tax incentives, financial support, and subsidies. By incorporating willingness to pay and consumer choice modelling, incentive schemes should, wherever feasible, cater to those who would otherwise be unable to afford an EV<sup>90</sup>. The Electric Vehicle Council suggests scheme options such as zero-interest loans or lease schemes targeted at low to middle income households<sup>91</sup>. As of 2023, 25 per cent of all new cars purchased in France were EVs<sup>92</sup>, yet the French Government continues to drive this adoption through its EV purchase subsidy and conversion subsidy, with more generous subsidies available for those on low incomes<sup>93</sup>. On the other hand, EVs consist of 24 per cent of car sales in Germany, but sales fell by almost 5 per cent in the first quarter of 2024 following the removal of subsidies at the end of 2023<sup>94</sup>.

#### RAC calls on the WA Government to:

- Extend the ZEV scheme providing a \$3,500 rebate for people who purchase an eligible vehicle for a further two years.
- Commit \$23 million to fund a second phase of the WA EV network program to roll out more public EV chargers and to enhance amenities at existing locations.

<sup>&</sup>lt;sup>84</sup> Modelling covers the South-West Interconnected System project area, and does not include the North-West Interconnected System or regional power.

<sup>&</sup>lt;sup>85</sup> The International Council on Clean Transportation (2021). *Charging Up America: Assessing the Growing Need for U.S. Charging Infrastructure Through 2050.* Retrieved from: https://theicct.org/publication/charging-up-america-assessing-the-growing-need-for-u-s-charging-infrastructure-through-2030/ (accessed 9 October 2023).

<sup>&</sup>lt;sup>86</sup> Infrastructure needs were calculated by the International Council of Clean Transportation (ICCT) (2021) ratios and CSIRO (2024) EV projections.

<sup>&</sup>lt;sup>87</sup> Includes battery electric vehicles; plug-in hybrid vehicles; and fuel-cell electric vehicles.

<sup>&</sup>lt;sup>88</sup> 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 (accessed 3 September 2024).

<sup>89</sup> Supra note- 108

<sup>&</sup>lt;sup>90</sup> RAC. (2024). Inquiry into the transition to electric vehicles RAC response to the Standing Committee on Climate Change, Energy, Environment and Water. Retrieved from: 2024---rac-response-to-the-inquiry-into-the-transition-to-electric-vehicles.pdf (accessed 1 October 2024).

<sup>&</sup>lt;sup>91</sup> International Energy Agency. (2024). *Global EV outlook 2024*. Retrieved from: https://www.iea.org/reports/global-ev-outlook-2024 (accessed 27 September 2024)

<sup>&</sup>lt;sup>92</sup> Supra note- 90

<sup>&</sup>lt;sup>93</sup> Republique Francaise. (2023). *Eco bonus for a car*. Retrieved from: https://www.service-public.fr/particuliers/vosdroits/F36844?lang=en (accessed 2 October 2024).

<sup>94</sup> Supra note-90

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