



Plug it in, change the world: accelerating electric vehicle uptake in lutruwita/Tasmania

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The sectoral decarbonisation plans required by updates to Tasmania's climate legislation provide lutruwita/Tasmania with a possible, practical, and popular opportunity to cut its high transport emissions by switching to electric vehicles and increasing public and active transport uptake. This paper reviews transport decarbonisation across the nation, providing a potential roadmap to reducing transport emissions in lutruwita/Tasmania.

About Climate Tasmania

Climate Tasmania is a group of concerned professionals who have a diverse range of expertise, spanning scientific, legal, economic, health, energy, social and policy aspects of climate change. Our aim is "To provide timely, independent and authoritative advice to Tasmanian business, government and community leaders on climate change and appropriate policy responses."

Details of the members of the Climate Tasmania board and expert advisers are available at www.climatetasmania.org/members/

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About Rachel Hay

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Acknowledgment of Country

We acknowledge the Traditional Custodians of the land on which we live, love and work, the muwinina people of nipaluna/Hobart, and palawa people as the continuing custodians of lutruwita/Tasmania, and extend our respect to their Elders past and present.

This paper uses palawa kani, the language of Tasmanian Aborigines, for place names where possible. Find out more at: <http://tacinc.com.au/pulingina-to-lutruwita-tasmania-place-names-map/>

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Summary

The Tasmanian Government claims that lutruwita/Tasmania has achieved net zero emissions since 2014. However, they admit that the state's continued net zero status is not secured, given the unpredictability in relying on Land Use, Land Use Change and Forestry (LULUCF) to offset our continuing emissions.

In recognition of this, the Tasmanian Government has amended the *Climate Change (State Action) Act 2008*, to legislate a target of net zero emissions by 2030 and require sectoral decarbonisation plans be prepared, including for the transport sector.

There is large potential for decarbonisation by switching to electric vehicles (EVs) and increasing public transport. Transport is Tasmania's second highest emitting sector – 21% of the state's gross emissions. Renewable energy generation and high reliance on private cars means that lutruwita/Tasmania has a larger potential for reducing emissions through EVs than other states. lutruwita/Tasmania is ideally placed for EV uptake – we have high private car usage, shorter than average commuting distances and our compact geography makes it easier to place charging stations at key locations.

Australia Institute research shows that Tasmanians want to transition to EVs. Tasmanians support Government creating a fast-charging network (74%), fully electrifying the state's bus fleets by 2030 (73%), subsidising purchase costs of EVs (73%), discounting registration and stamp duty (68%) and mandatory installation of fast chargers in new apartment blocks (70%).

The Tasmanian Government has already made a rolling start towards electrifying vehicles in lutruwita/Tasmania by waiving stamp duty for road users until 2024 and registration costs for car rental companies until 2023, providing grants for charging stations, committing to make the Government fleet 100% electric by 2030 and supporting electric bus trials.

However, Tasmanian EV uptake is stuck at the starting line. Less than 1% of vehicles are electric and only 3% of vehicle sales in lutruwita/Tasmania in 2022 were electric. Further, public transport and active transport use are low. More needs to be done to incentivise uptake.

Despite this, there were no new programs for vehicle electrification in this year's state budget.

Every other state and territory aside from lutruwita/Tasmania has a strategy document for vehicle electrification. Under these plans, states have set targets for EV sales, waived registration and stamp duties, provided ongoing support to increase fast chargers and raised consumer awareness around the switch to EVs. lutruwita/Tasmania is the only state without a purchase price incentive such as a subsidy, rebate or loans scheme – the most important policy which can be implemented to incentivise uptake.

With transport sector emissions reduction plans in development, there's no better time than now for the Tasmanian Government to put the policies in place to transition to EVs. Based on international and interstate counterparts, this paper outlines possible, practical, and popular policies – providing a potential roadmap to accelerate EV uptake.

Climate Tasmania research recommends that the Tasmanian Government:

1. Create an ambitious sector emission reduction plan for transport, by 2024, which sets a target for decarbonisation and policies to achieve it;
2. Set targets for vehicle electrification to be 100% of all light vehicle sales to be electric by 2030, 100% of new bus purchases to be electric by 2025, 100% of the bus fleet to be electric by 2030 and 30% of new truck sales to be electric by 2030;
3. Provide purchase price incentives such as a registration waiver to all drivers on an ongoing basis, introducing a subsidy or rebate of \$3,000, or loan scheme of \$15,000;
4. Scrap their commitment to introduce the world's worst EV policy, a road user tax;
5. Create the infrastructure needed, by continuing the ChargeSmart Grants program, changing planning laws to support EV charging infrastructure and introducing a grant scheme for innovative solutions to EV implementation;
6. Raising consumer awareness about purchasing EVs;
7. Spending just as much on the electrification of heavy electric vehicles, if not more, than on light passenger vehicles, given their decarbonisation potential;
8. Creating a target for public transport increase, delivered by making services more frequent, cheaper, reliable and accessible; and
9. Creating a target for active transport increase, delivered by improving physical infrastructure and driver education.

Introduction

lutruwita/Tasmania is already seeing the effects of climate change and will continue to experience rising temperatures, changed rainfall, increased storms and erosion, longer bushfire seasons, ocean acidification and rising sea levels.¹

In recognition of the need to mitigate and adapt to the impacts of climate change, the Tasmanian Government has recently amended the *Climate Change (State Action) Act 2008*.² The Act now establishes a net zero emissions target by 2030, a framework for sector-based emissions reductions, the requirement for a state-wide action plan and regular risk assessments.

The creation of sectoral emissions reduction plans that this legislation requires provides the opportunity to prioritise emissions reductions in high emitting sectors, including transport.

The Tasmanian Government has already made a rolling start towards electrifying vehicles in lutruwita/Tasmania, with a number of policies supporting electric vehicle (EV) use. But with less than 1% of vehicles in the state being electric, more needs to be done to incentivise uptake.³ Despite this, there are no new programs for incentivising electric vehicles in this year's state budget. In transitioning to EVs, the Tasmanian Government can learn from its international and interstate counterparts on the targets, financial incentives, infrastructure and consumer awareness needed.

This paper will discuss why transport is the next cab off the rank for decarbonisation in lutruwita/Tasmania, and the policies needed for this transition. It outlines possible, practical, and popular policies and provides a potential roadmap to accelerate EV, public transport and active transport uptake.

¹ Renewables, Climate and Future Industries Tasmania (2021) *What are the projected climate change impacts for Tasmania?*,

https://recfit.tas.gov.au/what_are_the_projected_impacts_for_tasmania#:~:text=Increased%20frequency%20and%20intensity%20of,summer%20days%20and%20more%20heatwaves.

² *Climate Change (State Action) Amendment Bill 2021*

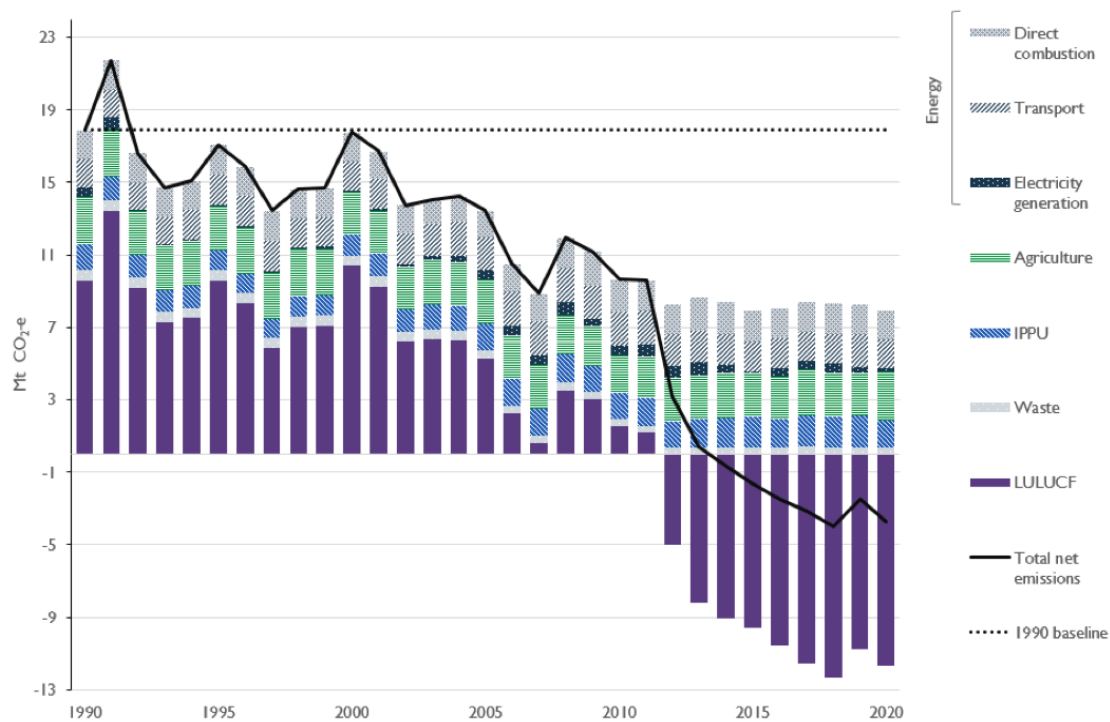
³ Tasmanian Government Transport Services (2023) *Registration & Licensing Statistics As at 31 March 2023*, https://www.transport.tas.gov.au/licensing/general_information/statistics

Transport: the next cab off the rank

Possible

According to the Tasmanian government, lutruwita/Tasmania has achieved net zero emissions since 2014.⁴ Figure 1, below, shows that Tasmania's net zero emissions status has been achieved by offsets from the Land Use, Land Use Change and Forestry (LULUCF) sector, the only sector which is a net carbon sink. In 2020, Tasmania's approximately 8 Mt of carbon dioxide equivalent (CO₂-e) emissions were offset by the approximately 12 Mt CO₂-e that were saved through reductions in forest clearing, reforestation, new plantations and improved cropping practises.⁵

Figure 1: Tasmania's emissions by sector and energy sub-sector - 1990 to 2020



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However, Tasmania's continued net zero status is by no means a sure thing. LULUCF emissions are vulnerable to change from natural events such as bushfires and continued

⁴ Renewables, Climate and Future Industries Tasmania (2022) *Tasmanian Greenhouse Gas Emissions Report 2022*, p. 10, https://recfit.tas.gov.au/__data/assets/pdf_file/0010/369523/Tasmanian_Greenhouse_Gas_Emissions_Report_2022.pdf

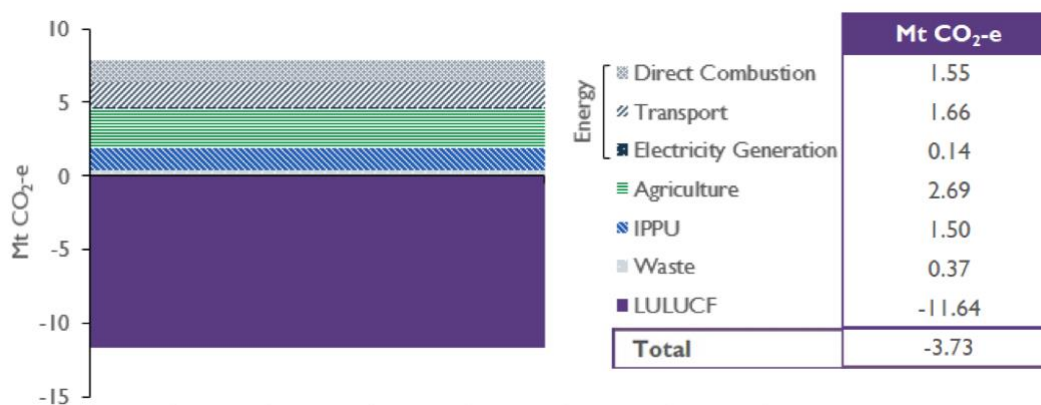
⁵ Tasmanian Policy Exchange (2022) *Tasmanian Greenhouse Gas Emissions Update*, p. 8, https://www.utas.edu.au/__data/assets/pdf_file/0003/1610409/UTAS-GHG-Emissions-Update-2022.pdf

⁶ Renewables, Climate and Future Industries Tasmania (2022) *Tasmanian Greenhouse Gas Emissions Report 2022*, p. 10, https://recfit.tas.gov.au/__data/assets/pdf_file/0010/369523/Tasmanian_Greenhouse_Gas_Emissions_Report_2022.pdf

polluting practises such as land clearing and forestry.⁷ The Tasmanian Policy Exchange has predicted that, from 2030, Tasmania will not be able to achieve net zero emissions because of reductions in carbon sequestration from the LULUCF sector.⁸

Figure 2, below, shows that lutruwita/Tasmania continues to emit in all of its key sectors, except for LULUCF. Transport produces the second largest amount of carbon dioxide equivalent (CO₂-e) emissions by sector in Tasmania: 21% of gross emissions in 2020.⁹ Gross emissions are the total emissions, excluding sequestration from the LULUCF sector. The transport sector includes emissions produced from public, private and commercial vehicles, aviation, shipping and railways.¹⁰ Non-transport energy also produces 21%, while agriculture produces the highest emissions, at 34% of CO₂-e emissions, and industrial processes and product use, 19%. While CO₂-e emissions from waste are continuing to rise, they remain at 5% of Tasmania’s carbon emissions.

Figure 2: Tasmanian emissions by sector and energy sub-sectors – 2020¹¹



Whilst not recorded in the Tasmanian Government’s report, Dr Jennifer Sanger has found that native forest logging in the LULUCF sector was in fact Tasmania’s largest emitter in 2019, at about 4.7 Mt of CO₂-e per year – see figure 3, below.¹²

⁷ Sanger (2022) *Tasmania’s Forest Carbon: From Emissions Disaster to Climate Solution*, p. 11, <https://static1.squarespace.com/static/60b20f09dcfc4f2bd6b0c171/t/63ddce424a52643d2f6008cf/1675480999178/Tasmanias+Forest+Carbon.pdf>

⁸ Tasmanian Policy Exchange (2022) *Tasmanian Greenhouse Gas Emissions Update*, p. 18, https://www.utas.edu.au/__data/assets/pdf_file/0003/1610409/UTAS-GHG-Emissions-Update-2022.pdf

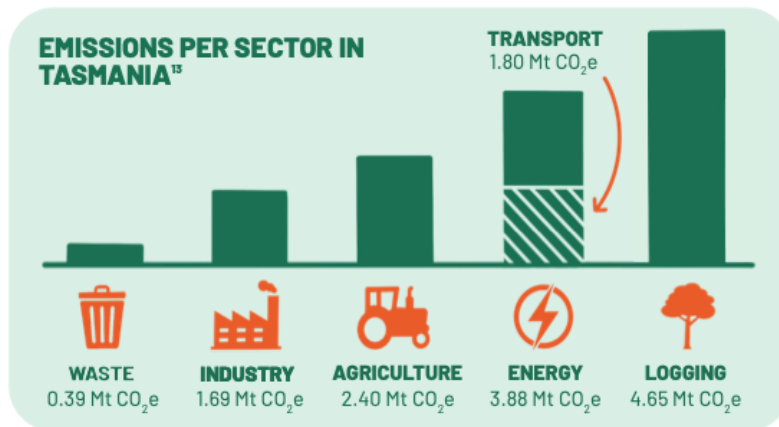
⁹ Renewables, Climate and Future Industries Tasmania (2022) *Tasmanian Greenhouse Gas Emissions Report 2022*, p. 15, https://recfit.tas.gov.au/__data/assets/pdf_file/0010/369523/Tasmanian_Greenhouse_Gas_Emissions_Report_2022.pdf

¹⁰ Ibid, p. 17

¹¹ Ibid

¹² Sanger (2022) *Tasmania’s Forest Carbon: From Emissions Disaster to Climate Solution*, p. 11, <https://static1.squarespace.com/static/60b20f09dcfc4f2bd6b0c171/t/63ddce424a52643d2f6008cf/1675480999178/Tasmanias+Forest+Carbon.pdf>

Figure 3: Emissions per sector in lutruwita/Tasmania¹³



Practical

lutruwita/Tasmania is in the rare position of being able to generate 100% of its energy renewably.¹⁴ Whilst most other Australian states are still decarbonising their energy sectors, lutruwita/Tasmania can turn to the transport sector to reduce emissions, due to the high proportion of renewable energy, particularly hydroelectricity, in the state. The Australian Capital Territory (ACT) is the only other state to achieve 100% renewable energy generation, and is now also focusing on reducing emissions in its transport sector.¹⁵

Tasmania's renewable energy self-sufficiency also has the benefit of meaning that the state has the most emissions reductions to gain in the country by switching to EVs. The possible emissions reduction from electrifying Tasmanian vehicles is 272 g CO₂-e /km, compared to 77g CO₂-e/km for Victoria.¹⁶ In their most recent report, the Intergovernmental Panel on Climate Change said that "electric vehicles powered by low emissions electricity offer the largest decarbonisation potential for land-based transport."¹⁷

Inventor, author, and scientist Saul Griffith argues that lutruwita/Tasmania may be best placed in the world to move towards electrifying everything, given our renewable energy generation.¹⁸ Whilst a larger generation of renewable energy will be needed with the

¹³ Ibid

¹⁴ Tasmanian Policy Exchange (2022) *Tasmanian Greenhouse Gas Emissions Update*, p. 16, https://www.utas.edu.au/__data/assets/pdf_file/0003/1610409/UTAS-GHG-Emissions-Update-2022.pdf
 Tasmanian Policy Exchange (2022) *Tasmanian Greenhouse Gas Emissions Update*, p. 16, https://www.utas.edu.au/__data/assets/pdf_file/0003/1610409/UTAS-GHG-Emissions-Update-2022.pdf. The ACT transport sector makes up 60% of its emissions.

¹⁶ Smit and Kennedy (2022) *Greenhouse Gas Emissions Performance of Electric and Fossil-Fueled Passenger Vehicles with Uncertainty Estimates Using a Probabilistic Life-Cycle Assessment*, pp. 20, <https://www.mdpi.com/2071-1050/14/6/3444>

¹⁷ Intergovernmental Panel on Climate Change (2023) *Synthesis Report on the IPCC Sixth Assessment Report (AR6)*, p. 72, https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf

¹⁸ Peach (2022) *Saul Griffith thinks Tasmania is 'better placed than anywhere in the world' to go fully electric by 2030*, <https://www.examiner.com.au/story/7652873/should-tasmania-go-fully-electric-joe-bidens-former-climate-advisor-thinks-yes/>

increase of EVs, the Tasmanian Government has already set a target of getting to 200% renewable energy generation by 2040.¹⁹ In creating the renewable energy needed, the environmentally extractive practises which have led to a changing climate should be avoided. Energy should also be allocated first to Tasmanians, rather than transferred interstate, in order to secure our decarbonisation needs.

High CO₂-e emissions in the transport sector are partly due to Tasmanians' large reliance on private cars.²⁰ Ninety percent of homes own two or more registered vehicles – the highest amount in the country. 84% of Tasmanians in the greater nipaluna/Hobart region drive a private vehicle to work each day – the highest number in the nation. Tasmanians also have the oldest cars in Australia, which are less fuel efficient and therefore higher emitting.²¹

lutruwita/Tasmania's compact island geography also makes it ideally placed for electric vehicle uptake. It is easier to place charging stations at key locations, with shorter than average commuting distances and a growing visitor economy that is supported by a clean, green image.²² Improving availability of EVs to tourists would increase their experience of lutruwita/Tasmania as an eco-tourism destination and there are a number of benefits for Tasmanians from transitioning to EVs.

Tasmanians will experience better health from a transition to EVs, due to reduced traffic noise and better air quality. Electrifying vehicles will support energy security by decreasing our reliance on imported liquid fossil fuels. Australia's fuel security is weak, with 90% of fuel imported from overseas and reserves only available for 32 days; if disrupted, it would have a disastrous effect on the Australian economy.²³

In the last year, Tasmanians have felt the squeeze of soaring prices from imported fuel. nipaluna/Hobart was the most expensive capital city to refuel your tank in March 2022, with the fuel for a drive from nipaluna/Hobart to Launceston costing as much as a flight to Naarm/Melbourne.²⁴ Together with savings on maintenance costs, switching to an EV could save drivers \$1,300 per year, or \$19,500 over the 15-year life of their vehicle.²⁵

¹⁹ Renewables, Climate and Future Industries Tasmania (2023) *200% Tasmanian Renewable Energy Target*, https://www.stategrowth.tas.gov.au/recfit/renewables/tasmanian_renewable_energy_target

²⁰ Tasmanian Policy Exchange (2021) *Towards a climate-positive Tasmania*, p. 33, https://www.utas.edu.au/__data/assets/pdf_file/0009/1545561/Towards-a-climate-positive-Tasmania-02112021.pdf

²¹ The Australia Bureau of Statistics (2021) *Motor Vehicle Census, Australia*, <https://www.abs.gov.au/statistics/industry/tourism-and-transport/motor-vehicle-census-australia/latest-release>

²² Department of Premier and Cabinet (2021) *Current State of Play*, https://recfit.tas.gov.au/__data/assets/pdf_file/0007/348973/Electric_Vehicles_In_Tasmania_-_Current_State_of_Play_2018.PDF

²³ Carter, Quicke and Armistead (2022) *Over a barrel*, p. 4, https://australiainstitute.org.au/wp-content/uploads/2022/04/P1036-Over-a-barrel_liquid-fuel-security-WEB.pdf

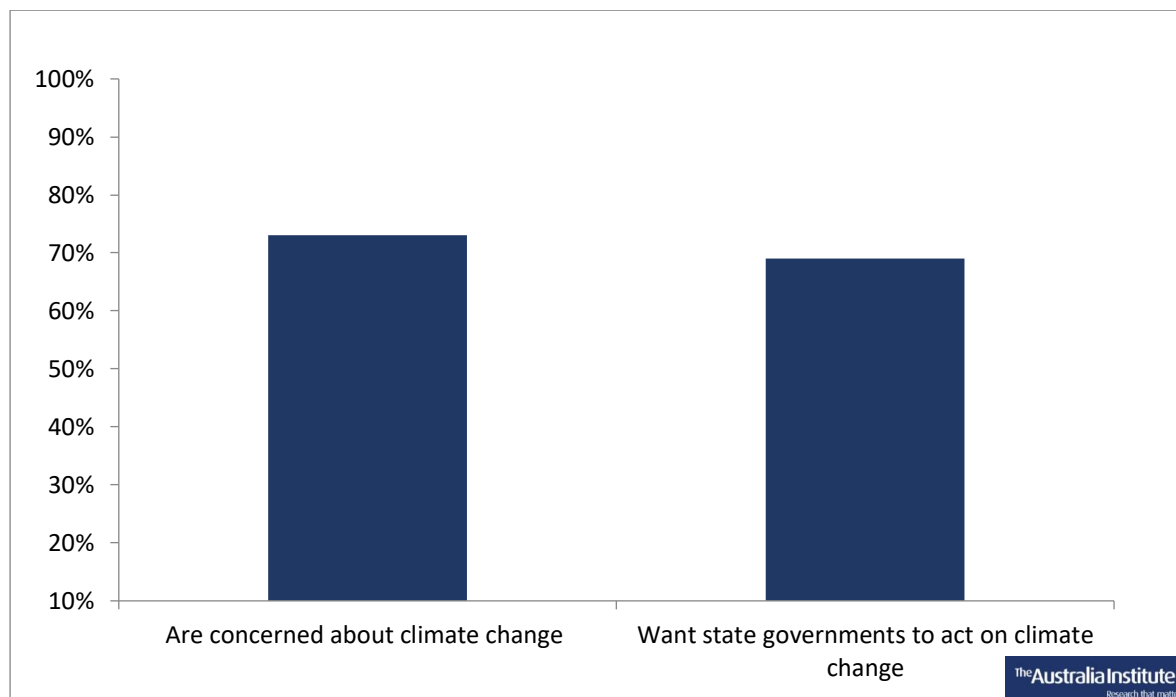
²⁴ ABC News (2022) *A flight to Melbourne now costs the same as a drive to Launceston from Hobart*, <https://www.abc.net.au/news/2022-03-16/fuel-prices-impact-in-tasmania-flight-melbourne-launceston/100910392>

²⁵ Fisk (2022) *Switching to an EV 'could save car owners \$1300 a year' says study*, <https://www.whichcar.com.au/news/switching-to-an-ev-could-save-car-owners-1300-a-year-says-study>

Popular

Australia Institute research shows that policies to incentivise electric vehicle uptake are popular and that Tasmanians support ambitious climate action through such policies. Figure 4, below, shows that in the 2021 Climate of the Nation Report, Tasmanians were concerned about climate change (73%) and want the state government to act to address it (69%).²⁶

Figure 4: Attitudes on climate change²⁷

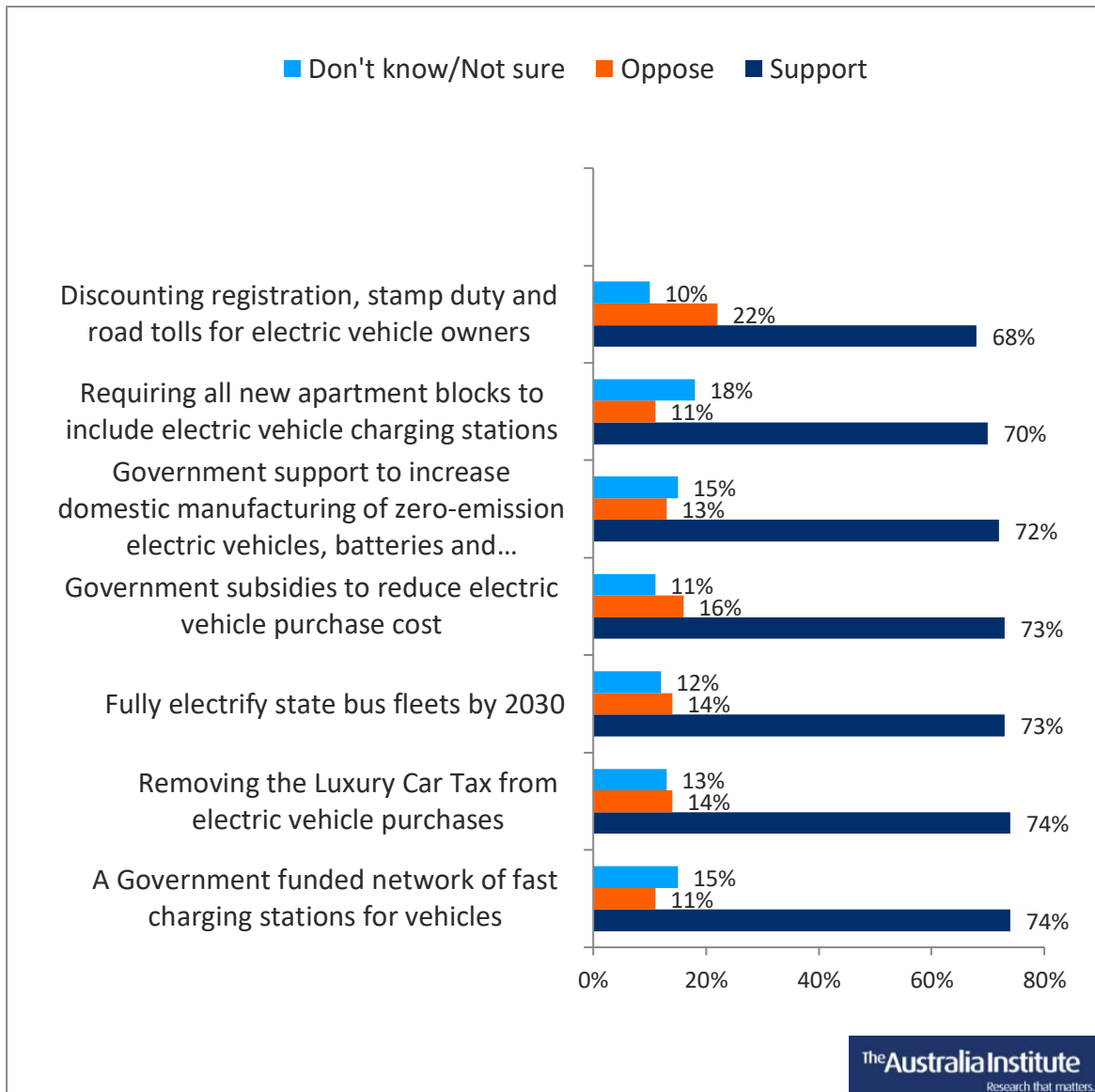


Tasmanians support incentivising electric vehicle uptake through funding a network of fast charging stations (74%), fully electrifying the state’s bus fleets by 2030 (73%) and subsidising purchase costs of EVs (73%). A strong majority of Tasmanians (72%) want support for increasing domestic manufacturing of EVs and parts, and mandatory installation of fast chargers in new apartment blocks (70%). The Tasmanian Government discounting registration and stamp duty was also a popular policy (68%), as Figure 5, below, shows.

²⁶ The Australia Institute (2021) *Climate of the Nation 2021 Tasmanian Supplement*, <https://australiainstitute.org.au/wp-content/uploads/2021/10/Climate-of-the-Nation-2021-TAS-supplement.pdf>

²⁷ Ibid

Figure 5: Support for electric vehicle policies ²⁸



A 2018 survey by the Good Car Company showed that over 81% of participants were considering buying an electric vehicle, 18% of which were considering it within the next two years.²⁹

²⁸ Ibid

²⁹ Tasmanian Policy Exchange (2021) *Towards a climate-positive Tasmania*, p. 33, https://www.utas.edu.au/__data/assets/pdf_file/0009/1545561/Towards-a-climate-positive-Tasmania-02112021.pdf

Rolling start: Tasmania's current EV policies

The Tasmanian Government has implemented a number of policies which seek to incentivise EV uptake and established the Electric Vehicle Working Group to take a coordinated approach to supporting uptake.³⁰ The Working Group is tasked with identifying the benefits and barriers; reviewing policy and regulatory standards; identifying priority areas for action; understanding the impact of the transition of EVs on electricity generation; supporting the rollout of charging infrastructure; and improving data collection and sharing knowledge. The Working Group includes various key government departments, energy providers, businesses, interest groups and the University of Tasmania.

Stamp duty and registration waivers

In 2021, the Tasmanian Government committed to waiving the stamp duty on EVs for two years to reduce the purchase price of EVs.³¹ On average, this reduces the cost of purchase by \$2,000. In 2022, the number of EVs on Tasmanian roads doubled, with 676 of 1,100 purchasers taking up the stamp duty waiver.³² The Government has extended their stamp duty waiver on new and used EVs until the end of 2023. They have also waived registration fees for EVs purchased by car rental companies and coach operators until mid-2023.³³

Charging electric vehicle uptake

The Tasmanian Government has supported 14 fast charging stations and 23 destination and workplace chargers through its first Electric Vehicle ChargeSmart Grants Program in 2018-19.³⁴

Through the second round of the Electric Vehicle ChargeSmart Grants Program in 2021, the Government provided a further \$773,000 for the introduction of fast chargers across the

³⁰ Renewables, Climate and Future Industries Tasmania (2021) *Tasmanian Electric Vehicle Working Group*, https://recfit.tas.gov.au/electric_vehicle_working_group

³¹ Gutwein (2021) *Stamp duty waiver for Electric vehicles*, https://www.premier.tas.gov.au/site_resources_2015/additional_releases/stamp_duty_waiver_for_electric_vehicles

³² Rockcliff (2022) *Supporting Tasmanian businesses to go electric*, https://www.premier.tas.gov.au/site_resources_2015/additional_releases/supporting-tasmanian-businesses-to-go-electric

³³ Tasmanian Government (2021) *Government Services Budget Paper No 2 Volume 1*, p. 327, <https://www.treasury.tas.gov.au/Documents/2021-22-Budget-Paper-No-2-Volume-1.pdf>

³⁴ Gutwein (2021) *Tasmania's electric vehicle future charging ahead*, http://www.premier.tas.gov.au/site_resources_2015/additional_releases/tasmanias_electric_vehicle_future_charging_ahead

state in regional and tourism destinations.³⁵ This provided funding for at least 20 fast chargers and 23 destination and workplace chargers.

This will be an important step towards making the West, North-West, North-East and South-East of lutruwita/Tasmania more accessible to electric vehicle drivers.³⁶

Electrifying the Government fleet

The Tasmanian Government has committed to making their fleet of vehicles 100% electric by 2030.³⁷ Beyond the immediate reduction in emissions, this has the additional benefit of assisting the introduction of second-hand vehicles into the market over time. Funding was allocated for the purchase of 50 EVs in 2021-22 and 75 in 2022-23 – accounting to 10 to 20% of the Government’s fleet.³⁸ 13 were purchased in 2020-21 and 39 in 2021-22.³⁹ The Government aims for the purchase of 100 EVs in 2023-24. However, this does not include state-owned enterprises such as Sustainable Timbers Tasmania, Hydro Tasmania or Metro Tasmania.

Raising consumer awareness

In order to charge EV uptake through increasing consumer awareness, the Tasmanian Government partnered with AEVA for “try and drive” events and advertises its policies on its website.⁴⁰ Between 2015 and 2020, the Government funded the Smarter Fleets program.⁴¹ This supported government agencies and councils to prepare for introducing EVs into their fleets. It also assisted heavy vehicles in improving efficiency, reducing fuel expenditure and carbon emissions.

Public transport

Acknowledging the potential for decarbonisation through greater public transport electrification, the Tasmanian Government committed \$18.3 million to Metro Tasmania’s

³⁵ Renewables, Climate and Future Industries Tasmania (2021) *ChargeSmart grants*, https://recfit.tas.gov.au/chargesmart_grants

³⁶ Inglis (2021) *Tasmania’s electric blues*, p. 7, the Mercury

³⁷ Ferguson (2021) *Supporting Tasmania’s Electric Vehicle future*, http://www.premier.tas.gov.au/site_resources_2015/additional_releases/supporting_tasmanias_electric_vehicle_future

³⁸ McGlone (2022) *Carbon reduction plan requires work*, the Mercury, pp. 22-23

³⁹ Tasmanian Government (2023) *Government Services: Budget Paper No. 2*, p. 272, <https://www.treasury.tas.gov.au/Documents/2023-24-Budget-Paper-No-2-Volume-1.pdf>

⁴⁰ Electric Vehicle Council (2022) *State of EV*, p. 38, <https://electricvehiclecouncil.com.au/wp-content/uploads/2022/03/EVC-State-of-EVs-2022-1.pdf>

⁴¹ Renewables, Climate and Future Industries Tasmania (2021) *Smarter Fleets*, https://recfit.tas.gov.au/smarter_fleets

electric bus trial.⁴² This will involve the trialling of three battery electric buses in Launceston and three hydrogen fuel cell electric buses in nipaluna/Hobart for up to three years.⁴³ A further \$3.3 million was committed in 2023-24 State Budget towards the trial.⁴⁴

The Tasmanian Government has also made a number of commitments aimed at increasing public transport use in recent years. In the 2021-22 State Budget, the Government provided \$20 million to increase services in the Kingston area, which had experienced crowding.⁴⁵ \$5 million was also committed to park and ride facilities in Rokeby, Sorell and Glenorchy. An additional \$25.9 million was provided to Metro Tasmania to improve ticketing systems.

In March 2022, as fuel prices soared, Tasmanians were given free public bus travel for five weeks.⁴⁶ This saw an additional 100,000 passengers.⁴⁷

In the 2022-23 State Budget, the Tasmanian Government provided an additional \$17.3 million to improve park and ride services, \$8.3 million to bus stop upgrades and \$18.9 million to continue the Derwent Ferry Service.⁴⁸ The Derwent River Ferry Service is an example of an innovative solution to increasing public transport options, which saw 110,000 users in its first year.⁴⁹ The Government is looking into 33 areas where this could be expanded to. The Tasmanian Government has committed to increase bus and ferry services on the building of the Macquarie Point Stadium.

⁴² Renewables, Climate and Future Industries Tasmania (2022) *Tasmanian Greenhouse Gas Emissions Report 2022*, p. 5, https://recfit.tas.gov.au/__data/assets/pdf_file/0010/369523/Tasmanian_Greenhouse_Gas_Emissions_Report_2022.pdf

⁴³ Ferguson and Barnett (2022) *Zero emissions bus trials for Tasmania*, https://www.premier.tas.gov.au/site_resources_2015/additional_releases/zero_emission_bus_trials_for_tasmania

⁴⁴ Tasmanian Government (2023) Budget Paper No. 1, p. 6, <https://www.treasury.tas.gov.au/Documents/2023-24-Budget-Paper-No-1.pdf>

⁴⁵ Ferguson (2021) *Delivering better public transport for Tasmanians*, http://premier-dev.dpac.tas.gov.au/budget_2021/budget_releases/delivering_better_public_transport_for_tasmanians

⁴⁶ ABC (2022) *Free bus travel in Tasmania for five weeks to help offset rocketing fuel prices*, <https://www.abc.net.au/news/2022-03-22/free-buses-to-offset-rocketing-fuel-prices-in-tasmania/100928750>

⁴⁷ Ferguson (2022) *More than 100,000 extra people pick buses*, https://www.premier.tas.gov.au/site_resources_2015/additional_releases/more_than_100,000_extra_people_pick_buses

⁴⁸ Ferguson (2022) *Delivering the vital infrastructure projects that our growing Tasmania needs*, https://www.premier.tas.gov.au/budget_2022/budget_releases/delivering_the_vital_infrastructure_projects_that_our_growing_tasmania_needs#:~:text=Transport%20initiatives%20in%20the%202022,area%2C%20and%20Hobart%27s%20Northern%20suburbs

⁴⁹ Killick (2023) *More buses, ferries announced to ease Hobart traffic problems*, <https://www.themercury.com.au/news/tasmania/more-buses-ferries-announced-to-ease-hobart-traffic-problems/news-story/b588b86d0fa15bb2424394bd559b76b2>

Plug it in, change the world: Driving Tasmania’s EV future

Buoyed by the Tasmanian Government’s incentives, between January 2022 and 2023, there was a 77% increase in EV registration numbers – from 912 to 1,612.⁵⁰ However, EV uptake is still slow. Of 701,455 vehicles registered in the state in March 2022, only 1,897 were EVs. This is only 0.3% of vehicles.⁵¹ Only 3% of vehicle sales in lutruwita/Tasmania in 2022 were electric.⁵² This is in comparison to 14% globally.⁵³ Further policy intervention is needed if we are to accelerate the transition to EVs.

Internationally, nationally and across Australia, governments are incentivising electric vehicle uptake through strategies, roadmaps and action plans. The Federal Government have recently released an Electric Vehicle Strategy, which will drive the transition to electric vehicles in Australia, with key policies such as fuel efficiency standards and the support of charging networks.⁵⁴ These documents outline goals that governments want to achieve in emissions reductions through electric vehicle uptake, and the policy instruments they commit to implementing in order to achieve them. Table 1, below, shows that every other state and territory aside from lutruwita/Tasmania has a document detailing their policies which will achieve decarbonisation of the transport sector.

The amendments to Tasmania’s Climate Change Act require the creation of sectoral decarbonisation and resilience plans within two years of the legislation being adopted. This provides the opportunity for the Tasmanian Government to set decarbonisation targets for the transport sector and policies to achieve this target. The UTAS Policy Exchange has suggested an emissions reduction target of 37% by 2030.⁵⁵

This section details a number of policies which have been used by governments internationally and across Australia to accelerate electric vehicle uptake that could be adopted in lutruwita/Tasmania.

⁴⁸ Killick (2023) *More buses, ferries announced to ease Hobart traffic problems*, <https://www.themercury.com.au/news/tasmania/more-buses-ferries-announced-to-ease-hobart-traffic-problems/news-story/b588b86d0fa15bb2424394bd559b76b2ent/news-story/dba364cec44a2d3fcfdb782013b787b7?amp#>

⁵¹ Tasmanian Government Transport Services (2023) *Registration & Licensing Statistics As at 30 April 2023*, https://www.transport.tas.gov.au/licensing/general_information/statistics

⁵² Which Car? (2023) *ACT led electric vehicle sales per capita in 2022*, <https://www.whichcar.com.au/news/act-led-electric-vehicle-sales-per-capita-in-2022>; Costello (2023) *VFACTS: Australia’s new car sales results for 2022*, <https://www.carexpert.com.au/car-news/vfacts-australias-new-car-sales-results-for-2022>

⁵³ Purtill (2023) *Electric vehicles 14 per cent of global new car sales, but less than 4 per cent in Australia: IEA*, <https://www.abc.net.au/news/science/2023-04-27/electric-vehicle-ev-sales-increased-globally-2022-iaa-outlook/102266800>

⁵⁴ Australian Government (2023) *National Electric Vehicle Strategy*, <https://www.dcceew.gov.au/sites/default/files/documents/national-electric-vehicle-strategy.pdf>

⁵⁵ Tasmanian Policy Exchange (2021) *Towards a climate-positive Tasmania*, p. 31, https://www.utas.edu.au/__data/assets/pdf_file/0009/1545561/Towards-a-climate-positive-Tasmania-02112021.pdf

Table 1: State and territory EV policies

	Tas	Vic	ACT	NSW	QLD	NT	WA	SA
Transport policy document	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stamp duty	Waived until 2024	Discount of \$10.40 per \$200 market value indefinitely	Waived indefinitely	Waived until 2027 or when EVs reach 30% of new car sales	2% rate compared to normal 3% rate indefinitely	Waived until 2027		
Registration	Waived car rental companies and coach operators until 2023	Discount of \$100 indefinitely	Waived for 2 years	Discounted indefinitely		Waived for 5 years		Waived for 3 years
Purchase price incentive		\$3000 subsidy	\$15000 loan	\$3000 rebate	\$6000 rebate		\$3500 rebate	\$3000 subsidy
Charging Stations	\$773000 for 43 chargers	\$19m in grants	\$1.3m for 70 chargers in 2022-23. Goal of 180 chargers by 2025	\$181m over 4 years	24 new chargers	\$21 million	\$20m for 90 chargers	\$12.35m for 536 chargers
Targets		50% by 2030	80-90% by 2030	52% by 2030-1	50% by 2030. 100% by 2036			100% by 2040
Government fleet target	100% by 2030	\$10 m for 400 vehicles	100% achieved	100% by 2030	100% by 2026	200 vehicles by 2030	25% of new vehicle by 2025/26	
Public transport target		100% by 2025	100% by 2040	100% by 2047	100% by 2030			
Road user tax	From 2027 or when EVs reach 30% of new car sales	2.6c/km		2.5c/km from 2027 or when EVs reach 30% of new car sales			2.5c/km from July 2027	

Note: references for the figures in this table are detailed in the section below.

Accelerating Electric Passenger Vehicles

Targeting electric

Targets have provided jurisdictions internationally and nationally with a roadmap to transition to EVs. Norway has a world-leading electric vehicle uptake target, at 100% of new car sales by 2025.⁵⁶ A number of countries, including the United Kingdom, Denmark, Austria, Singapore, Iceland, Ireland, Greece, Israel and the Netherlands have committed to 100% of new car sales being electric by 2030.⁵⁷ Canada and Chile aim for 2035; France and Spain by 2040; and Germany by Costa Rica 2050. Both Norway and the United Kingdom will ban the sale of ICE vehicles at their target dates for EVs.

In Australia, SA has signed the COP26 declaration on 100% of car sales being electric by 2040.⁵⁸ Victoria, NSW and Queensland (QLD) have set the target of 52% of all light vehicle sales to be electric by 2030.⁵⁹ The ACT aim to get to 80-90% by 2030, and QLD aim to get to 100% by 2036.⁶⁰ The ACT will even ban the sale of petrol and diesel vehicles from 2035. To keep pace with its national counterparts, the Tasmanian Government should set a target of 100% of all light vehicle sales to be electric by 2030.

Governments transitioning their vehicle fleets to EVs is an opportunity to lead by example, as well as to add EVs to the second-hand market in subsequent years. The Tasmanian Government's target is ahead of Victoria, who have only committed to transitioning a portion of their vehicles.⁶¹ The Tasmanian Government's target is the same as NSW, at 100% by 2030.⁶² However, in the race to scale up climate mitigation ambition, Tasmania is still losing to its interstate counterparts; the ACT have already achieved their goal of 100% of the government fleet being electric and QLD aim to get to 100% by 2026.⁶³ WA falls behind

⁵⁶ NSW Government (2021) *NSW Electric Vehicle Strategy*, p. 6, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Climate-change/nsw-electric-vehicle-strategy-210225.pdf>

⁵⁷ International Council on Clean Transportation (2022) *Annual update on the global transition to EVs: 2021*, p. 6, <https://theicct.org/wp-content/uploads/2022/06/global-ev-update-2021-jun22.pdf>

⁵⁸ Government of South Australia (2020) *Transport*, <https://www.safa.sa.gov.au/environmental-s-governance/transport#:~:text=South%20Australia%20is%20a%20signatory,zero%20emission%20cars%20and%20vans.>

⁵⁹ Victorian Government (2021) *Victoria's zero emissions vehicle roadmap* p. 4, https://www.energy.vic.gov.au/__data/assets/pdf_file/0036/575676/Zero-Emission-Vehicle-ZEV-Roadmap.pdf; NSW Government (2021) *NSW Electric Vehicle Strategy*, p. 20, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Climate-change/nsw-electric-vehicle-strategy-210225.pdf>; Electric Vehicle Council (2022) *State of EVs*, p. 32, <https://electricvehiclecouncil.com.au/wp-content/uploads/2022/03/EVC-State-of-EVs-2022-1.pdf>

⁶⁰ ACT Government (2021) *The future of ZEVs*, <https://www.climatechoices.act.gov.au/transport-and-travel/cars-and-vehicles/the-future-of-zevs>; Electric Vehicle Council (2022) *State of EVs*, p. 32, <https://electricvehiclecouncil.com.au/wp-content/uploads/2022/03/EVC-State-of-EVs-2022-1.pdf>

⁶¹ Victorian Government (2021) *Victoria's zero emissions vehicle roadmap*, p. 7, https://www.energy.vic.gov.au/__data/assets/pdf_file/0036/575676/Zero-Emission-Vehicle-ZEV-Roadmap.pdf

⁶² NSW Government (2021) *NSW Electric Vehicle Strategy*, p. 20, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Climate-change/nsw-electric-vehicle-strategy-210225.pdf>

⁶³ ACT Government (2022) *ACT Zero Emissions Vehicles Strategy 2022-30*, p. 16, https://www.climatechoices.act.gov.au/__data/assets/pdf_file/0006/2038497/2022_ZEV_Strategy.pdf; QLD Government (2022) *Queensland's Zero Emission Vehicle Strategy 2022-2032*, p. 13, <https://www.qld.gov.au/transport/projects/electricvehicles/zero-emission-strategy>

other states, with a target of 25% of new government vehicles to be electric by 2025/26.⁶⁴ The Northern Territory (NT) and Victoria have only made provision to replace a number of their vehicles by 2030 – 200 and 400, respectively.⁶⁵ SA only requires new government fleet vehicles to be electric where they are fit-for-purpose and cost effective, if the additional cost can be managed by improving utilisation of the fleet – however, they do “envisage” that the transition will occur before 2030.⁶⁶

Purchase price incentives

Waiving stamp duty and registration costs

The significant purchase price of EVs is the biggest deterrent to their uptake. EVs on the cheaper end in lutruwita/Tasmania still cost around \$45,000.⁶⁷ While second-hand models with low mileage are imported by the Good Car Company these still start at \$16,000.

A number of studies have found that waiving stamp duty and registration costs incentivises electric vehicle uptake by reducing upfront cost. The Bloomberg G20 Zero-Carbon Policy Scoreboard found that “policies lowering the upfront costs have been the most effective tool for driving early-stage adoption of passenger EVs and are offered in most G20 countries.”⁶⁸ The Australian EV Market Study Report also found that reductions in upfront cost were the biggest incentive for electric vehicle purchasers.⁶⁹ It found that in Norway, the country leading the transition to EVs, non-financial incentives are less important in incentivising electric vehicle uptake than financial incentives. A separate survey of nearly 3,400 electric vehicle owners in Norway found that reducing the cost of EVs was the most critical factor in promoting electric vehicle purchase.⁷⁰

Table 1 shows that the Tasmanian Government’s stamp duty waiver places it amongst other states in incentivising electric vehicle uptake. However, the Tasmanian Government has placed a short time limit on this policy – until 2024. The ACT has waived their stamp duties

⁶⁴ Department of Water and Environment Regulation (2020) *State Electric Vehicle Strategy for Western Australia*, p. 8, https://www.wa.gov.au/system/files/2020-11/State_Electric_Vehicle_Strategy_for_Western_Australia_0.pdf

⁶⁵ Northern Territory Government (2021) *Northern Territory Electric Vehicle Strategy and Implementation Plan*, p. 14, https://dipl.nt.gov.au/__data/assets/pdf_file/0007/1027483/electric-vehicle-strategy-implementation-plan.PDF; Victorian Government (2021) *Victoria’s zero emissions vehicle roadmap* p. 5, https://www.energy.vic.gov.au/__data/assets/pdf_file/0036/575676/Zero-Emission-Vehicle-ZEV-Roadmap.pdf

⁶⁶ Government of South Australia (2020) *South Australia’s Electric Vehicle Action Plan*, p. 23, https://www.energymining.sa.gov.au/__data/assets/pdf_file/0009/609390/DEM-Electric-Vehicle-Action-Plan.pdf

⁶⁷ Bailey (2023) *Good Car Co says EV strategy a step forward, but there is work to do*, <https://www.examiner.com.au/story/8169398/tasmanias-electric-future/>

⁶⁸ Bloomberg New Energy Finance (2021) *G20 Zero-Carbon Policy Scoreboard*, p. 24, <https://assets.bbhub.io/professional/sites/24/BNEF-G20-Zero-Carbon-Policy-Scoreboard-EXEC-SUM.pdf>

⁶⁹ Energeia for ARENA (2018) *Australian EV Market Study Report*, p. 2, <https://www.arena.gov.au/assets/2018/06/australian-ev-market-study-report.pdf>

⁷⁰ Bjerkan et al. (2016) *Incentives for promoting Battery Electric Vehicle (BEV) adoption in Norway*, <https://www.sciencedirect.com/science/article/pii/S1361920915002126>

on an ongoing basis.⁷¹ NSW has waived their stamp duty until 2027 or when electric vehicles make up 30% of new vehicle sales – whichever comes first.⁷² The NT has also waived their stamp duty until 2027.⁷³ The Victorian Government’s stamp duty is discounted \$8.40 per \$200 market value, while the QLD Government charges a 2% rate, compared to the usual 3% rate on an ongoing basis.⁷⁴

The ACT, NT and South Australia (SA) have all waived their vehicle registration costs, while Victoria and NSW offer discounts.⁷⁵ The ACT are even switching to a registration model which charges based on emissions, not weight, to incentivise less polluting vehicles.⁷⁶ Whilst the Tasmanian Government has waived EV registration fees for car rental companies and coach operators until mid-2023, this still leaves lutruwita/Tasmania as one of only three states or territories without a registration discount for all EVs. Given that the ACT, NSW, NT and Victorian governments offer both a stamp duty and registration discount, Tasmanians’ stamp duty waiver is not an argument against a registration waiver. The Tasmanian Government could continue its stamp duty waiver on an ongoing basis and expand its registration waiver to all EVs to further incentivise uptake. Figure 5 shows that 68% of Tasmanians support the Government discounting registration and stamp duty for electric vehicle owners.⁷⁷

Subsidies, rebates and loans

Like stamp duty and registration waivers, subsidies, rebates and loans incentivise electric vehicle uptake by reducing the upfront purchase price of EVs.

⁷¹ ACT Government (2022) *ACT Zero Emissions Vehicles Strategy 2022-30*, p. 16,

https://www.climatechoices.act.gov.au/__data/assets/pdf_file/0006/2038497/2022_ZEV_Strategy.pdf

⁷² NSW Government (2021) *NSW Electric Vehicle Strategy*, p. 19, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Climate-change/nsw-electric-vehicle-strategy-210225.pdf>

⁷³ NT Government (2021) *Northern Territory Electric Vehicle Strategy and Implementation Plan 2021-2026*, p. 14, https://dipl.nt.gov.au/__data/assets/pdf_file/0007/1027483/electric-vehicle-strategy-implementation-plan.PDF

⁷⁴ State Revenue Office Victoria (2022) *Motor vehicle duty current rates*, <https://www.sro.vic.gov.au/motor-vehicle-duty-current-rates>; QLD Government (2022) *Shifting to zero emission vehicles*, <https://www.qld.gov.au/transport/projects/electricvehicles/hitting-the-road>

⁷⁵ ACT Government (2022) *ACT Zero Emissions Vehicles Strategy 2022-30*, p. 16,

https://www.climatechoices.act.gov.au/__data/assets/pdf_file/0006/2038497/2022_ZEV_Strategy.pdf; NT

Government (2021) *Northern Territory Electric Vehicle Strategy and Implementation Plan 2021-2026*, p. 5,

https://dipl.nt.gov.au/__data/assets/pdf_file/0007/1027483/electric-vehicle-strategy-implementation-plan.PDF; Victorian Government (2021) *Victoria’s zero emissions vehicle roadmap*, p. 7,

https://www.energy.vic.gov.au/__data/assets/pdf_file/0031/583726/Zero-emission-vehicle-roadmap.pdf;

Department of Treasury and Finance (2021) *Incentives for EV*, <https://www.treasury.sa.gov.au/Growing-South-Australia/incentives-for-electric-vehicles>; NSW Government (2022) *Registering an electric vehicle*, <https://www.nsw.gov.au/driving-boating-and-transport/vehicle-registration/how-to/electric-vehicles#toc-registration-of-electric-vehicles>

⁷⁶ Visontay (2023) *ACT to incentivise electric vehicles with registration fee based on emissions rather than weight*, <https://amp.theguardian.com/australia-news/2023/feb/02/act-to-incentivise-electric-vehicles-with-registration-fee-based-on-emissions-rather-than-weight>

⁷⁷ The Australia Institute (2021) *Climate of the Nation 2021 Tasmanian Supplement*,

<https://australiainstitute.org.au/wp-content/uploads/2021/10/Climate-of-the-Nation-2021-TAS-supplement.pdf>

Subsidies are applied at the point of sale by car dealers to reduce the upfront cost of EVs. Victoria and SA both provide a \$3,000 subsidy on each electric vehicle.⁷⁸ In Victoria, for example, the state government has devoted \$46 million towards the provision of 20,000 subsidies over three years on EVs under \$68,740.

Rebates provide a partial refund to purchasers for their electric vehicle purchase. Leading the nation, QLD offers a \$6,000 rebate on EVs.⁷⁹ A rebate of \$3,000 is offered in NSW and WA.⁸⁰ NSW, for example, will provide this rebate on the first 25,000 EVs sold from 1 September 2021, that have a purchase price of under \$68,750.

The ACT Government offers an interest free loan from \$15,000 for the purchase of EVs.⁸¹ The loan must be paid back within 10 years. Alongside purchase price assistance, loans help users to install the charging infrastructure and renewable energy generation, through roof top solar, that is needed to support EV uptake. This scheme provides an equitable opportunity for those on lower incomes to participate in the electric vehicle transition. Research done by the Australian Institute found that 55% of Australians supported the government providing loans for electric vehicle purchase.⁸²

Importantly, these financial incentives are not stand-alone measures. They are often used in conjunction with other financial incentives such as stamp duty and registration waivers. The ACT has waived its stamp duty and registration costs, as well as offering loans. NSW's stamp duty reduction is offered alongside their \$3,000 rebate. SA has waived registration, and Victoria offers a \$100 discount, alongside their \$3,000 subsidies. Therefore, the Tasmanian Government's stamp duty waiver is not an argument against introducing other financial incentives. Further, the Australian Council of Social Service has suggested that financial incentives should be means tested in order to ensure that the poorest Australians do not bear the brunt of the expense of transitioning to EVs.⁸³

lutruwita/Tasmania is the only state or territory without an upfront subsidy, rebate or loan scheme. Yet, Figure 5 shows that 73% of Tasmanians support the Tasmanian Government

⁷⁸ Victorian Government (2021) *Victoria's zero emissions vehicle roadmap*, p. 7, https://www.energy.vic.gov.au/__data/assets/pdf_file/0031/583726/Zero-emission-vehicle-roadmap.pdf; Department of Energy and Mining (2021) *Electric vehicles*, <https://www.energymining.sa.gov.au/consumers/electric-vehicle-subsidy>

⁷⁹ Brenni (2023) *Making electric vehicles more affordable to slash emissions and act on climate change*, <https://statements.qld.gov.au/statements/97613>

⁸⁰ NSW Government (2021) *NSW Electric Vehicle Strategy*, p. 9, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Climate-change/nsw-electric-vehicle-strategy-210225.pdf>; WA Government Department of Transport (2022) *Electric vehicles*, <https://www.transport.wa.gov.au/projects/zero-emission-vehicle-zev-rebate.asp>

⁸¹ ACT Government (2022) *ACT Zero Emissions Vehicles Strategy 2022-30*, https://www.climatechoices.act.gov.au/__data/assets/pdf_file/0006/2038497/2022_ZEV_Strategy.pdf, p. 16;

⁸² The Australia Institute (2018) *Polling – Policies for low emissions and electric cars*, <https://australiainstitute.org.au/wp-content/uploads/2020/12/Electric-Vehicle-Polling-Aus-Institute-WEB.pdf>

⁸³ Jervis-Bardy (2022) *Poorer Australians to face 'increasing burden' during EV switch, department concedes*, <https://www.mudgeeguardian.com.au/story/7870706/poorer-australians-to-face-increasing-burden-during-ev-switch/>

reducing electric vehicle purchase cost.⁸⁴ To keep pace with its interstate counterparts, lutruwita/Tasmania could offer a \$3,000 rebate or subsidy, or \$15,000 interest-free loan.

EV Tax: World's Worst EV Policy

Implementing an EV Tax is an effective disincentive to EV purchase. Controversially, Victoria became the first Australian state to implement a road user tax on EV users.⁸⁵ The Victorian Government argued that this charge was necessary in order to ensure that EV users were paying for the upkeep of roads, as they would no longer be paying the fuel excise.⁸⁶ However, this is a logical fallacy, given that the fuel excise is a federal, not state-based tax, and is not tied to roads funding.⁸⁷

Various experts have described this as the world's worst EV policy, given its potential to disincentivise electric vehicle uptake by increasing costs. This almost negates the lower-range financial incentives that are provided, such as waiving registration costs. Research by the Australia Institute in SA has shown that such a tax would disincentivise electric vehicle uptake, with 69% of people stating that a road user charge would make them less likely to purchase an electric vehicle.⁸⁸

Whilst a road user tax was supported by the last SA Government, the new Labor government has scrapped this tax.⁸⁹ NSW and WA have committed to imposing a similar charge in 2027 or when EVs make up 30% of all new vehicles sold.⁹⁰ Buried in the 2021-22 Tasmanian State Budget is the same commitment from the Government.⁹¹

⁸⁴ The Australia Institute (2021) *Climate of the Nation 2021 Tasmanian Supplement*, <https://australiainstitute.org.au/wp-content/uploads/2021/10/Climate-of-the-Nation-2021-TAS-supplement.pdf>

⁸⁵ Vic roads (2022) *ZLEV road-user charge*, <https://www.vicroads.vic.gov.au/registration/registration-fees/zlev-road-user-charge>

⁸⁶ The Australia Institute (2020) *EV Road User Charge: 'A Great Big New Tax on Not Polluting'*, <https://australiainstitute.org.au/post/ev-road-user-charge-a-great-big-new-tax-on-not-polluting/>

⁸⁷ The Australia Institute (2021) *Submission: South Australian Government Consultation on Zero and Low Emission Vehicles Road User Charge*, <https://australiainstitute.org.au/wp-content/uploads/2022/03/The-Australia-Institute-SA-Government-Consultation-on-Zero-and-Low-Emission-Vehicles-RUC-FINAL.pdf>

⁸⁸ The Australia Institute (2021) *Polling – Electric vehicles in South Australia*, p. 1, <https://australiainstitute.org.au/wp-content/uploads/2021/08/Polling-August-2021-Electric-vehicles-in-SA-WEB.pdf>

⁸⁹ 7 News (2022) *SA moves to scrap tax on electric vehicles*, <https://7news.com.au/politics/sa-moves-to-scrap-tax-on-electric-vehicles-c-6856673>

⁹⁰ NSW Government (2021) *NSW Electric Vehicle Strategy*, p. 19, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Climate-change/nsw-electric-vehicle-strategy-210225.pdf>; McGowan (2022) *WA's climate action efforts accelerate with \$60 million EV package*, <https://www.mediastatements.wa.gov.au/Pages/McGowan/2022/05/WAs-climate-action-efforts-accelerate-with-60-million-dollar-EV-package.aspx>

⁹¹ Tasmanian Government (2021) *The Budget: Budget Paper No 1*, p. 81, <https://www.treasury.tas.gov.au/Documents/2021-22-Budget-Paper-No-1.pdf>

The imposition of road user taxes for EVs by Victoria is currently being challenged in the High Court by two Victorian EV drivers and the Commonwealth Government.⁹² The case argues that it is unconstitutional for Victoria to levy this tax, as it is a tax that only the Federal Government has been given the power to levy in the Constitution. In the meantime, 243 vehicles have been de-registered for failing to pay road user tax – some without notice.⁹³

Given the ability of a road user tax to disincentivise public uptake of EVs, further development of Tasmanian electric vehicle policy should not include a road user charge.

Creating the infrastructure needed

Charging our EV future

The security of accessible charging stations helps to incentivise electric vehicle uptake and use. Across the world, the introduction of charging infrastructure has been supported by governments. In Norway, for example, the Government provided up to 100% of the installation costs for fast chargers every 50km on Norway’s mainland.⁹⁴

The PlugShare map records 199 EV charging locations in lutruwita/Tasmania, spread across urban and rural centres around the state.⁹⁵ However, many of these are simply wall plugs and there are still many key locations without fast chargers, leaving electric vehicle drivers without certainty that they can reach their destination efficiently, or at all, outside major centres. Locations include Stanley, maytim/Arthur River, Savage River, Hastings, Dennes Point, laylatiya/Recherche Bay, mutatayna/South Arm, Sorell, Orford and turapina/Ben Lomond. RACT Advocacy Officer, Garry Bailey, says that there is still “range anxiety” amongst Tasmanians, which is disincentivising electric vehicle uptake.⁹⁶ Further grants programs could also help to increase electric vehicle fast charger coverage in key areas where there is currently only one charger.

nipaluna/Hobart has the highest number of public chargers, which at this point is 12. Almost half of the available chargers in lutruwita/Tasmania are wall plugs only – a very slow charging option which can take several hours to charge. A number are limited to Tesla users or accommodation guests only. The charging network would benefit from more chargers

⁹² Hatch (2022) *Albanese government seeks to pull plug on Victoria’s electric vehicle tax*, <https://www.theage.com.au/national/victoria/albanese-government-seeks-to-unplug-victoria-s-electric-vehicle-tax-20220715-p5b1xr.html>

⁹³ Zachariah (2023) *Hundreds of electrified cars deregistered in Victoria due to road-user tax – report*, <https://www.drive.com.au/news/victoria-cancels-electric-hybrid-car-rego-tax/>

⁹⁴ Quicke and Armistead (2020) *Ending the ICE age*, p. 8, <https://australiainstitute.org.au/wp-content/uploads/2020/12/P975-Norway-Australia-EV-policies-WEB.pdf>

⁹⁵ PlugShare (2021) Search for locations, <https://www.plugshare.com/>

⁹⁶ McIntyre (2022) *Rising petrol prices fuel electric vehicle market growth in Tasmania*, <https://www.abc.net.au/news/2022-06-16/rising-petrol-prices-fuel-ev-market-growth-in-tasmania/101150700>

that are accessible to a variety of users, as well as fast chargers. Continued support will be needed to support growing EV numbers.

The continued provision of the Tasmanian Government's successful ChargeSmart grants could ease issues related to EV charging accessibility. Figure 5, above, highlights that 74% of Tasmanians support the Government continuing to fund a network of fast chargers.⁹⁷

Table 1 shows that states and territories around Australia are continuing to provide funding to increase EV infrastructure. The previous NSW government committed \$171 million to funding electric vehicle charging stations over the next four years.⁹⁸ This includes \$131 million for public ultra-fast charging infrastructure and \$40 million for destination chargers, allocated in grant rounds. Part of this policy involves creating 'EV Super Highways' which aims to improve accessibility for regional residents and businesses.⁹⁹ The new Labor Government has committed an additional \$10 million for the rollout of at least 50 charging stations.¹⁰⁰

Victoria have also committed \$19m in grants, QLD to implementing 24 new chargers, NT to \$300,000 for 180 chargers, WA \$21m for up to 90 chargers and The ACT to 70 electric vehicle chargers.¹⁰¹ The ACT have also recently committed to having 180 EV chargers across the ACT by 2025. SA have awarded a \$12.35 million grant to RAA to construct and operate a statewide network of 536 chargers, to be completed by 2024.¹⁰²

Planning for our electric future

Amending construction laws and regulations to require the provision of electric vehicle charging infrastructure in new buildings, and minimum numbers in existing buildings, will make lutruwita/Tasmania ready for the transition to EVs. This will be particularly relevant for buildings such as apartment complexes, carparks and shopping centres. Figure 5 shows

⁹⁷ The Australia Institute (2021) *Climate of the Nation 2021 Tasmanian Supplement*, <https://australiainstitute.org.au/wp-content/uploads/2021/10/Climate-of-the-Nation-2021-TAS-supplement.pdf>

⁹⁸ NSW Government (2021) *NSW Electric Vehicle Strategy*, p. 21, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Climate-change/nsw-electric-vehicle-strategy-210225.pdf>

⁹⁹ Ibid, p. 22

¹⁰⁰ Corby (2023) *Labor government to continue rallying behind EV uptake*, <https://www.theaustralian.com.au/special-reports/electric-vehicles/labor-government-to-continue-rallying-behind-ev-uptake/news-story/15bb0e0a664eb3ad3a129d1c5e6ec51f>

¹⁰¹ Victorian Government (2021) *Victoria's zero emissions vehicle roadmap*, p. 5, https://www.energy.vic.gov.au/__data/assets/pdf_file/0031/583726/Zero-emission-vehicle-roadmap.pdf;

QLD Government (2022) *Queensland's Electric Super Highway*, <https://www.qld.gov.au/transport/projects/electricvehicles/super-highway>; Hill (2022) *Northern Territory unveils grants and stamp duty waiver for EVs and chargers*, <https://thedriven.io/2022/06/06/northern-territory-unveils-grants-and-stamp-duty-waiver-for-evs-and-chargers/>; Sanderson and Johnston (2021) *WA accelerates towards longest EV fast charging network*, <https://www.mediastatements.wa.gov.au/Pages/McGowan/2021/08/WA-accelerates-towards-longest-EV-fast-charging-network.aspx>;

ACT Government (2022) *ACT Zero Emissions Vehicles Strategy 2022-30*, p. 16, https://www.climatechoices.act.gov.au/__data/assets/pdf_file/0006/2038497/2022_ZEV_Strategy.pdf

¹⁰² Department of Energy and Mining (2022) *Statewide charging network*, <https://www.energymining.sa.gov.au/industry/modern-energy/electric-vehicles/statewide-charging-network>

that strong majority of Tasmanians support mandatory installation of fast chargers in new apartment blocks (70%).¹⁰³

Australian states and territories are putting similar policies in place. The Victorian Government has devoted \$298,000 to study EV-readiness in new buildings study and is supporting amendments to the National Construction Code.¹⁰⁴ The ACT is a step ahead, committing to enacting regulation in its Territory Plan to facilitate charging infrastructure in multi-unit and mixed-use developments by 2023.¹⁰⁵ WA is also requiring the provision of electric vehicle charging infrastructure in new buildings.¹⁰⁶ NSW have recently introduced a fine for non-EVs parking in EV charging bays which could see people charged up to \$2,200.¹⁰⁷ Iutruwita/Tasmania should also plan for its electric vehicle future, following in the tyre-tracks of Victoria and the ACT.

Raising public awareness

Raising awareness, as well as busting myths, will be crucial in driving EV uptake. Other state and territory governments, such as Victoria, have pages on their websites where purchasers can learn about EVs.¹⁰⁸ The ACT has delivered a mailout and digital advertising campaign on the benefits of EVs.¹⁰⁹ NSW has provided free test drives of EVs.¹¹⁰ Whilst the Tasmanian Government has information online regarding their policies, they could do more to raise public awareness. The programs of its interstate counterparts provide excellent examples of raising public awareness that the Tasmanian Government could adopt.

¹⁰³ The Australia Institute (2021) *Climate of the Nation 2021 Tasmanian Supplement*, <https://australiainstitute.org.au/wp-content/uploads/2021/10/Climate-of-the-Nation-2021-TAS-supplement.pdf>

¹⁰⁴ Victorian Government (2021) *Victoria's zero emissions vehicle roadmap*, p. 8, https://www.energy.vic.gov.au/__data/assets/pdf_file/0031/583726/Zero-emission-vehicle-roadmap.pdf

¹⁰⁵ ACT Government (2022) *ACT Zero Emissions Vehicles Strategy 2022-30*, p. 16, https://www.climatechoices.act.gov.au/__data/assets/pdf_file/0006/2038497/2022_ZEV_Strategy.pdf

¹⁰⁶ Department of Water and Environment Regulation (2020) *State Electric Vehicle Strategy for Western Australia*, p. 12, https://www.wa.gov.au/system/files/2020-11/State_Electric_Vehicle_Strategy_for_Western_Australia_0.pdf

¹⁰⁷ Mulach (2023) *NSW introduces fines for petrol and diesel cars parked in electric-car charging bays*, <https://www.drive.com.au/news/nsw-introduces-fines-for-petrol-and-diesel-cars-parked-in-electric-car-charging-bays/>

¹⁰⁸ Victorian Government (2022) *Zero emissions vehicles*, <https://www.energy.vic.gov.au/renewable-energy/zero-emissions-vehicles>

¹⁰⁹ Electric Vehicle Council (2022) *State of EVs*, p. 23, <https://electricvehiclecouncil.com.au/wp-content/uploads/2022/03/EVC-State-of-EVs-2022-1.pdf>

¹¹⁰ *Ibid*, p. 27

Next stop: public transport

Electrifying our buses

Electrifying public bus fleets is another important way in which lutruwita/Tasmania can reduce its transport emissions, given that 32% of Tasmania's transport emissions come from heavy transport, including buses.¹¹¹

The provision of electric buses in lutruwita/Tasmania could have the co-benefit of reducing Tasmanian's high reliance on private, emissions-intensive vehicles.¹¹² In turn, this could reduce congestion issues around city centres and improve access for regional Tasmanians. Public bus users are also four times more likely to meet daily exercise goals, walking up to 33 minutes more per day.¹¹³ The rollout of an electric bus fleet can help to overcome barriers to private uptake, by combatting misconceptions around EVs, such as unnecessary range anxieties. Electric buses are cheaper to run than diesel buses, and their total cost is approaching that of diesel buses.¹¹⁴ They also provide manufacturing opportunities for local companies.

Metro Tasmania, a state-owned company, is the main provider of bus services in lutruwita/Tasmania, with a fleet of 224 buses.¹¹⁵ Much of the fleet has recently been replaced, with the 100th bus being delivered to Metro Tasmania in 2021, as part of a collaboration between Bustech and Elphinstone. That same year, an additional 26 buses were ordered. As a result, lutruwita/Tasmania now has one of the youngest average fleets in the nation, at 8.1 years, compared to the industry average of 12 years.

The first tranche of new buses is powered by Euro6 diesel engines – the lowest emitting diesel engine available at the time. Though fitted with the Euro6 diesel engine, the second tranche of buses has the capacity to be retrofitted with batteries or hydrogen fuel cells.

Metro Tasmania's move towards lower emitting vehicles, and provision for buses to be converted to zero emission fuels, clearly acknowledges the need to transition their fleet. The Tasmanian Government's \$6 million contribution to Metro Tasmania's electric bus trial is a good start in determining feasibility of electrification of Tasmania's public bus fleet.¹¹⁶

¹¹¹ Tasmanian Policy Exchange (2021) *Towards a climate-positive Tasmania*, p. 35, https://www.utas.edu.au/__data/assets/pdf_file/0009/1545561/Towards-a-climate-positive-Tasmania-02112021.pdf

¹¹² Quicke and Parrott (2022) *Next stop: Zero emissions buses by 2030*, p. 4,

<https://australiainstitute.org.au/wp-content/uploads/2022/05/P1229-Next-stop-for-electric-buses-WEB.pdf>

¹¹³ Brown et. al. (2019) *Better transport accessibility, better health: a health economic impact assessment study for Melbourne, Australia*, <https://ijbnpa.biomedcentral.com/articles/10.1186/s12966-019-0853-y>

¹¹⁴ Quicke and Parrott (2022) *Next stop: Zero emissions buses by 2030*, p. 5,

<https://australiainstitute.org.au/wp-content/uploads/2022/05/P1229-Next-stop-for-electric-buses-WEB.pdf>

¹¹⁵ Metro Tasmania (2021) *Annual Report 2020-21*, p. 7, https://www.metrotas.com.au/wp-content/uploads/2021/10/210210-Metro-AR-2020-21_Final_web.pdf

¹¹⁶ Renewables, Climate and Future Industries Tasmania (2021) *Supporting Electric Vehicle Uptake*, https://recfit.tas.gov.au/fact_sheets_and_reports/supporting_electric_vehicle_uptake

Private coach operator, Kinetic (who own major bus services Tas Redline, MerseyLink and SkyBus) have introduced two electric buses to their SkyBus fleet.¹¹⁷

lutruwita/Tasmania is behind its international and national counterparts in setting targets to electrify its bus fleet. Internationally, Denmark, Netherlands, New Zealand, Austria, Cape Verde, Chile, and Colombia all have targets to completely electrify their bus fleets.¹¹⁸ New Zealand, for example, has set the target of all new buses purchased to be electric by 2025, and for all of their bus fleet to be electric by 2035.

Table 1 shows that states and territories across the country have made provision for electrifying their public transport fleets. Victoria has allocated \$20 million to a Zero Emissions Bus Project which will trial the use of electric buses, in the aim of all public bus purchases being electric from 2025.¹¹⁹ The NSW Government has committed to fully electrify their bus fleet by 2047, while the ACT aims for 2040.¹²⁰ QLD has committed to make every new bus purchase electric in South-East QLD from 2025 and regional QLD from 2025-2030.¹²¹ The WA Government has committed \$125 million, and the Commonwealth Government \$125 million, to purchasing 130 electric buses.¹²² It's also committed to undertaking a trial of electric buses in the Joondalup Central Area Transit Service.¹²³ SA and the NT are currently investigating the feasibility of implementing electric buses.¹²⁴

Electric buses have been trialled across Australia and the world. lutruwita/Tasmania needs to join its interstate counterparts in starting electrification of our public bus fleet. The Tasmanian Government can show their commitment to this by setting a target of 100% of new bus purchases to be electric by 2025 and 100% of the bus fleet to be electric by 2030. Figure 5 shows that 73% of Tasmanians support the state government fully electrifying the state bus fleet by 2030.¹²⁵

¹¹⁷ Skybus (2022) *SkyBus launches Tasmania's first electric buses into service at Hobart Airport*, <https://www.skybus.com.au/announcements/skybus-launches-tasmanias-first-electric-buses-into-service-at-hobart-airport>

¹¹⁸ Quicke and Parrott (2022) *Next stop: Zero emissions buses by 2030*, p. 7,

<https://australiainstitute.org.au/wp-content/uploads/2022/05/P1229-Next-stop-for-electric-buses-WEB.pdf>

¹¹⁹ Victorian Government (2021) *Victoria's zero emissions vehicle roadmap*, p. 7,

https://www.energy.vic.gov.au/__data/assets/pdf_file/0031/583726/Zero-emission-vehicle-roadmap.pdf

¹²⁰ NSW Government (2021) *Zero Emission Buses*, <https://www.transport.nsw.gov.au/projects/current-projects/zero-emission-buses>; ACT Government (2022) *ACT Zero Emissions Vehicles Strategy 2022-30*, p. 10, https://www.climatechoices.act.gov.au/__data/assets/pdf_file/0006/2038497/2022_ZEV_Strategy.pdf

¹²¹ QLD Government (2022) *Queensland's Zero Emission Vehicle Strategy 2022-2032*, p. 13,

<https://www.qld.gov.au/transport/projects/electricvehicles/zero-emission-strategy>

¹²² Government of Western Australia (2023) *Bus fleet goes electric with \$125 million State investment*, [https://www.mediastatements.wa.gov.au/Pages/McGowan/2023/04/Bus-fleet-goes-electric-with-\\$125-million-State-investment.aspx](https://www.mediastatements.wa.gov.au/Pages/McGowan/2023/04/Bus-fleet-goes-electric-with-$125-million-State-investment.aspx)

¹²³ Department of Water and Environment Regulation (2020) *State Electric Vehicle Strategy for Western Australia*, p. 8, https://www.wa.gov.au/system/files/2020-11/State_Electric_Vehicle_Strategy_for_Western_Australia_0.pdf

¹²⁴ *Ibid*, p. 9

¹²⁵ The Australia Institute (2021) *Climate of the Nation 2021 Tasmanian Supplement*, <https://australiainstitute.org.au/wp-content/uploads/2021/10/Climate-of-the-Nation-2021-TAS-supplement.pdf>

Increasing public transport use

Electrifying vehicles, including public buses, only solves part of our emissions reductions problem. Many Tasmanians will be unable to pay the high price of buying an EV, and will be left driving their old, high-polluting vehicles or catching public transport. In places where public transport is accessible, people tend to own fewer cars and drive less.¹²⁶

The Climate Council argue that a mode shift – towards public and active transport – is necessary to achieve equitable action on climate change.¹²⁷ Under their modelling, 49% of transport would need to be shifted to public transport by 2030. Governments are less ambitious: the ACT, for example, aim to shift the transport mode of their population to public transport to 16% by 2026.¹²⁸ Polling done by the Climate Council in 2022 showed that 80% of Australians believed that their government should invest more in public transport.¹²⁹

Rail-based transport has the greatest impact on reducing reliance on private vehicles, reducing emissions and decreasing congestion.¹³⁰ Whilst a light-rail link between nipaluna/Hobart and the northern suburbs has been suggested, the Tasmanian Government has ruled this out.¹³¹ They cite a report which stated that the existing rail infrastructure would be too costly to upgrade. However, proponents of a light-rail such as independent member for Clark, Kristie Johnston, believe that the Government has “cherry-picked certain findings” and that the \$161 million needed to build a scheme is actually “quite a modest amount of money” for this type of infrastructure. It’s certainly significantly less than the \$375 million that the Tasmanian Government has committed towards the proposed stadium on Macquarie Point.¹³²

The public transport system in lutruwita/Tasmania as it currently exists is a public bus-based system, with a number of operators across the state. But with only 2.5% of Tasmanians using a public bus to get to work, more needs to be done to incentivise the shift from private vehicles to public transport.¹³³ To fully understand Tasmanians attitudes to public

¹²⁶ Litman (2010) *Raise My Taxes, Please! Evaluating Household Savings From High Quality Public Transit Service*, p. 5, <http://www.vtpi.org/raisetaxes.pdf>

¹²⁷ Climate Council (2023) *Shifting Gear: the Path to Cleaner Transport*, p. 14, https://www.climatecouncil.org.au/wp-content/uploads/2023/05/CC_MVSA0354-CC-Report-Road-to-Personal-Transport_V5-FA-Screen-Single.pdf

¹²⁸ ACT Government (2015) *Building an integrated transport network*, p. 2, <https://www.transport.act.gov.au/about-us/active-travel?a=888712#:~:text=The%20ACT%20Government%20is%20building,travel%20choices%20across%20the%20ACT>

¹²⁹ Ibid, p. 31

¹³⁰ McIntosh et. al. (2014) *The role of urban form and transit in city car dependence: Analysis of 26 global cities from 1960 to 2000*, <https://www.sciencedirect.com/science/article/abs/pii/S136192091400114X>

¹³¹ Killick (2022) *Wilkie slams sloth-like progress on light rail plan*, <https://www.themercury.com.au/news/politics/not-suitable-parliamentary-committee-reveals-damning-light-rail-findings/news-story/1dcfcc901092b388dd788516da9d9282>

¹³² Murray (2023) *Prime Minister Anthony Albanese pledges \$240 million for Hobart stadium at Macquarie Point*, <https://www.abc.net.au/news/2023-04-29/pm-announces-funding-for-tas-afl-stadium-at-macquarie-point/102209420>

¹³³ ABS (2021) *Tasmania*, <https://www.abs.gov.au/census/find-census-data/quickstats/2021/6>

transport, more data is needed on Tasmanian's transport habits outside of work, for purposes such as education, socialising, shopping, recreation, and care. In a 2017 study on Tasmanian travel habits conducted by Menzies, the vast majority of respondents in this survey rarely or never used a public bus on weekends in the last year.¹³⁴

The lack of availability of public bus services out of peak times such as before 8am and after 6pm, as well as on weekends, can also limit the choices of potential users.¹³⁵ Lack of frequency and long wait and journey times for buses is another a deterrent, which, in rural or urban fringe areas at least, are more likely to make the journey slower than by car. In the Menzies travel study, 18% of respondents said that a lack of frequency of bus services was a barrier to their use.¹³⁶ Frequent services between urban hotspots, with short wait times between connecting services, would help to ease this issue.

Unreliability of services, due to lack of staffing, has also been a problem recently.¹³⁷ On the first week of February this year, as children returned to school, more than seventy services were cancelled. The Tasmanian Rail, Tram and Bus Union said that high turnover within Metro Tasmania is due to a lack of safety, with drivers subjected to physical and verbal attacks. In response, the Tasmanian Government is piloting the use of transit offices on public transport, equipped with body cameras.¹³⁸ Alongside addressing these staff shortages, communication around services availabilities and delays could help to provide users with surety of service.

Access to public buses, particularly in rural areas, is a significant deterrent for potential users. In the Menzies travel study, it was found that bus stops were at most 10 minutes walk away for 86% of respondents in the greater Hobart region.¹³⁹ Outside of population hubs, the distance becomes far greater. This limits the ability of people with less physical mobility to access these services. Linking bus stops with other transport routes, such as adequate footpaths and bike lanes, can help people access public transport, as well as increase active transport.

¹³⁴ Menzies Institute for Medical Research (2018) *Tasmanian travel and physical activity study 2017*, p. 11, https://www.menzies.utas.edu.au/__data/assets/pdf_file/0003/1084269/TAPAS-summary-report.-15.02.18.-Lyth-Sharman-Cleland.pdf

¹³⁵ Department of State Growth (n.d) *Transport Access Strategy*, p. 7, https://www.stategrowth.tas.gov.au/__data/assets/pdf_file/0007/174076/Transport_Access_Strategy.PDF

¹³⁶ Menzies Institute for Medical Research (2018) *Tasmanian travel and physical activity study 2017*, p. 20, https://www.menzies.utas.edu.au/__data/assets/pdf_file/0003/1084269/TAPAS-summary-report.-15.02.18.-Lyth-Sharman-Cleland.pdf

¹³⁷ Rojahn and Podwinski (2023) *More than 70 Metro bus services cancelled across Hobart as kids return to school*, <https://www.abc.net.au/news/2023-02-08/metro-bus-services-cancelled-as-children-return-to-school/101944750>

¹³⁸ Rockcliff (2023) *Taking additional action to safeguard public transport*, https://www.premier.tas.gov.au/site_resources_2015/additional_releases/taking-additional-action-to-safeguard-public-transport

¹³⁹ Menzies Institute for Medical Research (2018) *Tasmanian travel and physical activity study 2017*, p. 9, https://www.menzies.utas.edu.au/__data/assets/pdf_file/0003/1084269/TAPAS-summary-report.-15.02.18.-Lyth-Sharman-Cleland.pdf

Urban fares by Metro Tasmania are reasonable, costing \$3.50 for one zone, or \$4.80 for two zones.¹⁴⁰ Zone two includes trips from the northern, southern and eastern suburbs into nipaluna/Hobart.¹⁴¹ Fares increase substantially for non-urban trips, with a journey to mutatayna/South Arm costing \$8.70, for example.¹⁴²

Non-urban fares are even higher in areas not covered by Metro Tasmania. The service from nipaluna/Hobart to Sorell, for example, costs \$7.60 one way.¹⁴³ Sorell is only 25 minutes from nipaluna/Hobart, and one of the fastest growing areas in the state, with a larger population than urban nipaulna/Hobart, West Hobart and South Hobart combined.¹⁴⁴ This might account for the fact that only 1.7% of people living in Sorell catch public transport to work.¹⁴⁵ Further south, the Redline service to Dodges Ferry, only forty minutes drive from nipaluna/Hobart, costs \$10.70.¹⁴⁶ The Tassielink service to the Tasman Peninsula costs \$13.70 to Dunalley and whopping \$24.20 to Port Arthur for a trip from nipaluna/Hobart.¹⁴⁷ These fares have not improved since 2019.

Overcrowding on buses has been reported across the state, but is particularly bad in nipaluna/Hobart.¹⁴⁸ This issue is worse during peak times, including before and after school and work.

The Tasmanian Government should set a target for the increase of public transport, delivered by increasing the number of services available; the proliferation of bus stops; communication of services; securing reliability through staff retention; reducing fares (particularly in rural areas); and reduce overcrowding. Their investment should be just as much, if not more, than what is spent on light passenger vehicles, given the electrification potential in heavier vehicles.

¹⁴⁰ Metro Tasmania (2023) *Urban fares*, <https://www.metrotas.com.au/fares/urban-fares/>

¹⁴¹ Metro Tasmania (2023) *Fare changes*, <https://www.metrotas.com.au/fares/farechanges/>

¹⁴² Metro Tasmania (2023) *Non-urban fares*, <https://www.metrotas.com.au/fares/non-urban-fares/>

¹⁴³ Tasmanian Government (2019) *Dodges Ferry/Carlton and Sorell to Hobart bus fares*, https://www.transport.tas.gov.au/__data/assets/pdf_file/0003/183936/Carlton,_Dodges_Ferry_and_Sorell_to_Hobart_fares_v2.pdf

¹⁴⁴ Augustine (2022) *Population boom: why more people are choosing Sorell*, <https://www.themercury.com.au/news/tasmania/population-boom-why-more-people-are-choosing-sorell/news-story/c5b3cd26b1027e4816d9b37c4ad7cdc4>; ABS (2021) *Sorell*, <https://abs.gov.au/census/find-census-data/quickstats/2021/LGA64810>; ABS (2021) *Hobart*, <https://www.abs.gov.au/census/find-census-data/quickstats/2021/SAL60276>; ABS (2021) *South Hobart* <https://www.abs.gov.au/census/find-census-data/quickstats/2021/SAL60615>; ABS (2021) *West Hobart*, <https://www.abs.gov.au/census/find-census-data/quickstats/2021/601051033>

¹⁴⁵ ABS (2021) *Sorell*, <https://abs.gov.au/census/find-census-data/quickstats/2021/LGA64810>

¹⁴⁶ Tasmanian Government (2019) *Dodges Ferry/Carlton and Sorell to Hobart bus fares*, https://www.transport.tas.gov.au/__data/assets/pdf_file/0003/183936/Carlton,_Dodges_Ferry_and_Sorell_to_Hobart_fares_v2.pdf

¹⁴⁷ Tasmanian Government (2019) *Tasman Peninsula to Hobart bus fares*, https://www.transport.tas.gov.au/__data/assets/pdf_file/0005/183938/Tasman_Peninsula_to_Hobart_fares_v2.pdf

¹⁴⁸ Inglis (2021) *Overcrowding on Tasmanian buses getting worse: RTBU*, <https://www.examiner.com.au/story/7217006/overcrowding-on-tasmanian-buses-getting-worse-union-says/>

Active transport

There's no better mode of transport for emissions reduction than active transport, which can include activities such as walking, cycling and scootering. When a person walks or cycles, their carbon footprint is reduced by 84%.¹⁴⁹ The Climate Council argues that, in order to achieve the decarbonisation needed, 15% of transport should be shifted to active transport.¹⁵⁰ However, in lutruwita/Tasmania, only 4.2% of people walk to work and 0.7% bike.¹⁵¹ More data is needed on people's travel habits outside of work, for purposes such as education, socialising, shopping, recreation, and care. But with 28% of Australians living and working in the same postcode and 55% living within 10 kilometres of their workplace, there is exciting potential for a mode shift towards active transport.¹⁵² Victoria aims to increase active transport use by 25% 2030 and the ACT 7% for work by 2026.¹⁵³

Active transport has significant co-benefits for health, from increased exercise as well as reduced pollution, eases cost of living and reduces congestion.¹⁵⁴ However, there are a number of deterrents, including lack of safety on footpaths, crossings and roads; physical exertion, especially with the high density of hills in suburbs such as nipaluna/Hobart; and poor connectivity to public transport.¹⁵⁵ Specific to bicycling, the cost of owning a bicycle and a lack of bicycle parking and showering facilities can limit use.¹⁵⁶

In the ACT, a 2011 survey suggested that people would be more willing to engage in active travel if footpaths supported wheelchairs and prams; segregated bicycle lanes; frequent rest

¹⁴⁹ Brand et al. (2021) *The climate change mitigation impacts of active travel: Evidence from a longitudinal panel study in several European cities*,

<https://www.sciencedirect.com/science/article/pii/S0959378021000030>

¹⁵⁰ Climate Council (2023) *Shifting Gear: the Path to Cleaner Transport*, p. 14,

https://www.climatecouncil.org.au/wp-content/uploads/2023/05/CC_MVSA0354-CC-Report-Road-to-Personal-Transport_V5-FA-Screen-Single.pdf

¹⁵¹ ABS (2021) *Tasmania*, <https://www.abs.gov.au/census/find-census-data/quickstats/2021/6>

¹⁵² Ye and Ma (2019) *Australian city workers' average commute has blown out to 66 minutes a day. How does yours compare?*, <https://theconversation.com/australian-city-workers-average-commute-has-blown-out-to-66-minutes-a-day-how-does-yours-compare-120598>

¹⁵³ Victorian Government (2021) *Transport sector emissions reduction pledge*,

<https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/Transport-sector-pledge-accessible.pdf>; ACT Government (2015) *Building an integrated transport network*, p. 2,

<https://www.transport.act.gov.au/about-us/active-travel?a=888712#:~:text=The%20ACT%20Government%20is%20building,travel%20choices%20across%20the%20ACT>

<https://www.transport.act.gov.au/about-us/active-travel?a=888712#:~:text=The%20ACT%20Government%20is%20building,travel%20choices%20across%20the%20ACT>

¹⁵⁴ Climate Council (2023) *Shifting Gear: the Path to Cleaner Transport*, p. 17-18,

https://www.climatecouncil.org.au/wp-content/uploads/2023/05/CC_MVSA0354-CC-Report-Road-to-Personal-Transport_V5-FA-Screen-Single.pdf

¹⁵⁵ ACT Government (2015) *Building an integrated transport network*, p. 23,

<https://www.transport.act.gov.au/about-us/active-travel?a=888712#:~:text=The%20ACT%20Government%20is%20building,travel%20choices%20across%20the%20ACT>

<https://www.transport.act.gov.au/about-us/active-travel?a=888712#:~:text=The%20ACT%20Government%20is%20building,travel%20choices%20across%20the%20ACT>

¹⁵⁶ Scheepers et. al. (2014) *Shifting from car to active transport: A systematic review of the effectiveness of interventions*, p. 267, https://pg.edu.pl/files/wilis/2021-05/Scheepers%20at.%20al%20Shifting%20from%20car%20to%20active%20transport_A%20systematic%20review%20of%20the%20effectiveness%20of%20interventions.pdf

spots created; and better signage, lighting and surveillance.¹⁵⁷ Improved driver awareness of the rights of walkers and cyclists and fines to discourage unsafe driving are other methods. Reducing traffic speed, or barring access altogether, can also help active travellers to feel safer.¹⁵⁸ Bike or scooter sharing services, especially those equipped with electric capacities, can help travellers overcome exertion barriers.¹⁵⁹ Research by the Australia Institute shows that 80% of those surveyed supported modifying streets to encourage walking, and 30% supported a rebate for bikes.¹⁶⁰

The City of Hobart's E-scooter Trial was an excellent increasing active transport and reducing emissions.¹⁶¹ Their evaluation of the Trial suggested that 51% of e-scooter rides replaced fossil-fuel car travel – averting 66 tonnes of CO₂ from being emitted.¹⁶²

Increasing active transport provides an exciting decarbonisation opportunity with impressive health co-benefits. The Tasmanian Government should set a target for an increase in active transport, delivering this through improved infrastructure and education, and helping its local council partners to do the same.

Driving electric trucks

Trucks create a substantial proportion of the 32% of Tasmania's transport emissions that originates from heavy vehicles.¹⁶³ Across Australia, they represent 15% of emissions despite being only 1% of vehicles.¹⁶⁴ Further, given that trucks are large users of fossil fuels, they have a larger decarbonisation potential than passenger electric vehicles; Adiona Tech recently found that electrifying 10 'last mile' trucks would reduce the same amount of carbon emissions as 56 electric passenger vehicles.

¹⁵⁷ ACT Government (2015) *Building an integrated transport network*, p. 23, <https://www.transport.act.gov.au/about-us/active-travel?a=888712#:~:text=The%20ACT%20Government%20is%20building,travel%20choices%20across%20the%20ACT>

¹⁵⁸ Scheepers et. al. (2014) Shifting from car to active transport: A systematic review of the effectiveness of interventions, p. 276, https://pg.edu.pl/files/wilis/2021-05/Scheepers%20at.%20al%20Shifting%20from%20car%20to%20active%20transport_A%20systematic%20review%20of%20the%20effectiveness%20of%20interventions.pdf

¹⁵⁹ Ibid, p. 277

¹⁶⁰ Quicke and Venketasubramanian (2022) *Climate of the Nation 2022*, p. 29,

<https://australiainstitute.org.au/wp-content/uploads/2022/11/Climate-of-the-Nation-2022.pdf>

¹⁶¹ City of Hobart (2023) *E-scooters*, <https://www.hobartcity.com.au/City-services/Transport-and-traffic-management/E-scooters>

¹⁶² City of Hobart (2023) *City of Hobart Micromobility (e-scooter) Trial*, <https://www.hobartcity.com.au/files/assets/public/city-services/transport-and-traffic-management/e-scooters/e-scooter-trial-evaluation-report.pdf>

¹⁶³ Tasmanian Policy Exchange (2021) *Towards a climate-positive Tasmania*, p. 35, https://www.utas.edu.au/__data/assets/pdf_file/0009/1545561/Towards-a-climate-positive-Tasmania-02112021.pdf

¹⁶⁴ Adiona Tech (2023) *Connected Thinking*, p. 4, https://uploads-ssl.webflow.com/5f276424cd1d3033a76da418/6451ea7d71fb400e5951cb05_Connected%20Thinking%20-%20An%20Adiona%20Tech%20report%20on%20Australian%20transport%20electrification%20priorities.pdf

Globally, heavy-duty vehicles are still in the early stages of electrification.¹⁶⁵ Strides are being made towards electrification, however, with electric truck sales making between 2.7% and 1.5% of total new truck sales since 2016. There are now 58 electric truck models available in North America, Europe and China.¹⁶⁶ Countries such as Norway aim for 50% of new trucks to be electric by 2030. Comparatively, Australia lags behind, with no truck electrification target, low truck sales and only 14 models of electric truck available.

There is enormous potential for truck electrification in Australia. Despite a lack of diversity in models compared to Europe, electric trucks are available in Australia. This is particularly true for trucks which conduct 'last mile' services, travelling less than 100km per day.¹⁶⁷ Coles, for example, are trialling electric trucks for deliveries.¹⁶⁸

Australia's trucking fleet is aging – with an overall age of 10-15 years, compared to 6-10 years in Europe – meaning that trucks are likely to need replacing soon.¹⁶⁹ Further, 98% of truck operators are small or family-owned businesses, and 70% only have one truck.¹⁷⁰

The benefits to purchasers go beyond simply reducing CO₂ emissions – including ending the volatility and price associated with diesel costs, reducing maintenance costs, improving urban efficiency and delivering better conditions for truck drivers. In January 2022 – before fuel costs skyrocketed – electric trucks cost \$18 for 300 kilometres of fuel, while fuelling a diesel truck cost \$117.¹⁷¹

Businesses are innovating in order to address lack of supply of electric trucks and ensure that truckers who want to switch to electric can. Janus Electric, for example, convert regular trucks to electric engines.¹⁷² Diesel engines need to be rebuilt at 1 million kilometres – typically 4-5 years – providing a perfect time to make the switch. Under this system, batteries can be swapped out at key intervals on the road. A similar system could be implemented in lutruwita/Tasmania.

The Electric Vehicle Council and the Australian Trucking Association have recommended assistance from governments to increase take up. They've suggested that governments

¹⁶⁵ International Council on Clean Transportation (2022) *Annual update on the global transition to EVs: 2021*, <https://theicct.org/wp-content/uploads/2022/06/global-ev-update-2021-jun22.pdf>, p. 5

¹⁶⁶ Electric Vehicle Council (2022) *Electric trucks: Keeping shelves stocked in a net zero world*, p. 9, https://electricvehiclecouncil.com.au/wp-content/uploads/2022/01/ATA-EVC-Electric-trucks_Keeping-shelves-stocked-in-a-net-zero-world-1.pdf

¹⁶⁷ Basma et al (2022) *Electrifying last-mile delivery*, p. i, <https://theicct.org/wp-content/uploads/2022/06/tco-battery-diesel-delivery-trucks-jun2022.pdf>

¹⁶⁸ Coles (2022) *Coles drives for sustainability with first electric delivery truck*, <https://www.colesgroup.com.au/media-releases/?page=coles-drives-for-sustainability-with-first-electric-delivery-truck>

¹⁶⁹ Electric Vehicle Council (2022) *Electric trucks: Keeping shelves stocked in a net zero world*, p. 4, https://electricvehiclecouncil.com.au/wp-content/uploads/2022/01/ATA-EVC-Electric-trucks_Keeping-shelves-stocked-in-a-net-zero-world-1.pdf

¹⁷⁰ Ibid, p. 5

¹⁷¹ Foley (2022) *Make trucks electric to lift suburban curfews and ease congestion: Trucking industry*, <https://www.smh.com.au/politics/federal/make-trucks-electric-to-lift-suburban-curfews-and-ease-congestion-trucking-industry-20220114-p59oa0.html>

¹⁷² Janus Electric (2022), <https://www.januselectric.com.au/>

should provide purchase price incentives, invest in charging infrastructure, adopt a target of 30% of new truck sales to be electric by 2030, exempt electric trucks from urban curfews and change weight and width limits to accommodate batteries.¹⁷³ This is an excellent example of how policies incentivising light EV uptake by the state government can be applied to heavy vehicles. The Tasmanian Government should adopt these recommendations, ensuring that they spend just as much, if not more, on electrifying trucks as light passenger vehicles, due to their electrification potential.

Rewarding innovation

Innovation by governments, businesses and communities will drive the transition to EVs. The Victorian Government has committed \$5 million to a Zero Emissions Vehicles Commercial Sector Innovation Fund.¹⁷⁴ Through this program, businesses can apply for grants to implement innovative projects. Businesses were encouraged to apply zero emissions technology to a range of commercial uses, such as vehicle-charging infrastructure, electrifying business fleets, wheelchair accessible vehicles and training. The NSW Government is also providing grants to business such as councils, leasing and car sharing companies to electrify their fleets.¹⁷⁵

A similar grants program for innovative businesses could be applied in lutruwita/Tasmania, extending to businesses who use, supply, manufacture and service EVs. There are already a number of innovative electric vehicle businesses already operating in lutruwita/Tasmania that could expand with the help of government funding. The Good Car Company imports second hand EVs, selling them for under half the price of a new electric vehicle.¹⁷⁶ This helps to ease the main barrier that most people face to purchasing an electric vehicle – price. Elphinstone are helping to drive the manufacture of new electric technologies. They have produced an electric bus for Metro lutruwita/Tasmania, are developing vehicles for underground hard rock mining and manufacture electrical harnesses for mining equipment.¹⁷⁷ Incat are building the world's largest electric ship.¹⁷⁸ An innovation grant fund

¹⁷³ Electric Vehicle Council (2022) *Electric trucks: Keeping shelves stocked in a net zero world*, p. 13, https://electricvehiclecouncil.com.au/wp-content/uploads/2022/01/ATA-EVC-Electric-trucks_Keeping-shelves-stocked-in-a-net-zero-world-1.pdf

¹⁷⁴ Premier of Victoria (2021) *Grants To Drive Zero Emissions Future*, <https://www.premier.vic.gov.au/grants-drive-zero-emissions-future>

¹⁷⁵ NSW Government (2021) *NSW Electric Vehicle Strategy*, p. 20, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Climate-change/nsw-electric-vehicle-strategy-210225.pdf>

¹⁷⁶ Good Car Co. (2021) *Our Cars*, <https://www.goodcar.co/>

¹⁷⁷ Elphinstone (2021) *Elphinstone manufactures electrical harnesses for mining equipment and specialised applications*, <https://elphinstone.com/elphinstone-manufactures-electrical-harnesses-for-mining-equipment-and-specialised-applications/>; Elphinstone (2021) *Battery Electric Vehicle Project (BEV)*, <https://elphinstone.com/battery-electric-vehicle-project-bev/>; BusTech Group (2021) *BusTech Group and Elphinstone deliver 100th bus for Tasmania*, <https://bustechgroup.com.au/bustech-group-and-elphinstone-deliver-100th-bus-for-tasmania/>

¹⁷⁸ Bleakley (2023) *Tasmania's Incat to build world's largest all electric ship after customer dumps LNG*, <https://thedriven.io/2023/01/19/tasmanias-incat-to-build-worlds-largest-all-electric-ship-after-fossil-alternative-dumped/amp/>

could also be used by businesses to move their fleet to electric or train the electricians and mechanics to facilitate growing EV numbers.

Manufacturing our EV future

The transition to EVs presents an opportunity for Australia to rebuild its vehicle manufacturing industry.¹⁷⁹ This takes advantage of our strengths in producing renewable energy and extraction of copper and nickel, while building on our historical manufacturing capabilities and skilled workers. The Avelbury Nickel Mine, in Zeehan, has recently re-opened following the rise in nickel prices, due to EV sales.¹⁸⁰ Figure 5 shows that strong majority of Tasmanians (72%) support increasing domestic manufacturing of EVs.¹⁸¹

¹⁷⁹ Dean (2022) *Rebuilding Vehicle Manufacturing in Australia: Industrial Opportunities in an Electrified Future*, p. 4, https://australiainstitute.org.au/wp-content/uploads/2022/02/Rebuilding_Vehicle_Manufacturing_in_Australia_FINAL_march.pdf

¹⁸⁰ Powell (2022) *Reopened nickel mine could be Tasmania's ticket into blossoming EV industry*, <https://amp.abc.net.au/article/101702622>

¹⁸¹ The Australia Institute (2021) *Climate of the Nation 2021 Tasmanian Supplement*, <https://australiainstitute.org.au/wp-content/uploads/2021/10/Climate-of-the-Nation-2021-TAS-supplement.pdf>

Conclusion and Recommendations

With continued emissions and reliance on unpredictable LULUCF offsets, we need to see decarbonisation in lutruwita/Tasmania in order to remain at net zero emissions by 2030.

Lucky for lutruwita/Tasmania, there is large decarbonisation potential in transitioning our transport, the state is ideally placed for EVs, and Tasmanians have shown clear support for the move towards them.

The Tasmanian Government has made a start in incentivising EV uptake through policies such as waiving stamp duty for all EV purchasers, waiving registration costs for car rental companies, providing grants for charging stations, committing to make the government fleet 100% electric by 2030 and supporting electric bus trials.

But Tasmanian EV uptake is lagging. Less than 1% of vehicles in the state are electric. Only 3% of vehicle sales in 2022 were electric.

A comparison across Australian jurisdictions has shown that the Tasmanian Government is stalling compared to its interstate counterparts in implementing EV incentives. lutruwita/Tasmania is the only state without an overarching strategy document or purchase price incentive such as a subsidy, rebate or loans scheme – the most important policy which can be implemented to incentivise EV uptake. A number of other states have set targets for EV sales, waived registration and stamp duties, provided ongoing support to increase fast chargers and raised consumer awareness around the switch to EVs.

More needs to be done to incentivise electric vehicle and public transport uptake, and the sectoral emissions reduction plans required by amendments to Tasmania's Climate Change Act provide the perfect opportunity.

Climate Tasmania recommends the following policies to accelerate EV uptake:

1. Creating an ambitious sector emission reduction plan for transport, by 2024, which sets a target for decarbonisation and policies to achieve it;
2. Setting targets for vehicle electrification to be 100% of all light vehicle sales to be electric by 2030, 100% of new bus purchases to be electric by 2025, 100% of the bus fleet to be electric by 2030 and 30% of new truck sales to be electric by 2030;
3. Providing purchase price incentives such as a registration waivers to all drivers on an ongoing basis and introducing a subsidy or rebate of \$3,000, or loan scheme of \$15,000;
4. Scrapping their commitment to the world's worst EV policy, a road user tax;
5. Creating the infrastructure needed, by continuing the ChargeSmart Grants program, changing planning laws to support EV charging infrastructure and introducing a grant scheme for innovative solutions to EV implementation;
6. Raising consumer awareness on purchasing EVs;

7. Spending just as much on the electrification of heavy electric vehicles, if not more, than on light passenger vehicles, given their decarbonisation potential;
8. Creating a target for public transport increase, delivered by making services more frequent, cheaper, reliable and accessible; and
9. Creating a target for active transport increase, delivered by improving physical infrastructure and driver education.