ARE WE THERE YET?
CLEAN TRANSPORT SCORECARD FOR AUSTRALIAN STATES AND TERRITORIES

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Key findings

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Cleaning up transport is the next frontier in tackling the climate crisis, as this is Australia's third largest source of greenhouse gas emissions - and it's rising.

› Transport accounts for 18.7 percent of our national emissions, with cars and light commercial vehicles the biggest contributors.

› At the same time as other sectors of the economy are getting cleaned up (like electricity), personal transport is one of our nation's fastest growing sources of emissions.

› For Australia to play its part in limiting climate harm by reaching net zero by 2035, transport emissions need to plummet by an average of 7 million tonnes annually. That's equal to the drop in transport emissions we saw during COVID-19 lockdowns.

› We have the technologies we need right now to decarbonise the transport sector, and focusing on providing cleaner options for Australians to get around each day will be key to reaching zero emissions.

2

A few states and territories are bucking the trend of rising transport emissions, with the Australian Capital Territory (ACT) and Tasmania leading the race to decarbonise transport.

› In the past decade, Tasmania has reduced its overall transport emissions by 18 percent and the ACT by seven percent - proving we can reverse the trend of rising transport emissions.

› South Australia has also cut transport emissions (by five percent) and Victoria has managed a slight (one percent) decline, with all other states and territories adding to rising transport emissions.

› The ACT and Tasmania also recorded the lowest transport emissions on a per person basis.

› At the moment, most states and territories only allocate less than two percent of their budgets on essential infrastructure for active options like walking and bike riding. This is not what the Australian public wants or expects.

3

Transport needs and the capacity to act vary across states and territories. All are switching gears when it comes to clean transport, but need to do much more to rapidly reduce emissions.

› Across the board the ACT leads on many markers of progress, which resulted in its number one ranking, and award for *Clean All Rounder.*

› New South Wales was the runner up, being crowned *Public Transport Powerhouse* based on its impressive public transport usage. Tasmania *(Emissions Slasher award)* and Victoria *(People Powered award)* are tied for third.

› South Australia is charging ahead with its electric vehicle infrastructure, while Queensland, Western Australia and the Northern Territory have the most work to do to find zero emission transport solutions that work across their vast distances.

› Overall, all states and territories need to focus on becoming less car centric and dependent by implementing a major shift to public transport and active options like walking and riding. Less than one in five Australians choose to do so now.

› More work can also be done to accelerate the uptake of electric vehicles by supporting the introduction of national fuel efficiency standards, electrifying government fleets, offering incentives or zero interest loans to purchase electric vehicles, and improving access to public charging facilities.

4

Shifting rapidly away from a transport system dominated by private, polluting cars to one that's more active and runs on clean energy will dramatically improve our lives in many ways.

› Providing better access and options for catching public transport and active travel (like walking, riding or rolling) will make it easier for all Australians to get around - including some of the most disadvantaged. It will create cleaner and healthier communities, and reduce people's costs of living all while growing the economy.

› Research shows that when people get more active they can significantly cut overall transport emissions. A study in Europe found if one in five urban residents switched from driving to bike riding for one trip a day, it could cut European car emissions by eight percent.

› States and territories should set targets for the percentage of trips they want to shift to active and public transport, and invest at least 50 percent of their transport budgets in public transport, plus 20 percent in essential active transport infrastructure, like walking and bike lanes.

THE AUSTRALIAN
CLEAN TRANSPORT RACE:
2022 SCORE CARD

	Transport and useage profile						Transport policies and plans			
	Transport emissions per person (tCO2e)	Transport emissions trend % (2009-2019)	Public transport share (%)	Active transport share (%)	Electric vehicles as a % of new car sales (2022 year to date)	Electric vehicle chargers per 100,000 people	Zero emissions transport plan	Public and active transport mode share target	Electric bus target	Government fleet target for electric passenger vehicles
1 ACT	1.65	▼ 7.37	7.09	8.35	9.45	9	☑	☒	2022: new purchases, 2040: entire fleet	All new vehicles now
2 NSW	1.85	▲ 2.37	13.93	5.41	3.66	8	☑	☒	2047: entire fleet	100% by 2030
3 VIC	1.89	▼ 0.97	10.38	5.30	3.43	7	☑	25% active transport by 2030	2025: new purchases	400 zero emissions vehicles by 2023
3 TAS	1.69	▼ 18.46	3.05	6.87	3.25	19	☒	☒	☒	100% by 2030
5 SA	2.00	▼ 4.76	6.75	4.57	2.28	12	Partial	☒	☒	100% by 2030
6 QLD	2.31	▲ 15.61	6.28	5.22	3.26	7	Developing	☒	2030: new purchases	100% by 2026
7 WA	2.43	▲ 20.32	7.43	4.57	2.79	11	Developing	☒	☒	25% by 2025-26
8 NT	2.30	▲ 37.69	5.60	12.67	0.84	9	☒	☒	☒	20% by 2030

Transport emissions data uses the period up until the end of 2019, to account for changes due to COVID-19. Similarly, public and active transport share uses the 2016 Census, as the 2021 Census was impacted by COVID-19 lockdowns.

1. Introduction: Why transport emissions matter

With the transformation of Australia's energy system underway and accelerating rapidly, decarbonising transport is the next frontier for our nation in tackling the climate crisis.

Transport accounts for 18.7 percent of Australia's greenhouse gas emissions, and is the third highest source of emissions behind only electricity and stationary energy (DCCEEW, 2022). Road transport is responsible for the bulk of transport emissions, with cars and light commercial vehicles alone making up 62 percent of this pollution (DISER, 2021). Importantly, at a time when emissions from other sectors have started a welcome and necessary decline, personal transport is one of Australia's fastest growing sources of emissions (DCCEEW, 2022).[1]
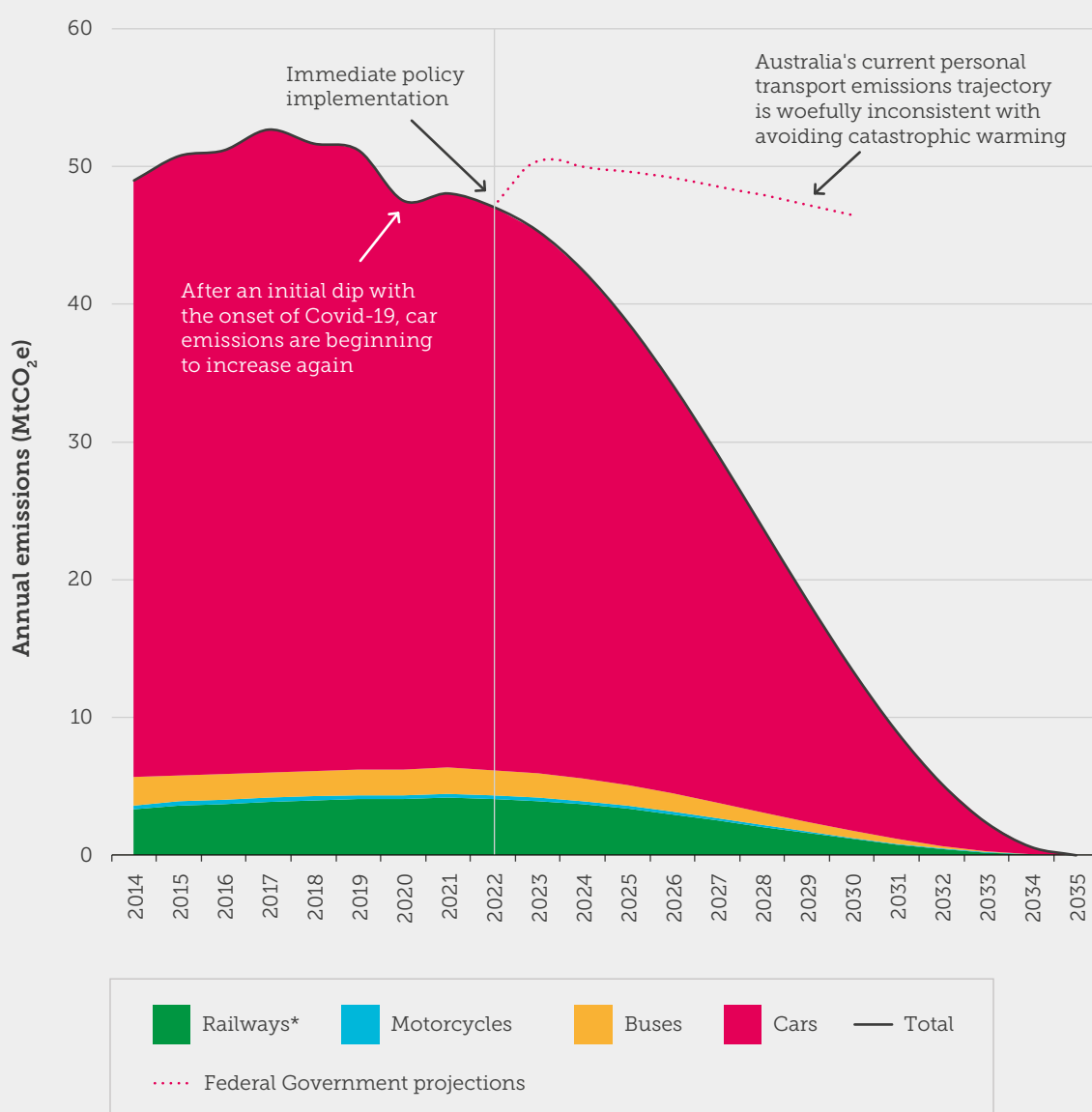
To help limit warming in line with the *Paris Agreement* and avoid a full-blown climate catastrophe, Australia should aim to reach net zero emissions by 2035 (Climate Council, 2021). Achieving near absolute zero emissions by 2035 in the transport sector will require transport emissions to plummet by an average of 6.99 million tonnes annually (DCCEEW, 2022),[2] as sharp a drop as experienced due to the impacts of COVID-19 lockdowns in 2019-2020 (DISER, 2021). Even if Australia were to move much slower, and only aim to reach its net zero emissions by 2050, transport emissions would still need to drop by an average of 3.24 million tonnes annually.

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1   Prior to COVID-19, transport was the second largest and fastest growing source of emissions. DISER (2021) projects that transport emissions will return to pre-pandemic levels by 2024.

2   Emissions reductions based on the March 2022 National Greenhouse Gas Inventory update.

TIME TO GET MOVING: RAPID EMISSIONS REDUCTION FOR PERSONAL TRANSPORT

Trajectory for near absolute zero emissions if the right policies are put in place immediately

Immediate policy implementation

Australia's current personal transport emissions trajectory is woefully inconsistent with avoiding catastrophic warming

After an initial dip with the onset of Covid-19, car emissions are beginning to increase again

Annual emissions (MtCO$_2$e)

Legend: Railways* · Motorcycles · Buses · Cars · Total · Federal Government projections

*Railways includes freight.

Source: DISER (2021)

Figure 1: Moving fast, or moving slow: how our choices will determine personal transport emissions out to 2035.

We can rapidly cut transport emissions this decade using smart policies and technologies that exist today.

Policies and investments that reduce transport emissions can be put in place now using existing technologies. This makes reducing emissions in the transport sector quickly this decade much easier than is the case for some other sectors of the economy, where solutions are in earlier stages of development. Given the range of clean transport options that are readily available, the focus for this sector should be on achieving near absolute zero emissions. This means getting as close to zero emissions as possible with minimal use of offsetting or 'net zero' accounting.

Decarbonising personal transport is a significantly bigger task than getting all drivers to swap their petrol vehicles for an electric vehicle (EV). We also need to shift the focus of transportation away from being dominated by private cars. Boosting zero emissions public transport, and building quality, connected and safe footpaths and bike lanes gives people much better options so they can choose how to get around and do their bit in reducing emissions.

Doing so will deliver a wide range of further benefits to people living in cities and regions such as cleaner air, healthier communities, lower travel costs, and much more liveable cities and towns (see Section 4. *Towards public and active transport*, for more discussion of these benefits).

States and territories in Australia are responsible for public transport systems, as well as most of our road network. At the moment, most only allocate less than two percent of their budgets on essential infrastructure for active transport like footpaths and bikes (Pojani et al., 2018). This is not what the Australian public expects - with 77 percent wanting their state or territory to prioritise this spending or at least balance it against road funding.

This report compares the performance of Australia's states and territories when it comes to driving the decarbonisation of personal transport. It provides a transparent baseline for comparing where we are today, as well as for tracking progress as each jurisdiction works to cut transport emissions over time.

THE INFLUENCE OF COVID-19 ON TRANSPORT

In 2020 and 2021, Australians living in different parts of the country experienced a series of lockdowns as governments battled to control the spread of COVID-19. People living in Melbourne and Sydney spent the most days in lockdown, with the strictest limitations on movement. These two major cities (where more than 10 million people live) spent a total of 263 and 159 days under lockdowns respectively, followed by Brisbane at 67 days, Adelaide at 62 days and Perth at 61 days (Lockdown Stats Melbourne, 2021).

This had a sudden and severe impact on people's ability and desire to move around, their travel patterns and ultimately, transport emissions.

In addition to a significant rise in the number of people working from home rather than offices, COVID-19 safety risks decreased people's willingness to use public transport (ITLS, 2022). The pandemic also resulted in significant increases in people walking and riding - both for leisure and errands as people stayed closer to home. In fact, one Sydney study found that 91 percent of people reported walking more often for exercise and leisure due to the pandemic. Similarly, the number of people riding a bike more than doubled (City of Sydney, 2021a).

The Climate Council has accounted for the effect of COVID-19 in this report by using 2016 Census data to provide a more typical snapshot of transport-related behaviour than the 2021 Census data when there were lockdowns, and using transport emissions data prior to COVID-19 (up until the end of 2019).

COMPARING APPLES AND ORANGES

Australian states and territories differ significantly in their geography, population density and distribution of key industries. This is why parts of Australia have very different capabilities and opportunities to pursue clean transport.

Decentralised jurisdictions where populations are spread around rather than concentrated in a capital city - including the Northern Territory, Western Australia and Queensland - face particular challenges when it comes to cleaning up their transport systems, especially compared with highly-urbanised communities such as those in the ACT and Victoria.

In assessing the progress being made towards clean transport across Australia and when identifying opportunities to accelerate this, it is therefore important to consider which mix of solutions best fits each local context. For example, in large states with dispersed communities, high-quality public transport systems connecting regional areas with major service centres may be a higher priority than investment in active travel options like bike lanes and footpaths in the cities. Whereas, strengthening infrastructure that enables uptake of electric vehicles may be particularly important for remote communities that do not have the population density required to support high-frequency public transport services.

Figure 2: Population density varies greatly between states and territories. For example, in 2021 the most densely populated area in Australia was Melbourne's Central Business District - North (with 31,100 people per square kilometre). In comparison, Western Australia's most densely populated area was Highgate in Perth's north (4,000 people per square kilometre) and for the Northern Territory it was Nightcliff in Darwin's northern suburbs (2,800 people per square kilometre) (ABS, 2022a).

2. Shifting gears: How states and territories measure up

SHIFTING GEARS:
HOW STATES & TERRITORIES MEASURE UP

ACT

CLEAN ALL ROUNDER

Transport emissions per person (tCO$_2$e)[3]
1.65

Leading: Zero emissions transport plan and more!

NEW SOUTH WALES

PUBLIC TRANSPORT POWERHOUSE

Transport emissions per person (tCO$_2$e)
1.85

Leading: Public transport uptake

Lagging: Electric vehicle chargers per person

VICTORIA

PEOPLE POWERED

Transport emissions per person (tCO$_2$e)
1.89

Leading: Target for active transport use

Lagging: Government electric vehicle fleet target

TASMANIA

EMISSIONS SLASHER

Transport emissions per person (tCO$_2$e)
1.69

Leading: Reducing transport emissions

Lagging: Public transport uptake

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3   tCO$_2$e = Tonnes of carbon dioxide equivalent. (A combined measure of greenhouse gases. Gases other than carbon dioxide, such as methane, are converted to the equivalent amount of carbon dioxide in terms of global warming potential.)
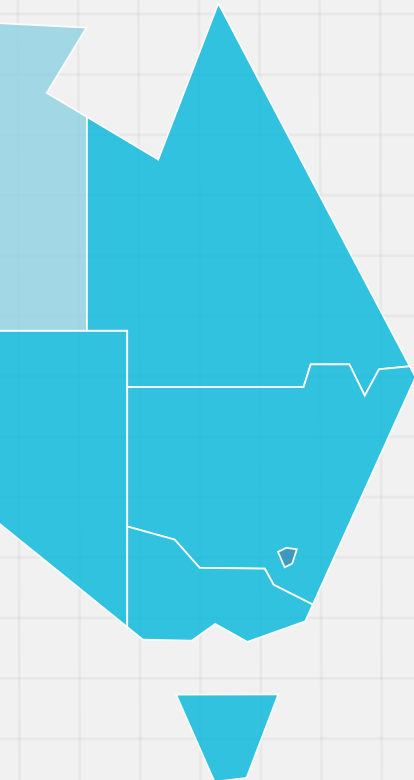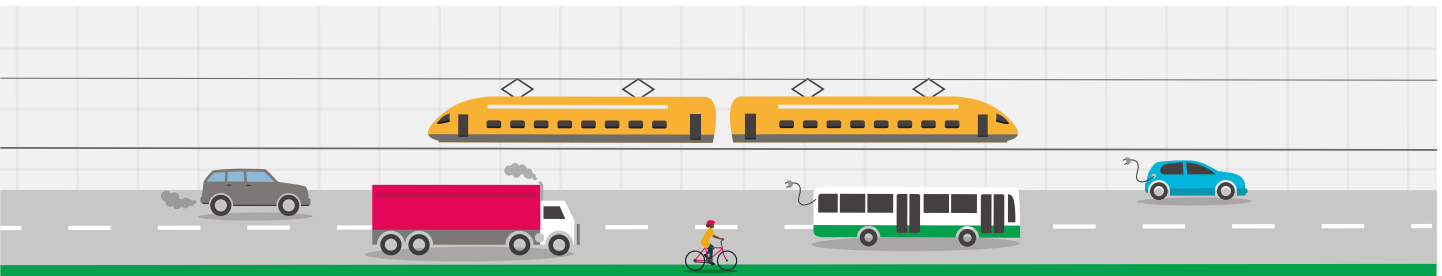
SOUTH AUSTRALIA

CHARGING AHEAD

5

Transport emissions per person (tCO$_2$e)
2.00

Leading: High number of electric vehicle chargers per person

Lagging: Share of people using active transport options

QUEENSLAND

FLEET FOOTED

6

Transport emissions per person (tCO$_2$e)
2.31

Leading: Government electric vehicle fleet target

Lagging: Electric vehicle chargers per person

WESTERN AUSTRALIA

HIGH HURDLER

7

Transport emissions per person (tCO$_2$e)
2.43

Leading: Relatively high public transport use

Lagging: Transport emissions per person

NORTHERN TERRITORY

ACTIVE MOVER

8

Transport emissions per person (tCO$_2$e)
2.30

Leading: Share of people using active transport options

Lagging: Transport emissions growth

3. Reducing transport emissions

TRANSPORT EMISSIONS ACROSS STATES AND TERRITORIES

There is significant variation across the country when it comes to transport emissions (see Table 1). This scorecard examines a number of metrics, each of which gives insight into different aspects of the switch to clean transport.

Measuring transport emissions per person means that the scorecard takes account of varying population sizes across states and territories. The ACT has the lowest transport emissions per person at 1.65tCO$_2$e per person per year, with Tasmania not far behind at 1.69tCO$_2$e per person. New South Wales and Victoria are next, with South Australia, the Northern Territory and Queensland in the middle of the pack. Western Australia brings up the rear with 2.43tCO$_2$e per person - no doubt reflecting the larger distances being travelled within Australia's largest state.

Tracking transport emissions growth or decline over the past 10 years (2009-2019) offers an insight into how states and territories are performing over the long term. Tasmania is a clear leader, having reduced transport emissions by 18.46 percent, while the ACT, South Australia and Victoria have also reduced emissions by 7.37 percent, 4.76 percent and 0.97 percent respectively. Unfortunately, the Northern Territory and Western Australia are moving in the wrong direction, having increased emissions over the past ten years by a whopping 37.69 percent and 20.32 percent respectively.[4] This is likely due to increased mining in the regions from 2010 onwards, which has resulted in more workers and others travelling more frequently across vast distances.

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4   There is a mixed relationship between population growth and trend in emissions over the same period (2009-2019). Tasmania's population increased at the slowest rate for example, growing by 6.25 percent while the state had the greatest emissions reduction (18.46 percent). However, the ACT, which reduced emissions by 7.37 percent, saw its population increase by 20.37 percent (second highest population growth after Victoria). South Australia (4.76 percent transport emissions reduction) and the Northern Territory (37.69 percent transport emissions increase) increased their populations by 7.67 percent and 7.51 percent respectively. New South Wales, Queensland and Western Australia had a similar range of population increases (between 13 and 16 percent) but the range in emissions increase differs greatly from 2.37 percent to 20.32 percent (ABS, 2010, 2020).

Table 1: State and territory transport emissions per person and trend.

	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Transport emissions per person (tCO$_2$e)	🥇 1.65	1.85	2.30	2.31	2.00	1.69	1.89	2.43
Transport emissions trend 2009-2019	-7.37%	2.37%	37.69%	15.61%	-4.76%	🥇 -18.46%	-0.97%	20.32%

Figure 3: At the end of January 2021, there were 20.14 million registered motor vehicles in Australia, with 14.85 million (74 percent) of these being passenger vehicles (ABS, 2021a). Car ownership and use is a significant part of Australian culture and something we will need to reimagine on the journey to net zero.

4. Towards public and active transport

To rapidly reduce transport emissions this decade, it is essential to increase the number of trips that people take by public transport, walking, bike riding, rolling (e.g. by scooter, skate board, or wheelchair) or other active options. Supporting and enabling people to shift away from private vehicle use and towards clean transport options should be a priority focus for governments around Australia.

It won't be any surprise to drivers who get stuck in car traffic - nationwide the most common way to travel to work is driving (by car, truck, motorbike or taxi) as 81 percent of people make their daily commute in a private vehicle. However, just under ten percent of Australians use public transport, and only a little over five percent walk or ride a bike (BITRE, 2021). This points to a significant opportunity for rapid emissions reduction this decade if we can support more people to choose clean, shared and/or active alternatives to the car.

New South Wales has the highest uptake of public transport among people commuting to work at almost 14 percent, well above all other jurisdictions. Victoria comes in second, but trails some way behind at around 10 percent, with most jurisdictions clustered at around 6-7 percent. Tasmania has the lowest uptake of public transport, with only three percent of people using it to get to work. As outlined previously, varying levels of urbanisation, travel distances, and the maturity and quality of the public transport system are all important factors in determining how easy and accessible public transport is to people as a regular way to get around.

Table 2: The amount of people who get to work without relying on a car.

Transport share %	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Public transport share	7.09%	🥇 13.93%	5.60%	6.28%	6.75%	3.05%	10.38%	7.43%
Active transport share	8.35%	5.41%	🥇 12.67%	5.22%	4.57%	6.87%	5.30%	4.57%

Figure 4: All public transport - from buses, trains, trams and ferries - will need to be electrified as soon as possible to rapidly reduce transport emissions. The world's first fully electric and zero-emissions fast ferry is now operational in Norway, joining a fleet of approximately 70 emission-free ferries operating across the country (Prevljak, 2022). It's time for Australia to make the switch!

When it comes to active ways of getting around, the Northern Territory leaves every other jurisdiction in its dust, with almost 13 percent of people walking and riding. This is particularly impressive given the Northern Territory's significantly hotter weather compared to the milder southern states. The ACT comes in second, with the other states sitting some way behind, pointing to strong opportunities around the country for more people to get active.

NSW leads the nation when it comes to public transport use at almost 14 percent of all work trips, and NT is number one for those walking and riding.

THE 'POWER OF ONE': THE COLLECTIVE CLIMATE IMPACT OF CHANGING TRAVEL FOR A SINGLE JOURNEY

A study in Europe (Brand et al., 2021) observed 4,000 people over a two-year period, finding that the carbon footprint for daily travel is 84 percent smaller for people who walk or cycle compared to other types of transport. The average person who shifted from car to bike for one day a week cut their carbon footprint by 3.2 kilograms of carbon dioxide, the equivalent emissions of driving a car for 10 kilometres or sending 800 emails. If just one in five urban residents permanently switched from driving to bike riding for one trip a day, it would cut emissions from all car travel in Europe by about 8 percent over the next few years.

QUEENSLAND'S BRISBANE TO BORDER MASTERPLAN

In August 2022, the Queensland Government announced a plan to connect South East Queensland all the way to the NSW border via bike lanes. Major gaps in the current network across local and state government assets will be identified in order to address them. This plan sets in motion one of the biggest single connected active transport links in the southern hemisphere (QLD Government, 2022). The Masterplan is an excellent example of a state government leveraging current upgrades to the transport network to review opportunities for active travel. Not only will the revised routes support Queenslanders to get around in healthy ways, but they pave the way for exciting events which will boost tourism, including a new map for the Tour de Brisbane.

Figures 5 and 6: Bike riding comes in many shapes and forms, to suit a range of lifestyles and life stages. Whether it's through one of 3,000 bike sharing systems worldwide and nearly ten million shared bikes (PBSC Urban Solutions, 2021); or cargo bikes and tandem bikes for families to get to school and other activities.

Rapidly reducing our overall emissions this decade and reaching near absolute zero for transport by 2035 requires a major and rapid shift away from polluting private cars towards quality, connected and safe options for public and active transport.

This is a big change for Australia, but it will deliver many benefits in addition to cutting emissions and avoiding even greater climate harm, including:

› **Better health:** In Australia, an estimated 1,700 deaths occur every year due to air pollution from cars, trucks and buses - which is higher than the national road toll (Schofield et al., 2017). Moving to zero emission vehicles and getting more people to use public and active transport options will deliver cleaner, healthier air - particularly in our cities.

› **Boosting productivity:** According to Infrastructure Australia, car traffic congestion costs the Australian economy $38.8 billion annually (Infrastructure Australia Audit, 2019). Numerous studies have shown that when more people use active and public transport more often, with less private vehicle use, this reduces car traffic congestion and associated costs than spending even more money on roads (Aftabuzzaman et al., 2008; Garrard, 2009).

› **Reducing the costs of living:** Many Australians are reliant on cars because our public and active transport infrastructure is often inadequate, which increases the costs to us of getting around (Scheurer et al., 2017). Walking and bike riding, followed by public transport, are the cheapest forms of transport. Enabling more people to access these options will help lower their transport costs.

› **Resilience against fossil fuel shocks:** Speeding up the shift toward public and active transport protects Australians against fuel price volatility. The former federal government intervened amid skyrocketing prices, implementing a fuel excise discount from March to September 2022 at a total cost of $5.6 billion. At a national level it also leaves governments and businesses less exposed to low domestic diesel and gasoline inventories, and rising costs of diesel for train and bus fleets.

› **Better choice:** Quality urban design and investment that prioritises active and public transport gives people more choice in how they travel (International Transport Forum, 2021). At the moment, people are often forced to rely on the private car - particularly in Australia's outer suburbs and regions.

› **Improving accessibility:** Improving active and public transport helps all Australians move around including some of our most vulnerable and marginalised groups, such as older people, people living with a disability, people on low incomes and migrant communities. Transport accessibility is a socio-economic issue: wealthier people are more likely to live closer to our city centres where there is access to better and more transport options (Scheurer et al., 2017). Those who would most benefit from the cost savings of leaving the car at home, on the other hand, often have the worst choices and least access to alternatives.

› **More, high-quality jobs:** Modelling consistently identifies investment in sustainable transport as a major job creator, with an estimated 12-15 jobs created per $1 million invested in active transport and electric vehicle charging infrastructure (ClimateWorks Australia, 2020). Supporting Australian electric car, train, tram, bus and truck manufacturing has the potential to create substantial jobs in the manufacturing sector, and increase domestic use of the high critical mineral deposits Australia has. Active transport is already a major job creator with almost 35,000 people directly employed in the Australian cycling economy[5] (EY & We Ride Australia, 2021).

› **Growing the economy:** The economic multipliers of walking, bike-riding and electric vehicle infrastructure are high. It is estimated there are $2 in returns for every $1 of public funding invested in active transport infrastructure (ClimateWorks Australia, 2020). Further, every $1 of public funds invested in transport could unlock 50 percent more in private co-investment (AlphaBeta & Climate Council, 2020).

› **Meeting community needs:** Australians want more options when it comes to public transport, footpaths and bike lanes. Climate Council polling shows 8 in 10 Australians believe governments should invest more in public transport. Further, more than two-thirds (67 percent) of Australians think governments should deliver more footpaths and bike lanes across the country (see the next breakout box).

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5   The Australian Cycling Economy as defined for We Ride Australia and EY's (2021) study includes expenditure of participants on items such as new bicycles, accessories and equipment, servicing, bike hire, merchandise and media and subscriptions. It also includes local and state government expenditure on bicycle infrastructure and programs, bicycle organisation spend and private sector spend on logistics and end of trip facilities.

AUSTRALIANS WANT MORE INVESTMENT IN PUBLIC AND ACTIVE TRANSPORT

A YouGov poll commissioned by the Climate Council in 2022 shows that 8 in 10 (80 percent) Australians believe governments should invest more in public transport and almost 7 in 10 (67 percent) agree governments should deliver more footpaths and bike lanes across the country.

When surveyed on balancing budget priorities, almost 8 in 10 (77 percent) want public transport, walking or bike-riding options prioritised

in the budget; or want balanced spending between roads and these other options (see Figure 7). This compares with just 16 percent of respondents who want road spending prioritised (Climate Council and YouGov, 2022).

These findings show that investment in active and public transport is much more popular than governments - based on their existing budget spending - may realise.

AUSTRALIANS WANT IMPROVED PUBLIC AND ACTIVE TRANSPORT AND A BALANCED BUDGET
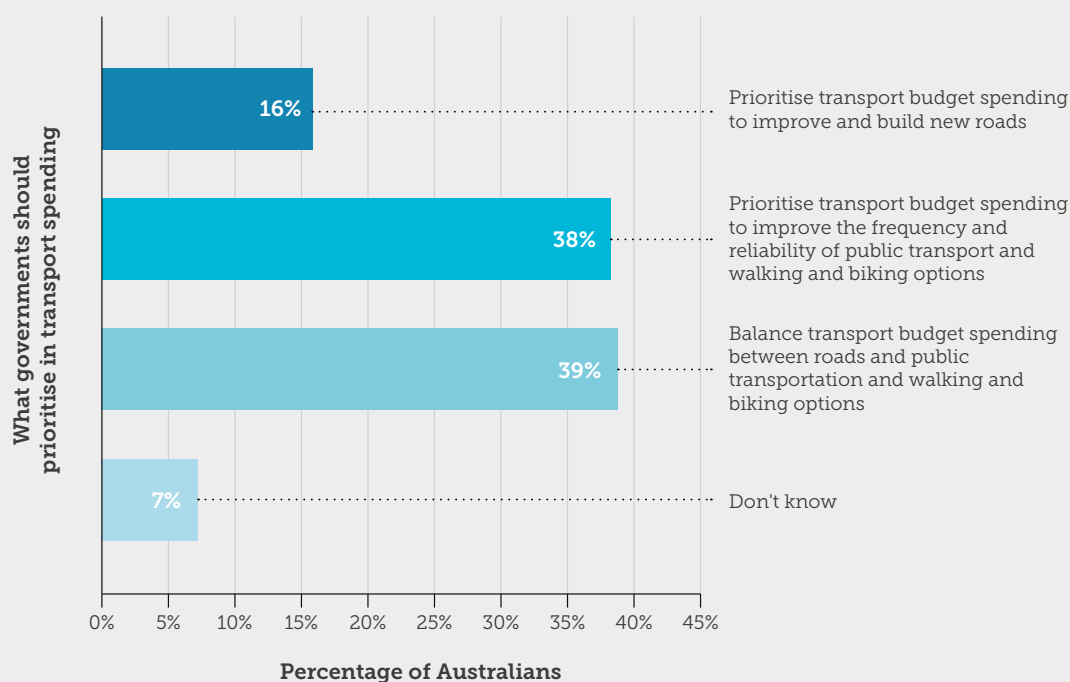

Figure 7: Australians' views on prioritisation of transport spending in state budgets.

MOVING AROUND IN CLEAN AND HEALTHY WAYS IMPROVES PEOPLE'S LIVES

CASE STUDY 1:
YARRALIN'S FIRST BIKE CLUB
(ABC, 2022)

Located in one of the most remote corners of the Northern Territory, Yarralin is a small Indigenous community of around 300 people. In 2021, school teacher Dennis Dean shared his love for bike riding with students, providing a stack of bikes for students to use. Soon, the Yarralin Bike Club was born. Students now ride to school, during break times and after school. The Yarralin Bike Club even hosts regular races and rides in the bush. A recent 12km race was a town-wide effort involving everyone including the children, their parents and even the local police. Making time for bike-riding within the school curriculum has strengthened relationships between teachers and students, improved health and fitness and increased school attendance.

CASE STUDY 2:
FROM POP UP LANE TO
PERMANENT ON PITT STREET
(City of Sydney, 2021b)

During the COVID-19 pandemic, the City of Sydney established a number of temporary pop-up bikeways. These proved so popular that some are now being made permanent, including a dedicated bikeway on Pitt Street in Sydney's central business district. Since being installed, the number of weekly bike trips on the Pitt Street cycleway has increased five-fold; with around 6,000 trips being recorded each week. The introduction of the bike lane has also resulted in a wider footpath, providing more space for people walking, pushing a pram or using a wheelchair, and making them safer by separating these two different types of travel.

Figure 8: Sydney's central business district is being transformed into a hive of public and active transport. With the completion of the light rail along George Street, a proposal to permanently pedestrianise the north end of George Street in late 2023 is currently undergoing community consultation.

MOVING AROUND IN CLEAN AND HEALTHY WAYS IMPROVES PEOPLE'S LIVES CONT.

CASE STUDY 3:
VICTORIA BRIDGE, QUEENSLAND
(Brisbane City Council, 2022b)

In 2021, a key bridge linking the heart of Brisbane's central business district to suburbs south of the Brisbane River was dedicated exclusively to public and active transport. The Victoria Bridge was converted into a "green bridge" and is now home to three lanes for buses and future Metro services, and separated two-way bike lanes and footpaths.

Four more "green bridges" are being delivered as part of Brisbane City Council's $550 million Green Bridges program - the largest investment in active transport infrastructure in the city's history (Brisbane City Council, 2022a).

Detailed community consultation and planning around such changes takes time. Council first proposed to open Victoria Bridge to clean transport in early 2016, however the plan only came to fruition in January 2021. This project highlights the importance of commencing clean transport corridor planning and consultation as soon as possible so everyone can help shape how we move around in the future.

Figure 9: Concept design for Victoria Bridge in Brisbane, Queensland. Bicycle Queensland's Anne Savage said the new plan was a big win for cyclists - with the bridge currently catering for 800 cycle trips a day and expectations that number would double once Victoria Bridge is converted (Brisbane Times, 2018).

MODE SHARE TARGETS: MEASURING THE WAYS WE GET AROUND

Mode share targets can help jurisdictions stay on track as they use different methods to support more Australians to move around in cleaner, healthier ways. Right now, Victoria is the only state or territory with a clear mode share target for active travel - that is, a percentage goal for how many people they want to be walking, riding or using other active forms of travel.[6] The state is aiming for 25 percent active travel by 2030, from a government reported baseline of 18 percent measured in 2021.

Neither Victoria nor any other jurisdiction has an explicit mode share target for public transport. In the context of COVID-19, governments must work to address actual and perceived safety risks for using public transport to encourage people back onto trains, trams, buses and ferries in even greater numbers.

Mode share refers to the percentage of people using a particular type of transport such as private car, public transport (bus, ferry, train or tram), or active transport (walking, riding or rolling - the latter including scooters, skate boards, wheelchairs and more). Jurisdictions can set short, medium and long-term targets for use of different types of transport by their populations.

With the right infrastructure, access and policies in place many more Australians will choose to ride, walk or catch public transport.

6   The ACT previously set mode share targets of seven percent walking, seven percent bike riding and 16 percent public transport for all journeys to work by 2026 (ACT Government, 2015). However, this has since been superseded by their 2022 policy which seeks to increase mode share from a 2017 Household Travel Survey baseline but sets no explicit targets (ACT Government, 2022a).

TRAVEL MAKEOVERS: LESSONS FROM OVERSEAS

Multiple cities and states across the world have successfully achieved a major shift towards bike-riding and walking. Vienna, Paris, London, Oslo, Prague and Geneva all increased public transport journeys by 20 percent or more between 2001 and 2012. Factors that enabled this significant change include: increased urban density, increased public transport supply and decreases in car use through a range of traffic restriction measures (UITP, 2015). Boosting public transport services and introducing car traffic congestion charges and parking limitations proved game-changing.

In 2014, Salt Lake City in the United States of America converted nine blocks of street parking into protected bike lanes along its historic downtown business corridor. The new bike lanes resulted in an increase in local retail sales compared to the city-wide increase over the same timeframe (Salt Lake City, 2015).

Seville in Spain dramatically increased the length of its bike infrastructure from 12 kilometres of lanes in 2005 to 120 kilometres in 2010, resulting in three times more people riding their bikes - an increase in riding from 3.2 percent to 8.9 percent (Marqués et al., 2015). Bogota in Columbia increased public transport use from 64 percent in 1999 to 70 percent in 2005 by extending its network of bus and rail lines. Here, Bus Rapid Transit offers a more affordable and convenient option that has also contributed to citywide urban renewal (Cain et al., 2007).

Now is the perfect opportunity for Australian states and territories to do likewise.
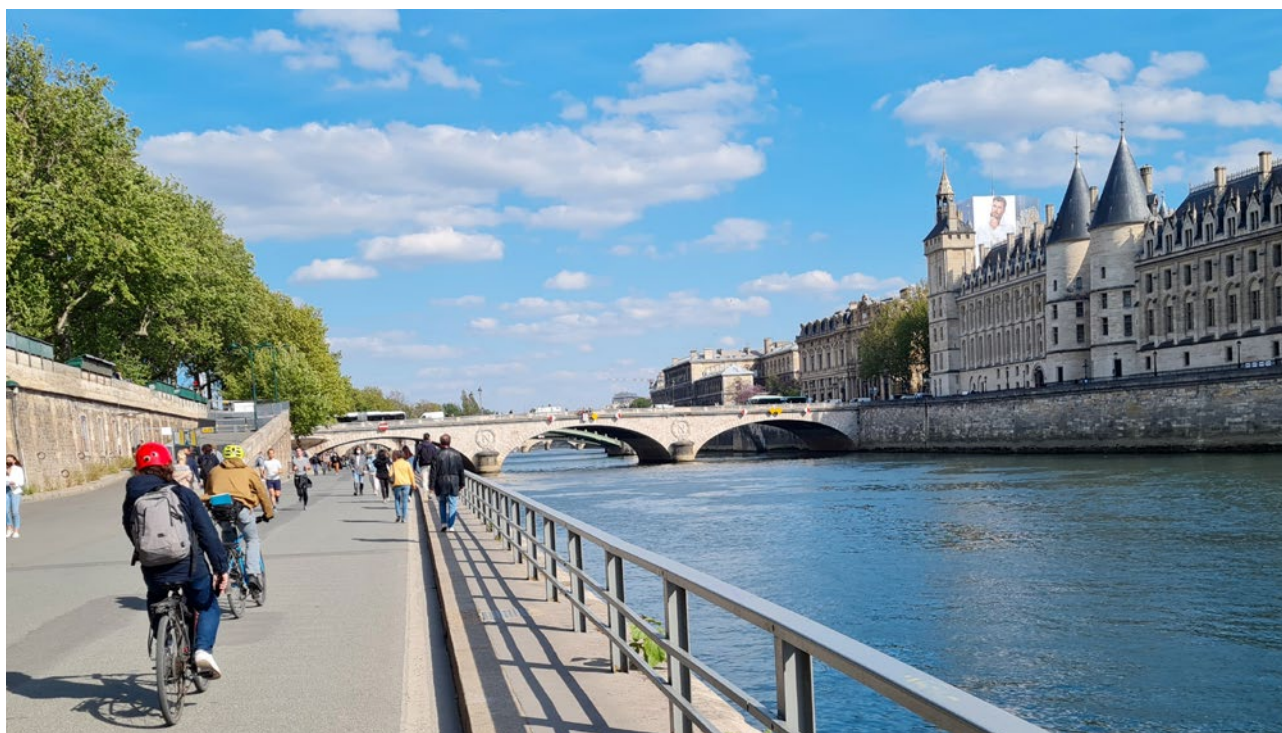
Figure 10: Paris will ban non-essential traffic passing through the city by 2024 in time for the Olympics. This is alongside approximately 100 streets which are completely pedestrianised in Paris, the city's 'Paris Respire' areas which are closed to cars on Sundays and public holidays, and car free days where the Avenue des Champs-Elysées is closed to cars on the first Sunday of each month.

PRIORITISING PEOPLE (RATHER THAN CARS) ON OUR STREETS MEANS WE CAN MOVE ALMOST DOUBLE THE NUMBER OF PEOPLE

CAR-ORIENTED STREET

MIXED TRANSPORT STREET
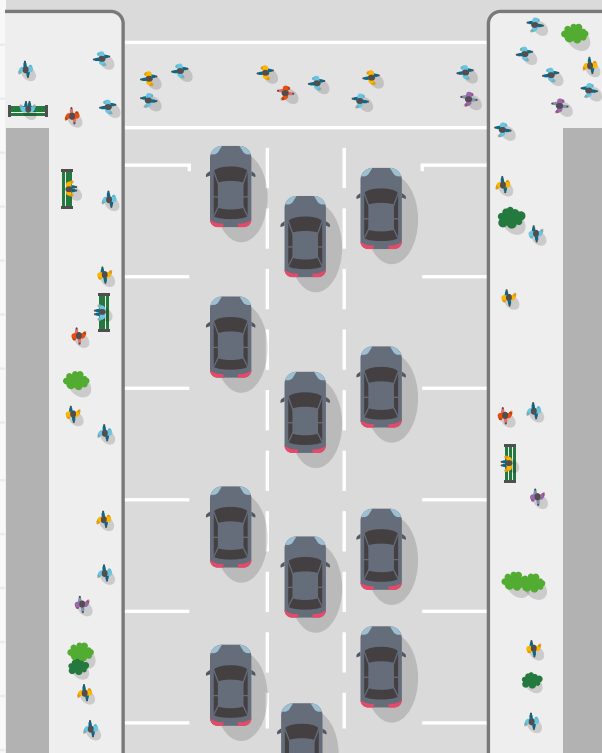
Hourly capacity of a car-oriented street

🚶	4,500	x	2 = 9,000 people
🚗	1,100	x	3 = 3,300 people

Hourly capacity of a multimodal street

🚶	8,000	x	2 = 16,000 people
🚗	1,100	x	1 = 1,100 people
🚲	1,000	x	1 = 1,000 people
🚌	6,000	x	1 = 6,000 people

Total people capacity per hour **12,300**

Total people capacity per hour **24,100**

While electric vehicles are a key part of decarbonising transport, it is clear that simply replacing each fossil fuel powered vehicle with an electric one will not address car traffic nor increase the capacity of our streets. This is why investing in public and active transport and increasing its availability is crucial to a cleaner, greener, more efficient and more effective transport system.

ELECTRIFYING PUBLIC TRANSPORT

To capitalise on all the benefits of increased public transport use - including lower emissions, better health, and greater affordability - we need to electrify our buses, trains, trams and ferries and make sure they're powered by renewable energy as soon as possible.

The Climate Council's scorecard compares bus fleet electrification across states and territories, as an indication of public transport electrification status in that jurisdiction. Once again, the ACT is a frontrunner, having committed to purchasing only electric buses from 2022 onwards, and promising to electrify its entire fleet by 2040. New South Wales isn't far behind, with a pledge to fully electrify its bus fleet by 2047. The state is taking a staggered approach, replacing their 4,039 diesel and gas-powered buses in greater Sydney with electric vehicles by 2035, followed by those in the outer metropolitan area by 2040, and regional areas by 2047. Neither Victoria or Queensland have set a target for a fully electric fleet, but they have both promised

to buy only electric buses from 2025 and 2030 respectively. Queensland has also taken a staggered approach, committing to purchase all new electric buses from 2025 in South East Queensland, and between 2025-2030 in regional Queensland. The Northern Territory, South Australia, Tasmania and Western Australia have not yet made any commitments to exclusively purchase electric buses, or provided a timeframe for electrifying their fleets.

The technologies for electric buses and public transport are here now. There is no reason for a delay in rollout, to purchase new fossil fuel vehicles, or pursue transport trials in alternative fuels when the cleaner version already exists. In fact, rather than subsidising fossil fuels to the tune of $11.6 billion - we could fully fund around 15,500 electric buses and replace all the buses in Sydney, Melbourne and Brisbane with more to spare (Climate Council, 2022b). All states and territories will need to rapidly accelerate their transition to fully electrified public transport by 2035 or earlier for Australia to come close to near absolute zero transport emissions by 2035.

Introducing clean, quiet electric buses is a great way for states and territories to encourage people to give public transport a go - particularly when fewer people are using public transport after COVID-19 (ABS, 2021b). Climate Council polling has found 7 in 10 Australians are keen to see the nation's entire bus fleet electrified and run on renewables as soon as possible (Climate Council and YouGov, 2022).

Table 3: The wheels are turning: Electric bus targets by state and territory.

	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Electric bus target	2022: new purchases, 2040: entire fleet	2047: entire fleet	None	2030: new purchases	None	None	2025: new purchases	None

Figures 11, 12 and 13: Everyone has a right to use public transport and get around in our communities with safety and ease. As we shift toward zero to low carbon emissions transport we must ensure it is designed with accessibility and inclusivity front of mind - for people in wheelchairs, with injuries, parents with prams, or elderly people - our systems need to provide for all.

For transport to reach near absolute zero emissions by 2035, all states and territories need to transition to fully electric public transport by 2035 or earlier.

5. Electric vehicles

Electric vehicles (EVs) are an important piece of the transport decarbonisation puzzle. EVs powered by renewable energy will play a vital role in cutting emissions from car trips where these can't be replaced with public transport, walking, riding or rolling. While it is beyond the scope of this report to detail, battery electric vehicles can also play a broader role in our clean energy system by storing and supplying energy to homes and the electricity grid - increasing reliability, resilience and meeting demand.

Figure 14: The Nissan Leaf is currently one of the most affordable electric vehicles in Australia, one of four models priced around $50,000 or lower. Others include Hyundai's Ioniq electric, BYD's Atto3 and MG's ZS EV (Drive, 2022).

ELECTRIC VEHICLES: GOVERNMENT FLEETS

With the average government fleet of vehicles entering the secondhand market after only three to four years (NSW Treasury, 2021), governments can play a unique role in increasing the supply of affordable electric vehicles for Australians by going all-electric. Climate Council's scorecard compares the targets of state and territories for fully electrifying government vehicle fleets (Table 4).

The ACT comes out on top with all new passenger vehicles leased now required to be electric. Queensland follows closely behind with a commitment to fully electrify its fleet by 2026. New South Wales, South Australia and Tasmania are midfield, aiming for 100 percent electric vehicles by 2030. Victoria, Western Australia and the Northern Territory have not yet made commitments to electrify their full fleets. What is considered an 'electric vehicle' varies by jurisdiction.

Currently all states and territories have targets with a mix of Battery Electric Vehicles, Fuel Cell Electric Vehicles and Plug-in Hybrid Electric Vehicles. As seen in Figure 15, Battery Electric Vehicles are the only fully electric vehicle, where others partially run on fossil fuels or other alternative fuels. Currently, Victoria is the only state with a solely Battery Electric Vehicle target (see Appendix Table 2 for full details on other states and territories).

When it comes to decarbonising state operations, electrifying government fleets is a smart place to start, given these vehicles often do much higher kilometres than private cars. Further, their relatively quick turnover to the second-hand market means government fleets can play an important role in boosting the affordability of electric vehicles and access for all Australians.

Table 4: Who is going electric? State and territory government fleet transition.

	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
State and territory fleet target for electric passenger vehicles	All new vehicles now	100% by 2030	20% by 2030	100% by 2026	100% by 2030	100% by 2030	400 zero emissions vehicles by 2023	25% by 2025-26

TYPES OF

ELECTRIC VEHICLES

BEV
Battery Electric Vehicle

PHEV
Plug-in Hybrid Electric Vehicle

HEV
Hybrid Electric Vehicle

FCEV
Fuel Cell Vehicle

Powered by
100% Electricity from Grid

Powered by
Petrol or Diesel and Electricty from Grid

Powered by
Petrol or Diesel

Powered by
Hydrogren and/or Electricity from Grid
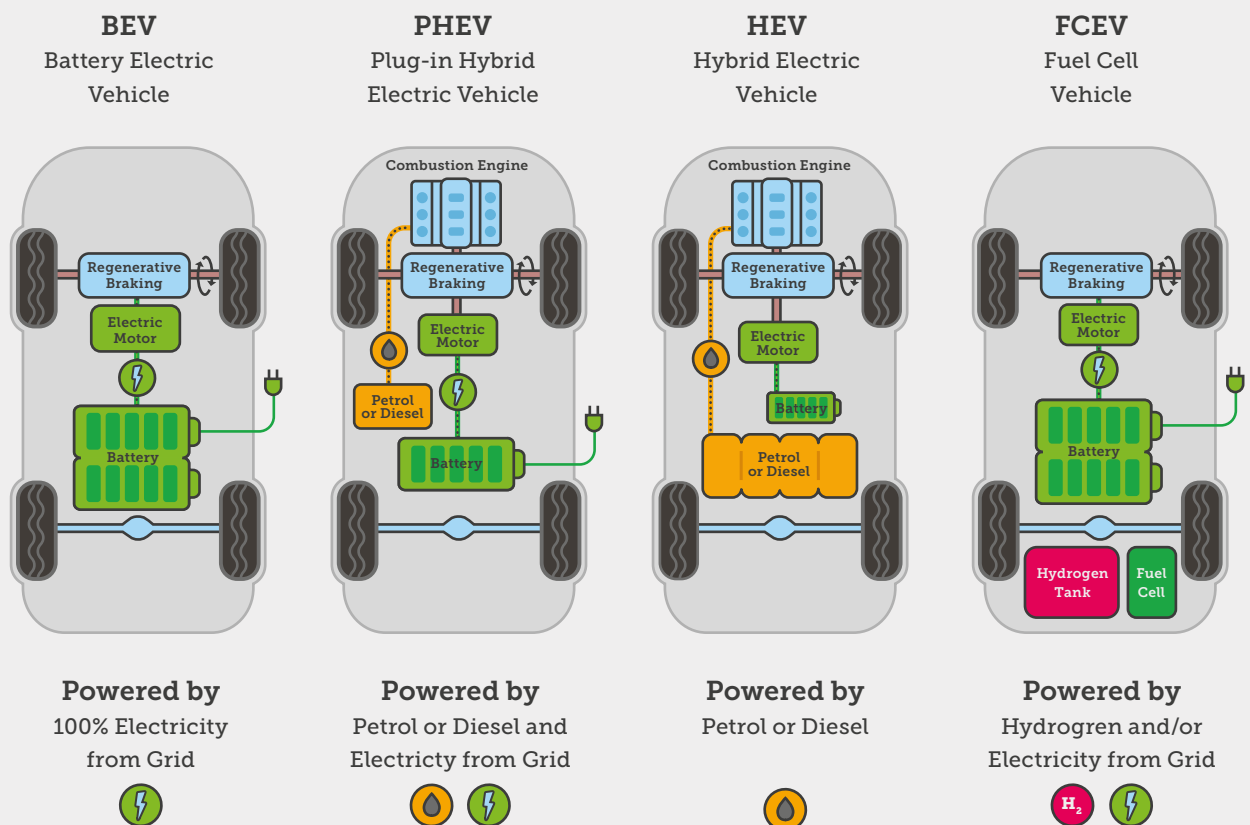
Figure 15: Different types of electric vehicles.

ELECTRIC VEHICLES: PERSONAL UPTAKE AND CHARGER AVAILABILITY

The market share of new electric vehicles in Australia increased by 65 percent between 2021 and 2022, indicating there's a strong desire among many Australians to buy one (Electric Vehicle Council, 2022). However, with electric vehicles still only accounting for 3.39 percent of all new vehicles sold in 2022 year to date, Australia has a long way to go to catch up with global peers (see Table 5 for 2021 comparisons).

The key to unlocking EV supply in Australia is the implementation of strong fuel efficiency standards. Currently covering about 80 percent of the global car market, Australia is one of the only wealthy countries without these standards (Smit et al., 2019). Fuel efficiency standards aim to limit the greenhouse gas emissions Australia's fleet of cars releases - in short incentivising car makers to supply low and zero emissions vehicles, or penalising them if they don't. Introducing strong fuel efficiency standards is the best way to get more cheap, clean EVs onto our roads, to free Australians from high prices at the petrol pump and cut emissions for our future.

Table 5: International electric vehicle uptake.

Jurisdiction		Percentage of new car sales (2021)	Number of EV models available
	European Union	17.0%	184
	China	16.0%	298
	Global	8.6%	450
	United States	4.6%	63
	New Zealand	4.4%	~70
	Australia	2.8%	31

Sources: IEA (2022), EVC (2021) and Drive Electric (2022) includes battery electric vehicles and plug-in hybrid electric vehicles.

In Australia, the ACT is the front runner when it comes to electric vehicle sales with EVs making up 9.45 percent of all new car sales. New South Wales, Victoria, Queensland and Tasmania sit in the middle of the pack with around three percent of sales each. The Northern Territory has the lowest uptake of electric vehicles as they make up less than one percent of new car sales. This is not surprising given both the current high cost of electric vehicles and the long distances that people in the Top End often need to travel.

For Australians to feel confident to buy an electric vehicle, charging infrastructure must be readily accessible. Investments in EV charging infrastructure lay the groundwork for the future, and once constructed will continue to offer a public benefit - which cannot be undone by future governments. The Climate Council's scorecard breaks down electric vehicle chargers per capita, identifying Tasmania as the clear leader with 19 electric vehicle chargers per 100,000 people. South Australia and Western Australia are also doing well with 12 and 11 chargers per 100,000 people respectively. Other jurisdictions have clear ground to make up with less than 10 chargers per 100,000 people. Internationally, availability of charging infrastructure is tied to electric vehicle uptake. The Netherlands, for example, is a world leader with 699 chargers per 100,000 people with electric vehicles making up 34 percent of new car sales (ChargeUp Europe, 2022; Inside EVs, 2022).

Tasmania is a national leader when looking at overall cuts to transport emissions and electric vehicle charging infrastructure.

Table 6: EVs: Who is buying them, and how easy is it to recharge?

	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Electric vehicles as a percentage of all new car sales in 2022 (year to date)	🥇 9.45%	3.66%	0.84%	3.26%	2.28%	3.25%	3.43%	2.79%
Electric vehicle chargers per 100,000 people	9	8	9	7	12	🥇 19	7	11

Figure 16: Electric vehicle charging station in Rockhampton, regional Queensland. The state government is delivering the Queensland Electric Super Highway to connect electric vehicle drivers across the state.

6. Planning for zero emissions transport

Integrated planning for zero emissions transport is important because it can drive better government decision-making and ensure investments are geared towards giving Australians more choice in how they move around. The Climate Council encourages all state and territory governments to put in place clear and public plans for driving down emissions, matched by transparent investment through annual budget processes.

When it comes to this kind of planning, only the ACT and Victoria have dedicated strategies for cutting emissions from transport. New South Wales and South Australia have addressed transport as a subsection within their broader decarbonisation strategies, which is an important acknowledgement of the role this sector will play. At the time of writing, Queensland and Western Australia have transport strategies under development, while the Northern Territory and Tasmania don't have such plans.

Encouragingly, all states and territories except Tasmania have dedicated strategies for supporting and incentivising the uptake of electric vehicles. See Table 2 in the Appendix for full details.

Figure 17: A zero emissions transport system can benefit us all. Cleaner, greener transport avoids greater climate harm by rapidly reducing emissions, creates better health outcomes, reduced cost of living, more livable cities and improved accessibility and choice, all while boosting the economy and creating jobs. Just like the Yarralin Bike Club in the Northern territory, such a transformation also has the potential to bring communities together.

7. Recommendations

This scorecard report shows Australian states and territories are at varying stages on their journey to cleaner transport and there's a long road ahead to reach zero emissions.

To accelerate the transition to clean transport that gives Australians more choice, cuts costs and improves health, the Climate Council recommends state and territory governments prioritise three key actions.

1. Strengthen investment in clean public transport and active travel infrastructure

The Climate Council recommends that **50 percent of each state or territory transport budget be dedicated to public transport**, and **20 percent towards active transport**. This is in line with global best practice and is an investment benchmark recommended by the United Nations (2016). Currently less than two percent of most state and territory transport budgets around Australia are directed to active transport (Pojani et al., 2018), falling far short of what is required. Investment in public transport is often ad hoc and inconsistent, with occasional mega projects like a new tram or rail line obscuring a lack of consistent, steady investment to improve the frequency, reliability and availability of public transport services - particularly in suburbs and regions. Governments should set out clear plans and timeframes for lifting their investment above today's insufficient levels.

2. Electrify public transport fleets and power them with the sun and wind

State and territory governments should set targets and investment plans for converting **100 percent of public transport fleets to zero emission vehicles by 2035**. This will not only offer passengers a cleaner, quieter and more comfortable ride, but it will also deliver cleaner air for our cities and boost opportunities for domestic manufacturing, creating more good, local jobs.

All states and territories can speed up the switch to clean transport with better investment in and support for public transport, active transport and electric vehicles.

3. Support the rapid uptake of electric vehicles with smart policies and essential infrastructure

As this scorecard shows, uptake of electric vehicles and the availability of enabling infrastructure like public chargers varies greatly around Australia. State and territory governments can help get more Australians behind the wheel of a zero emissions vehicle by:

› Partnering with the Australian Government to design **strong national fuel efficiency standards** that will incentivise the supply of more cheap, clean electric vehicles to Australia;

› **Improving access to public charging infrastructure** - particularly in regional areas and along major transport routes; and

› **Offering well-designed incentives** - like stamp duty discounts and zero interest loans - which help reduce the considerable upfront cost of buying an EV.

Australia's states and territories have an important role to play in setting the wheels in motion for cleaner transport across the nation. Taking these key steps will help drive the deep cuts in emissions needed this decade to tackle the climate crisis, while making transport better and more accessible for every Australian - no matter where they live.

FURTHER READING

Climate Council transport reports:

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Climate Council, (2018)
Waiting for the Greenlight - Transport Solutions to Climate Change

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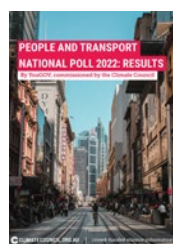
Climate Council & YouGov, (2022)
People and Transport National Poll

. . . .

Climate Council (2022a)
Charging Ahead: State and Territory Transport Recommendations policy package

. . . .

Climate Council, (2022c)
Send the Right Signal: How to Talk Effectively About Sustainable Transport

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Page 30: Figure 17 - 'Sustainable transport. Bicycle traffic signal, green light, road bike, free bike zone or area, bike sharing with silhouette of cyclist and bike on the blurred background' by Michele Ursi, licensed through Shutterstock.

Appendix

METHODOLOGY NOTES

The scorecard has taken COVID-19's impact on transport and emissions into account, with the following measures: using Census data from 2016, using transport emissions data up until the end of 2019 prior to the pandemic. This also serves as a limitation as public and active transport levels in each jurisdiction may have increased or decreased since the 2016 Census, however the following 2021 Census did not accurately reflect Australians' travel due to COVID-19 lock downs.

Emissions data by Australia-New Zealand Standard Industry Classifications (ANZSIC) was used as residential transport is separated and more accurately represents personal transport emissions. A more detailed scorecard with source material is included below.

Table 1: Detailed states and territories scorecard.

	Metric	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Transport emissions and usage profile	**Transport emissions per person (tCO$_2$e)***	1.65	1.85	2.30	2.31	2.00	1.69	1.89	2.43
	Source: DCCEEW (2022b), ABS (2020)								
	Transport emissions trend (2009-2019)*	-7.37	2.37	37.69	15.61	-4.76	-18.46	-0.97	20.32
	Source: DCCEEW (2022b)								
	Public transport share	7.09%	13.93%	5.60%	6.28%	6.75%	3.05%	10.38%	7.43%
	Source: BITRE (2021)								
	Active transport share	8.35%	5.41%	12.67%	5.22%	4.57%	6.87%	5.30%	4.57%
	Source: BITRE (2021)								
	Electric vehicles as a % of new car sales (2022 YTD) includes BEVs and PHEVs	9.45	3.66	0.84	3.26	2.28	3.25	3.43	2.79
	Source: EVC (2022)								
	EV chargers per 100,000 people	9	8	9	7	12	19	7	11
	Source: EVC (2022), ABS (2022b)								
Transport policy and planning	**Zero emissions transport plan**	Yes and electric vehicle plan	Yes and electric vehicle plan	None and partial electric vehicle plan	In development and electric vehicle plan	Partial and electric vehicle plan	None	Yes and electric vehicle plan	In development and electric vehicle plan
	Source: Various state and government websites (see Table 2 for more detail).								
	Public and active transport mode share target	None	None	None	None	None	None	25% AT by 2030	None
	Source: Various state and government websites								
	Electric bus target	2022 new purchases, 2040 entire fleet	2047 (entire fleet)	None	2030 (new purchases)	None	None	2025 (new purchases)	None
	Source: Various state and government websites								
	State fleet target for electric passenger vehicles	All new vehicles now. EVs include BEVs, FCEVs and PHEVs (updating the definition to exclude PHEVs)	100% by 2030 EVs include BEVs and FCEVs	20% by 2030 EVs include BEVs and FCEVs	100% by 2026 EVs include BEVs and FCEVs	100% by 2030 EVs include BEVs, FCEVs and PHEVs	100% by 2030 EVs include BEVs, FCEVs and PHEVs	400 zero emissions vehicles by 2023 EVs include BEVs	25% by 2025-26 EVs include BEV, FCEV and PHEV
	Source: Various state and government websites, see links								

Table 2: State and territory transport decarbonisation plans and targets.

State and territory	Transport decarbonisation plan?*	Summary of plans and targets

ACT	**Yes**	**Zero Emissions Transition Plan for Transport** (ACT Government, 2020):
		
		☑ Net zero emissions across public transport and state fleets by 2040, with an interim target of 33 percent reductions by 2025
		
		☑ A transition to clean battery-electric buses (BEBs) powered by renewable energy, underpinned by five key steps:
		
		  › Building the required bus depot infrastructure
		  › Procuring zero-emission buses
		  › Partnering with the energy sector to manage the increasing load on the grid to mitigate challenges and harness opportunities early
		  › Upskilling workers to bring the service to life
		  › Increasing public transport use for improved services
		
		ACT Zero Emissions Vehicles Strategy 2022-2030 (ACT Government, 2022b):
		
		☑ Target for sales of electric vehicles to reach 80-90 percent of all vehicle sales by 2030
		
		☑ Cease registration of new internal combustion engine (ICE) vehicles by 2035

Victoria	**Yes**	**Transport emissions pledge** (State of Victoria, 2021a): ☑ All new public transport bus purchases to be electric vehicles from 2025 ☑ 400 electric vehicles to be added to the Victorian Government fleet by 2023 ☑ Increasing active transport mode share to 25 percent by 2030 **Climate Change Strategy** (State of Victoria, 2021b): ☑ Metropolitan train and tram network will be 100 percent powered by renewable electricity by 2025 ☑ Development of '20-minute' neighbourhoods under the Plan Melbourne program ☑ Over 250 kilometres of bike and footpaths built across major transport infrastructure program **Zero Emissions Vehicle Strategy** (State of Victoria, 2021c): ☑ Half of all vehicle sales to be electric vehicles by 2030

State and territory	Transport decarbonisation plan?*	Summary of plans and targets
SA	Partial	**Climate Change Action Plan** (State of South Australia, 2020): ☑ Align transport and urban planning with low emissions transport outcomes ☑ Increase the use of public transport and active travel **Electric Vehicle Action Plan** (Government of South Australia, 2020): ☑ Aims for electric vehicles to be the common choice for motorists by 2030, and the default choice by 2035, in line with achieving net zero emissions by 2050
NSW	Partial	**Future Transport for NSW Plan** (Transport for NSW, 2022a): ☑ Plans to achieve net zero emissions from public transport operations and fleet by 2035. However, subsequent announcements have delayed the full electrification of the state's bus fleet from 2030 to 2047 (Sydney Morning Herald, 2022) ☑ Support the transport sector to achieve net zero emissions by 2050 **Net Zero Cities Action Plan** (Transport for NSW, 2022b): › Trial a Vehicle to Grid capability[7] › Develop an active transport data platform › Deliver net zero precincts › Develop a Roadmap to Net Zero Infrastructure at Transport for NSW **NSW Government's Electric Vehicle Strategy** (State of New South Wales, 2021): ☑ At least 50 percent of car sales to be electric vehicles by 2030
QLD	In development	Queensland is developing a net-zero emissions transport roadmap to identify how Queensland's transport sector will contribute to the state's goal of reducing emissions below 30 percent on 2005 levels by 2030 and net zero emissions by 2050 (State of Queensland, 2020). **Queensland Zero Emissions Vehicle Strategy** (State of Queensland, 2022): ☑ 50 percent of new passenger vehicle sales to be zero emission by 2030, moving to 100 percent by 2036 ☑ 100 percent of eligible* Queensland Government fleet passenger vehicles to be zero emission by 2026 *As current leases expire, where a zero emissions vehicle alternative and sufficient charging infrastructure is available.

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7   To date zero emissions vehicles have only had one-way chargers. New technologies mean that zero emissions vehicles with bi-directional chargers are entering Australia - where cars can discharge energy to power a home (vehicle-to-home) and can also export energy to the grid (vehicle-to-grid). These can increase the reliability of the electricity grid; improve resilience in our energy infrastructure; and help meet peak demand. (Transport for NSW, 2022b p.22)

State and territory	Transport decarbonisation plan?*	Summary of plans and targets
WA	**In development**	WA is updating its 2021 Metronet Sustainability Strategy, which outlines a target for 'transport infrastructure and precincts to have an emissions reduction plan/strategy to support the State Government Climate Policy to achieve net zero emissions for Western Australia by 2050' (Metronet, 2021 p.19). **WA Electric Vehicle Strategy** (DWER, 2020): ☑ A target for a minimum 25 percent of new light and small passenger vehicles, and small and medium SUV government fleet vehicles to be electric by 2025/26.
NT	**No**	☒ The Northern Territory does not have a comprehensive zero emissions transport plan. **NT EV Electric Vehicle Strategy and Implementation Plan 2021-2026** (Northern Territory Government, 2020): ☒ No target for electric vehicle uptake
TAS	**No**	☒ Tasmania does not have a comprehensive zero emissions transport plan. ☒ No comprehensive electric vehicle strategy or sales target.

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

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