

CHARGING CORPORATE ACTION:

The Case for Renewable-Powered Electric Vehicle Fleets



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TABLE OF CONTENTS

EXECUTIVE SUMMARY	6
Key Findings	8
ABOUT THIS REPORT	9
INTRODUCTION	12
The transport problem	12
The fleets solution	15
CHAPTER 1: BENEFITS OF ELECTRIFYING VEHICLE FLEETS	17
Potential impact of renewable-powered electric fleets	17
Why companies are electrifying their fleets	18

Why companies are electrifying their fleets	18
Electric vehicles are good for business	19
Prices are going down, down, down	19
The down-low on TCO	20
Going the extra mile	21
Managing fuel security	21
Improving brand loyalty in staff and customers	23
Government incentives driving change	23
Supercharging electric vehicles with renewables	26
What about hybrids?	27

CHAPTER 2: STATE OF PLAY FOR CORPORATE Electric vehicles

29

Government fleets leading the charge in Australia	29
State and Territory government action	31
Case Study: South Australian Government	32
Case Study: Australian Capital Territory	33

44

49

Businesses on the road to renewable electric fleets	34
State of play: Corporate commitments and action	35
State of play: Advocating for change	38
Business Case Studies	40
Case study: IKEA (Ingka Group)	40
Case study: AGL	42
Case study: Hertz	43

CHAPTER 3: ROAD TO ACTION

Set your sights on the finish line	45
Start your engines	46
Get race-ready	47
Join the cheer squad	47
Advocate for change	48
Jump start success for staff and customers	48

APPENDICES

Appendix 1: List of facts, figures and assumptions	49
Appendix 1.1: VFACTS sales by sector	49
Appendix 1.2: Corporate fleet emissions calculations	49
Appendix 1.3: TCO assessment for passenger vehicles	51
Appendix 1.4: Battery prices	55
Appendix 2: List of company profiles	56
Appendix 3: Vehicles coming soon	58

ENDNOTES

62

EXECUTIVE Summary

The impacts of climate change are being felt here and now, with huge droughts, bushfires and floods that were previously decades to centuries apart now hitting Australia back-to-back, causing immense social and economic shocks and costing our economy billions of dollars.

In Australia, transport is the third largest - and the fastest growing - source of climate pollution, fuelled by road vehicles including cars, trucks and buses which contribute 82% of greenhouse gas emissions from the transport sector.

The science is crystal clear: to keep global heating below 1.5 degrees as set out in the Paris Agreement, the world must rapidly phase out fossil fuels, and accelerate the shift to electric vehicles.

The corporate sector has a critical role to play in this transition, with high expectations from investors, stakeholders, staff and consumers, all wanting companies to play a leading role in addressing climate change.

With just 1,000 companies responsible for about 1.5 million cars on the road, big businesses can take the wheel in the race to net zero by electrifying their fleets and powering them with renewable energy. This will not only rapidly drive down climate pollution, but kickstart the second-hand electric car market, enabling consumers to buy their first electric car sooner.

The business case for fleet electrification is stronger than ever, with rapid advancement of electric vehicle manufacturing capacity and supply chains, falling battery prices, and strong residual value seeing total cost of ownership plummet.

Cost modelling for emissions abatement also shows that by 2025, electric vehicles will be the cheaper option for corporate fleet managers when acquiring and operating new vehicles across all available vehicle types and utilisation scenarios.

Fleet electrification also reduces corporate reliance on insecure fuel supply chains, which has been demonstrated by the Russian invasion of Ukraine with massive knock-on effects causing economic shock at a corporate and national level. If something similar occurs in the Asia-Pacific region in the coming years, many, if not all of the maritime supply chains through which Australia receives 90% of its oil would be affected.

Despite global movement on electric vehicles and leadership by major multinationals like IKEA, Coca Cola Europacific Partners, and Deloitte, most companies analysed by Greenpeace Australia Pacific for this report are early in their transition. There is a huge opportunity for Australian corporations to take the lead to accelerate climate action, drive down emissions, and get in the fast lane to an electricpowered future.



OVER 120 LEADING BUSINESSES

representing 5.5 million vehicles across 98 markets worldwide have already committed to electrify their fleets by 2030 through EV100¹



OVER 40% OF NEW CAR SALES

are purchased for use in corporate and government fleets.²



JUST 1,000 BUSINESSES

are responsible for around 1.5 million vehicles on the road³ and about 3.9 million cars in Australia are used by businesses.⁴



HEAVY TRUCKS USED FOR TRANSPORTING FREIGHT

are only 4% of vehicles on the road but contribute 38% of transport emissions.⁵

Key Findings

Transport is the third largest and fastest growing source of climate pollution. This is fuelled by road vehicles including cars, trucks and buses which contribute 82% of transport emissions.⁶



1,000 companies are responsible for 1.5 million cars on the road. Businesses can take the wheel in the race to net zero by electrifying their fleets and powering them with renewable energy.



Total cost of ownership of electric vehicles is plummeting. Batteries, manufacturing supply chains, and high residual value are all contributing to the strengthened business case for fleet electrification.



Governments and multinational companies are already going electric. With the average range of electric vehicles at almost 500 kms, many car fleets have already committed to electrification. IKEA, Unilever and Maersk have even gone one step further in committing to zero-emissions trucks.



Stakeholders expect companies to address climate change. Investors, staff and consumers all have high expectations that companies play a leading role in addressing climate change.



ABOUT THIS REPORT

Charging Corporate Action: the case for renewable-powered electric vehicle fleets highlights the opportunities and advantages of electric vehicles for business, showcasing the potential for Australian companies to step up and lead the charge toward renewable-powered electric fleets.

The following chapters will look at the state of play for corporate electric vehicles in Australia, with a particular focus on passenger vehicles. It considers the case for electrifying fleets including what governments and corporations are currently doing, motivations for electrification and the road to action for companies.

About Electrify

The Electrify campaign is Greenpeace Australia Pacific's campaign to end fossil fuel dependence by electrifying everything and powering it with renewables.

Electrify Fleets is focused on accelerating renewable-powered electric cars, vans, utes and trucks in corporate fleets.



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Why the Electrify campaign?

After a decade of delay at the Federal level, Australia is lagging behind most comparable nations in the uptake of electric vehicles, with one of the most polluting and least efficient domestic vehicle fleets in the world. But as one of the sunniest and windiest countries, Australia has a huge opportunity to lead on renewable-powered electric transport. By introducing a strong national fuel efficiency standard and cleaning up corporate fleets we can rapidly drive down emissions, and help end Australia's reliance on foreign oil.

However it is important to note that electrifying corporate fleets is just one part of the solution. A switch to EVs is part of a wider shift to reduce transport emissions. This requires getting cars off the road, and getting a lot more people into affordable, accessible alternatives in public and active transport. Major investments are required in bikes and e-bikes, rail, tram and bus, and local walking and bike networks and infrastructure. Giving people accessible options that work for them and our environment is essential to decarbonise our transport sector.



Cars on Neckartor Street in Stuttgart © Paul Lovis Wagner / Greenpeace

Data

Data in the report is drawn from research conducted by Australian zero-emissions transport consultancy Evenergi commissioned by Greenpeace Australia Pacific. It also draws on survey responses from a survey sent to all companies profiled as well as desktop research of publicly available information.

Defining electric vehicles

Greenpeace Australia Pacific defines electric vehicles as pure battery electric vehicles and does not consider hybrids (plug-in or conventional) to be a solution due to their climate pollution and dependence on fossil fuels. In the case of zeroemissions vehicles, only fuels produced with 100% renewable electricity and zero tailpipe emissions are considered fit-for-purpose for emissions reduction. Due to the energy-intensive nature of green hydrogen, production should be reserved for hard-to-abate sectors possibly including heavy trucking requiring long distance travel.

What are fuel efficiency standards?

Fuel efficiency standards are rules that require vehicle manufacturers to reduce the amount of emissions from the vehicles they sell. Australia currently has none, and is trailing behind most of the developed world in this area. Implementing a strong fuel efficiency standard will influence the availability and affordability of electric vehicles, further driving down costs for businesses committed to 100% electric fleets.



INTRODUCTION

The cars and trucks on Australia's roads are dirty, polluting, expensive and harmful to our health and planet. But it doesn't need to be this way. Switching to cleaner electric vehicles powered by home-grown renewable energy can clean up our roads, save money, end our reliance on foreign oil and cut emissions.

This introduction outlines the problems with our current oil-dependent transport system – and illustrates how corporations going electric can be a big part of the solution.

The transport problem

Transport and 1.5

In 2019, transport accounted for 15% of total global greenhouse gas emissions. 7

Unlike other sectors where the growth in climate pollution has slowed, transport emissions continue to rise.⁸

Limiting global heating to well below 2 degrees, as set out in the Paris Agreement, requires a rapid reduction in greenhouse gas emissions.⁹ Climate scientists have identified 1.5 degrees as the uppermost safe limit of temperature rise.¹⁰ At 1.5 degrees, climate impacts will cause irreversible damages that threaten people and ecosystems, with more frequent extreme weather events, the loss of all coral reefs and the extinction of up to 14% of land-based plants and animals.¹¹

Escalating economic risks

Australia is on the very frontlines of the climate crisis. Extreme droughts, unprecedented bushfires and back-toback flooding events are being supercharged by climate change, and the economic costs are immense. At Australia's current rate of emissions, by 2060 the impacts of unchecked fossil fuel dependence are expected to cost the Australian economy \$94 billion per year, with the cumulative cost expected to tip \$4.2 trillion by 2100.^{13 14}

Health impacts of transport pollution

Transport pollution puts our communities at risk. Road transport is the second largest contributor to overall air pollution in Australia and the largest source of carbon monoxide and lead.¹⁵ In 2023, new research from Melbourne Climate Futures found that the health impacts of traffic pollution may be causing 10 times more deaths than car accidents.¹⁶ Their estimates suggest transport pollution is likely to cause:

- 11,105 premature deaths in adults per year;
- 12,210 cardiovascular hospitalisations per year;
- 6,840 respiratory hospitalisations per year;
- 66,000 active asthma cases per year

However, these impacts can be turned around rapidly by getting more electric vehicles on the road and cleaning up our air. Recent research in the United states showed that postcodes in California with higher rates of electric vehicle adoption had fewer numbers of asthma-related emergency hospitalisations.¹⁷

Furthermore, researchers at Swinburne University have calculated that the widespread adoption of electric vehicles would reduce pollution enough to save the lives of 24,000 Australians over the next two decades, while also saving the country \$148 billion in costs and benefits.¹⁸

Oil production's toxic legacy

Internal combustion engines rely on petrol and diesel which are fossil fuels responsible for climate change. However the impact of oil extraction doesn't end there. Environmental pollution from oil mining and production such as fracking, oil spills, and oil well blow-outs has been directly linked to ground water and drinking water contamination.¹⁹ Lead, arsenic, chlorine and mercury are common pollutants in oil that carry serious health implications for both humans and the environment.²⁰ Additionally, fracking for shale oil can use up to 16 million litres of water per well, releasing toxic wastewater that often contaminates ground and drinking water.²¹

Car Exhaust at Multi Lane Street in Berlin © Paul Langrock /Greenpeace



The end of the road for internal combustion engines

In order to achieve net zero emissions by 2050, the International Energy Agency recommends all new vehicles must be zeroemissions by no later than 2035. This allows a 15-year lifespan of internal combustion engine vehicles sold before the deadline.²² However, if Australia is to do its 'fair share' when meeting global obligations, we need to strive for actions that accurately reflect our carbon budget; this means reaching net zero by 2035 for even a 50% chance of staying below 1.5°C.²³

The international market has already signalled the 'end of the road' for internal combustion engine vehicles as part of the Glasgow Declaration on Zero-Emission Cars and Vans signed at COP26 in 2021.²⁴ The declaration, signed by more than 100 governments, car makers, financial institutions and multinational companies, pledges to end the sale of internal combustion engine vehicles by 2035 in leading markets.²⁵

What's a carbon budget?

Like a financial budget, a carbon budget is a limit on how many greenhouse gas emissions can be "spent" before hitting a certain level of global heating. Most carbon budgets are calculated in line with the Paris Agreement of limiting global heating to 1.5 degrees above pre-industrial levels.

Driving Australia's emissions

In Australia, transport is the third largest - and the fastest growing - source of climate pollution, fuelled by road vehicles including cars, trucks and buses which contribute 81% of transport emissions.^{26 27}

Australia is lagging behind most comparable nations in the uptake of electric vehicles with one of the most polluting and least efficient domestic vehicle fleets in the world. In 2022, while electric vehicle uptake averaged 10% around the globe, only 3% of total light vehicles sold in Australia were electric vehicles.^{28,29} By comparison, last year almost 28% of car sales in China were electric and in Norway it was 79.3%, with four in every five cars sold electric.³⁰

The fleets solution

Cutting pollution and feeding the second hand car market

Fleets make up more than 40% of new car sales each year, with approximately 450,000 purchased for business, government and rental fleets annually.³¹ According to the Australasian Fleet Management Association (AFMA), just 1,000 companies are responsible for about 1.5 million vehicles on the road.³²

As most fleets update their vehicles within 3-5 years of purchase, this fast turnover makes them an important feeder for the secondhand market and offers the opportunity for the Australian public to access more affordable electric vehicles faster.

If Australia's largest corporate fleets commit to only purchase electric vehicles by 2025, we could see an extra 1 million to 1.5 million electric cars, utes and vans reaching the second hand market before 2030.

It's estimated that switching to renewable electric cars, utes and vans in corporate fleets could reduce annual climate pollution from cars by up to 10% and light commercial vehicles by up to 30% according to estimates based on the market share of corporate fleets.³³ This doesn't account for the longterm benefits of emissions reduction for the second-hand car market.

Sending a clear market signal for decarbonisation

Corporate fleets also have an important role in sending market signals on the need to decarbonise transport. In 2022, a Greenpeace Germany report showed that the automotive industry plans to produce 330 to 463 million more internal combustion engine vehicles than the maximum limit that would restrict global warming to 1.5 degrees.³⁴ A 2023 report from global consultancy Kearney based on a more generous carbon budget confirms that the car manufacturing industry is on track to reach its carbon budget by 2035 and to overshoot it by 75% by 2050.³⁵

Clear demand signals like electric vehicle targets from both government and corporate fleet owners play a critical role in shifting the automotive industry away from fossil fuels. Setting targets in advance can significantly influence electric vehicle supply by giving manufacturers and infrastructure providers the certainty to invest in scaling-up electric vehicle technology and charting a path towards a renewable transport future.

Pledging to electrify with renewable energy

A growing number of multinational companies like Coca-Cola Europacific Partners, AstraZeneca, Ingka Group (IKEA), Siemens and Unilever have already pledged to phase out fossil fuel vehicles through international commitments including the Accelerating to Zero coalition formed by the Glasgow Declaration, *EV100* run by the Climate Group, and as part of plans to meet net-zero or emissions reduction targets.

Here in Australia many major businesses - including Woolworths, Coles, Bunnings, and the 'big four' banks - are switching to 100% renewable electricity by 2025, and these companies are well positioned to now take a leading role in the shift to renewable-powered electric vehicles. Committing to electrify 100% of light vehicles by 2030 including cars, SUVs utes and vans, with an interim target of all new vehicle purchases to be battery electric from no later than 2025 will go a long way to realising the emissions and costs savings and reputational benefits of fleet electrification.



CHAPTER 1: BENEFITS OF ELECTRIFYING VEHICLE FLEETS

Potential impact of renewablepowered electric fleets

Fleets are a 'quick win' for transport decarbonisation because of the large number of vehicles on the road and outsized impact of their climate pollution.

Switching to renewable powered electric cars, utes and vans in corporate fleets could reduce annual climate pollution from cars by up to 10% and light commercial vehicles by up to 30% according to estimates based on the market share of corporate fleets.³⁶ This is without considering the flowon impacts for private car use after fleet vehicles boost the second hand car market, which would drive additional benefits as more people purchase electric vehicles.

According to the 2022 Fleet Electric Vehicle Insights Report, about 1,000 companies have a large fleet of over 250 vehicles accounting for a total of 1.49 million vehicles on the road.³⁷ If these top 1,000 companies with large corporate fleets were to completely electrify their vehicles, it could save in excess of 3-7 million tonnes of climate pollution per year.³⁸

Heavy trucks used to transport goods across the country also have an outsized influence on transport pollution. Despite only making up 4% of vehicles on the road, road freight is estimated to contribute 38% of total climate pollution from transport.³⁹

A corporate fleet is considered by the Australasian Fleet Management Association as having greater than 20 vehicles. In more developed international markets, electric vehicle uptake has followed a sharp adoption curve that picks up rapidly after hitting 10% of new car sales.⁴⁰ As fleets are responsible for over 40% of new car sales each year, businesses have a key role to play in hitting the tipping point of 10% of new vehicle sales to accelerate electric vehicle adoption in Australia.^{41 42}

Why companies are electrifying their fleets

- Lower operating costs and total cost of ownership
- Reducing climate pollution
- Meeting zero emissions targets
- Improving fuel security
- Cleaner, quieter streets
- Addressing climate risk
- Reputational benefits

There are many key drivers of electric vehicle adoption around the world, including reducing climate pollution, promoting quieter streets, government incentives and lower overall costs. Over the last ten years, countries with a supportive regulatory environment including fuel efficiency standards, have experienced high adoption rates of electric vehicles, rapid infrastructure advancement and increased supply of a wide range of models.

Greenpeace Australia Pacific surveyed major companies on their corporate fleet electrification plans and found that all respondents self-identified as extremely committed to reducing their impact on climate change. Of the companies who completed the survey, 40% had already undertaken an electric vehicle transition plan, and a further 50% had plans to undertake one. This reflects the building momentum among the business sector for corporate fleet transition and the opportunity for fast followers to join early movers in the fast lane to renewable-powered fleets.

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Electric vehicles are good for business

The cost of electric vehicles has decreased significantly in recent years, and their range and charging infrastructure have improved dramatically. Outlined below are some of the advantages for businesses of adopting electric vehicles in their corporate fleet.

Prices are going down, down, down

The economic case for electric vehicles has rapidly improved in recent years, particularly for corporate fleets which in general are used more often and travel longer distances than personal cars.

- The cost of running a battery electric vehicle is about 70% cheaper per KM than an internal combustion engine vehicle thanks to the price of electricity compared to fuel, and much lower maintenance needs.⁴³
- In 2022, refuelling a petrol vehicle costs more than five times per kilometre of travel than charging an electric vehicle.⁴⁴
- A low-utilisation fleet vehicle drives roughly 15,000km a year with an estimated spend of \$2,160 on petrol per year (\$0.14/km). An electric vehicle travelling that same distance would cost around \$600 per year (\$0.04/km) in electricity costs, saving \$1,600 a year on fuel alone.⁴⁵
- Extrapolating from those calculations, a high utilisation fleet vehicle travelling 35,000 km a year would have an estimated spend of \$4,900 on petrol, and an electric vehicle travelling the same distance would cost \$1,400 on petrol, saving \$3,500 a year on fuel.

Rapid advancement of electric vehicle manufacturing capacity and supply chains, falling battery prices, and strong residual value have improved the business case for electric vehicles and charging infrastructure installation. These trends are expected to continue, with prices steadily falling this decade as the battery industry scales further and new battery technologies come to market.⁴⁶

Despite the number of battery electric vehicle models increasing to 38 in 2022, the range of models with lower price points available in overseas markets is significantly greater where governments have taken action to support the industry, including implementing fuel efficiency standards. With the Australian Government actively contemplating the introduction of fuel efficiency standards matching the European, United States and New Zealand markets as part of its new Electric Vehicle Strategy, it is anticipated that Australia will see a greater range of vehicle options soon.

The down-low on TCO

The total cost of ownership (TCO) for a vehicle refers to the start to finish pricing of buying, maintaining, and operating a vehicle during its life-cycle, or until it is on-sold.

TCO is a critical consideration for businesses when considering new asset purchases such as fleet vehicles, as it takes in factors beyond initial purchase price, and expenses spanning several financial years.

The TCO of internal combustion engine vehicles includes many costs that either don't apply to electric vehicles such as engine maintenance, or are greatly reduced, such as cost to "fuel" the vehicle, as detailed in the previous section.

TCO for electric vehicles is influenced by the types of vehicles, annual distance travelled, energy prices and existing stock. For companies operating their vehicles on a 'high-utilisation basis' i.e a large amount of kilometres travelled per year, the TCO benefits of EVs are much higher compared to companies that use their vehicles less regularly, due to the higher operating cost savings.⁴⁷

According to analysis by Bloomberg and modelling by Evenergi, falling battery prices will further soften the TCO of electric vehicles, and drive down the upfront purchase cost, so that electric cars will be at parity or cheaper than internal combustion engine vehicles on a lifecycle cost basis by 2025.⁴⁸

Cost modelling for emissions abatement (cost per tonne of CO_2) shows that by 2025 electric vehicles will be the cheaper option for corporate fleet managers when acquiring and operating new vehicles. This is across all available light vehicle types and utilisation scenarios.⁴⁹



Going the extra mile

According to the Australasian Fleet Management Association (AFMA), organisations who are currently using electric vehicles actually travel on average more kilometres per day than those who do not have plans to introduce electric cars.⁵⁰

The average electric vehicle today has a range of 480km on a single charge with newer models climbing over 500km in range.⁵¹ Surveying by AFMA revealed only 3-9% of cars (including SUVs) used by businesses with no plan to transition to electric complete trips beyond a 200km radius, with 75% of trips undertaken within 100km.⁵² This means that there are still common misconceptions about electric vehicle range that need to be addressed when communicating transition plans to stakeholders.

The average electric vehicle today has a range of 480km on a single charge

Managing fuel security

In 2020-21, the transport sector accounted for more than two-thirds of oil consumption in Australia, with road transport alone responsible for a 54% share.⁵³

Fuel security has made headlines in recent years due to the insecure nature of Australia's fuel reserves. 91% of fuel in Australia is imported and vulnerable to volatile international prices and supply chain disruptions.⁵⁴ As Russia's invasion of Ukraine has shown, countries with high reliance and energy-exposure to fossil fuels imported from overseas are economically vulnerable to market shocks. If conflict in the Asia-Pacific were to occur in the coming years, many, if not all of the maritime supply chains through which Australia receives 90% of its oil would be affected.⁵⁵

Research from The Australia Institute shows that 33% of Australia's oil imports could potentially be replaced with domestically generated electricity if Australia's entire passenger vehicle fleet was to transition to electric vehicles.⁵⁶

Australia's fuel security and energy independence can be improved drastically by electrifying transport and powering it with local renewable energy resources.

Improving brand loyalty in staff and customers

People are increasingly expecting companies and CEOs to act with a social and environmental conscience. Edelman's 2023 Trust Barometer found 82% of people expect CEOs to take a public stand on climate change. The report highlights the role of business as a trusted institution with a responsibility and expectation to lead on key issues including delivering on climate solutions.⁵⁷

In a competitive employment market, corporate leadership on sustainability is also key to recruiting and retaining top talent. A 2021 survey by IBM's Institute for Business Value showed that 88% of people rate addressing climate change as important to them, and two-thirds were more likely to seek job opportunities with environmentally and socially responsible organisations.⁵⁸

A new phenomenon has emerged which KPMG has dubbed 'climate quitting'. It refers to a third of 18-24 year olds in the UK who have rejected job offers on the grounds of an employer's weak environmental and social governance credentials.⁵⁹

But it's not just about recruiting good talent, consumer sentiments towards products and services have also been rapidly shifting. Mainstream customers are now willing to pay more for goods and services that prioritise climate and sustainability - since 2019 an extra 22% of customers surveyed said prioritising environmental sustainability when choosing a brand was very or extremely important to them.⁶⁰

In relation to vehicle electrification, recent Greenpeace Australia Pacific polling showed that 54% of respondents agree with the statement that "major Australian companies should be switching their corporate car and trucking fleet to electric vehicles."⁶¹



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Government incentives driving change

Across both state and federal governments, many policy mechanisms, such as grants and discount schemes, exist to increase the uptake and attractiveness of electric vehicles.

For business owners and corporate fleet managers, government grants remain a powerful way to support the initial investment of buying electric vehicles and installing on-site charging infrastructure.

Research below outlines a snapshot of some key government initiatives available for businesses and eligible individuals looking to buy electric vehicles or install charging infrastructure.



Table: Snapshot of key government initiatives supporting electric fleets

PROGRAM	GOVERNMENT	INVESTMENT AMOUNT	FOCUS AREAS
ARENA Future Fuels program ⁶²	Federal	\$250M ⁶³	Funding program for innovative zero-emission vehicle transition initiatives (for both passenger and heavy vehicles) and charging infrastructure projects
Electric Car Discount ⁶⁴	Federal	FBT exemption for zero- emission vehicles made available by employers to employees up to a price threshold of \$84,916	Passenger vehicles in fleets
Driving the Nation Fund ⁶⁵	Federal	\$500M	Doubled ARENA funding to support expansion of national EV charging network
STATE INITIATIVES			
Drive Electric NSW EV fleet incentive ⁶⁶	NSW	\$105M	Support the purchase of battery electric or fuel cell electric vehicles, with additional funds available for smart base charging ⁶⁷
Destination Charging grants	NSW	\$20M	Provide co-funding for purchase and installation of EV chargers
NT Electric Vehicle Charger Grants Scheme ⁶⁸	NT	\$300,000	Electric Vehicle Charger (Residential and Business) Grants Scheme will be available to owners of EVs to buy and install EV chargers. This includes 100 residential grants of \$1,000 and 80 business grants of \$2,500, with a total of \$300,000 being committed.
QLD Zero Emission Vehicle Rebate Scheme ⁶⁹	QLD	A rebate of \$3,000 for eligible new zero emission vehicles	As part of the new ZEV Action Plan, the QLD Government introduced a purchase rebate of \$3,000 for all new battery EVs with a total purchase price of up to \$58,000, available from mid-2022 ⁷⁰
QLD Electric Vehicle Charging Infrastructure Scheme ⁷¹	QLD	\$10M	\$10 million to co-fund the installation of public fast charging infrastructure across the state in addition to existing Electric Super Highway funding
Commercial Sector Zero Emissions Vehicle Innovation Fund ⁷²	Victoria	\$5M	Under the \$100M Victorian Zero-emissions vehicle roadmap, the Victorian Government will establish a Commercial Sector Zero Emissions Vehicle Innovation Fund
EV Charging Infrastructure ⁷³	Victoria	\$19M	Under the \$100M Victorian Zero- emissions vehicle roadmap, \$19 million will be used to accelerate the rollout of EV charging infrastructure.
WA Electric Vehicle Charging Infrastructure Grants ⁷⁴	WA	\$10M	Grants of up to 50% of the cost of installing electric vehicle recharging infrastructure by not-for-profits, small and medium-sized businesses, and local governments.

Please note, while every effort has been made to provide accurate estimates above, these figures should be treated as indicative only

One recent example of government funding offering a legup for a business with a high-utilisation fleet is a \$20.1M support package offered by the Australian Renewable Energy Agency (ARENA) to logistics company Team Global Express. Under this program, which represents one of the largest electric truck trials in the world, 60 electric trucks will be deployed at the company's Western Sydney depot along with charging infrastructure and battery storage.⁷⁵ ARENA is further supporting fleet operators nationwide with a \$128M funding program for the installation of chargers and associated infrastructure.⁷⁶

On a state level, cash rebates, stamp duty exemptions, and heavily reduced registration costs are available to many buyers too. Research by the Electric Vehicle Council outlines all available rebates, and tax and registration incentives offered by the various states and territories as of October 2022 see table below.

GOVERNMENT	Approximate total incentive value in 2022 ⁷⁷ Including registration and stamp duty discounts, rebates, zero interest loan savings and accounting for any road user taxes.
ACT	\$6,708
NSW	\$4,500
NT	\$2,465
QLD	\$3,864
SA	\$3,414
TAS	\$2,000
VIC	\$1,888
WA	\$3,500

Table: State and Territory Government Incentives for electric vehicles

Supercharging electric vehicles with renewables

As one of the sunniest and windiest countries in the world, Australia's potential to harvest clean, renewable energy puts us at a huge advantage when it comes to reducing the climate and health impacts of transport pollution.

A recent Australian assessment of lifecycle emissions found that an electric vehicle powered by grid energy is already less emitting than that of an internal combustion engine - by an average of 29-41% per kilometre - when manufacturing, power production and battery recycling/disposal are taken into account.⁷⁸ However, powering an electric vehicle with a renewable power purchase agreement or a renewable powered grid can further significantly reduce these emissions.

Australia's electricity grid is already rapidly transitioning to renewable energy, with the Australian government committed to an 83% renewable electricity powered grid by 2030 and the Australian Energy Market Operator (AEMO) modelling a scenario in which all coal power stations in Australia close by 2032.^{79,80}In places with a high proportion of renewables in the electricity grid like South Australia, ACT and Tasmania, choosing a battery electric vehicle can reduce emissions by as much as 77%.⁸¹ This progress toward cleaning up the national grid makes battery electric vehicles a clean energy technology that keeps getting cleaner over time.

When it comes to corporate fleets, the opportunities for renewable-powered fleets are also there, with dozens of Australian businesses signing renewable power purchase agreements as part of their commitment to meet 100% renewable electricity target.

The dozens of Australian businesses already shifting to 100% renewable electricity can take advantage of their targets to gain the greatest possible emissions reduction benefits from their fleets.

What about hybrids?

When hybrid cars were introduced 25 years ago, they plugged a gap in the market for lower-pollution vehicles as electric vehicles were being developed.

Although they are still championed by some carmakers like Toyota, today fossil fuel-reliant hybrids and plug-in hybrids no longer represent the best technology for either cost savings or rapidly cutting climate pollution.

Today fossil fuel-reliant hybrids and plug-in hybrids no longer represent the best technology for either cost savings or rapidly cutting climate pollution.

Both conventional and plug-in hybrids have small batteries integrated with petrol-fuelled engines. This makes their powertrains more complex, and therefore more expensive to service; they have a shorter electric range, and most importantly still pollute our air and damage our climate.

Transport and Environment's '*How clean are electric cars*?' report shows that on a lifecycle analysis conventional hybrid and plug-in hybrid vehicles only deliver emissions reductions of 21% and 26% respectively, when compared to internal combustion engine vehicles. This makes them much closer to polluting petrol and diesel cars than to battery electric vehicles, which deliver a 69% reduction in emissions.⁸²

Furthermore, research in Europe has demonstrated that plugin hybrids consistently fail to meet their emissions reduction claims in real world scenarios. For example, the International Council on Clean Transportation (ICCT) revealed that the fuel consumption of many plug-in hybrids was up to five times higher than advertised.⁸³ This leads to much higher climate pollution and fuel costs.

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The main reasons plug-in hybrid electric vehicles have failed to reduce emissions and fuel as claimed are due to the methodology used to test and sell them, including:

- **1.** The real-world range for driving a plug-in-hybrid on only electricity is shorter than under testing conditions
- 2. Long-distance driving exceeds the electric driving range and leads to large distances travelled mainly powered by the combustion engine
- 3. Many vehicles are not fully charged before every driving day
- 4. When the combustion engine is running, it uses more fuel during real-world usage than in testing conditions⁸³

As corporate fleets travel more frequently and longer distances, the discrepancy between the reduction in fuel and pollution can be even greater.

Therefore, to realise the cost and emissions benefits of electrification - and to send a clear signal to car manufacturers to accelerate their production of zero emissions vehicles - it is important that corporate fleets commit to shifting to battery electric vehicles, rather than hybrids, as soon as possible.



Figure 1: Research conducted by the International Council on Clean Transportation demonstrated the gap between expected fuel use and real-world conditions for plug-in-hybrids, finding average fuel consumption to be between three to five times higher in the real world compared to test conditions.

Source: International Council on Clean Transportation⁸⁵

CHAPTER 2: STATE OF PLAY FOR CORPORATE ELECTRIC VEHICLES

This chapter analyses the current state of play of corporate fleet electrification in Australia, with a particular focus on passenger vehicles. It first provides a quick overview of government action where significant fleet transition is underway, then provides a snapshot of corporate action in relation to target setting, fleet transition and political engagement. Across both government and corporate fleets a number of company profiles are provided.

Government fleets leading the charge in Australia

Government fleets contain thousands of vehicles and their procurement decisions impact the new car market, as well as the secondhand models available to everyday Australians. The corporate sector can learn from government action on electric fleet transition planning and the scale of ambition.

The Federal Government has set a course for renewablepowered electric vehicles via its investment in renewable electricity and commitments to role model the transition through its own fleet. The Federal fleet of 12,000 vehicles, including 7,000 passenger cars, will soon be electrified through a target of 75% of new fleet vehicles being electric by 2025.^{86 87} The Federal Government has also projected the National Electricity Market (NEM) will reach an 83% share of renewable energy by 2030, which would contribute to a significant reduction in climate pollution from the electricity sector and supercharge the benefits of electric vehicles regardless of where they are charged in Australia.⁸⁸

It's not just the Federal Government, but many state and territory governments are also leading the way on EVs. Five state and territory governments responsible for a shared total of 45,600 vehicles have committed to electrifying their fleets by 2030 including South Australia, Australian Capital Territory, New South Wales, Queensland and Tasmania. Outlined below is the current state of play for state and territory government action.

"Based on currently available models and technologies, our 10-year transition will save around \$2 million in maintenance, around \$6 million in fuel costs and will reduce emissions by around 13,000 metric tonnes."

Peter Gutwein, former Tasmanian Premier⁸⁹



State and territory government action

	100% RENEWABLE ELECTRICITY TARGET	FLEETS TARGET	NUMBER OF LIGHT VEHICLES IN FLEET
Tasmania ^{90 91}	100% renewable now; 200% by 2040	100% by 2030 ⁹⁰	2,000
Australian Capital Territory ⁹²	100% renewable now	100% by 2030 - reached in 2021 for passenger fleet	1,800 vehicles
South Australia ⁹³	100% by 2030	100% by 2030	6,800 passenger and light commercial vehicles
Queensland ⁹⁴	80% by 2035	Yes, by 2026	10,000 vehicles95
New South Wales ^{96 97 98 99}	No	100% by 203098	Owns or leases over 25,000 vehicles ⁹⁹
Victoria ^{100 101}	Yes, 95% by 2035 ¹⁰⁰	No	10,000 vehicles ¹⁰²
Northern Territory ^{103 104}	50% by 2050 ¹⁰²	No	1,000 passenger vehicles
Western Australia ^{105 106 107}	No	No, 25% of new by 2026	8,000 vehicles

Case study: South Australian Government

The South Australian Government is leading by example with a plan to electrify its 6,800 passenger vehicles by 2030. It has a comprehensive plan to support the transition to renewable-powered electric vehicles including:

- Early investment in state-wide public charging infrastructure
- Electrifying its 6,800 passenger vehicles
- Transition to zero-emissions buses
- Catalysing business fleet uptake through the Fleet Pledge Program
- National advocacy for vehicle fuel efficiency, fuel quality, smart charging standards, tax reform addressing fuel excise, fringe benefits taxes and road user charging, and extended producer responsibility for batteries.¹⁰⁸

Fleet Pledge Program

The South Australian Government is working with local governments and businesses to increase uptake of electric vehicles through its Fleet Pledge Program. By taking the fleet pledge, businesses commit to driving the change by:

- · integrating electric vehicles into their fleet
- developing a fleet transition plan
- implementing smart charging solutions to optimise electricity use
- improving staff, contractor and supply chain preparedness
- participating in knowledge sharing events and reporting progress annually¹⁰⁹



Case study: Australian Capital Territory

The ACT Government has roughly 1,800 vehicles in its fleet including 585 passenger cars with 100% of fit-for-purpose vehicles transitioned to zero-emissions in 2021.

Some of the leading initiatives include:

- Achieved 100% renewable electricity in 2020.
- Ambition to have a zero-emissions public transport system by 2040 or earlier
- Plans to expand the public electric vehicle charging network to ensure there are at least 180 publicly available charging stations in the ACT by 2025¹¹⁰

The ACT Government also provides incentives for zero emissions vehicles including free registration, stamp duty exemptions for electric cars, scooters and motorbikes, interest free loans, and plans to incentivise e-bike uptake.



Businesses on the road to renewable electric fleets

As established in this report, corporate leadership on electric vehicles can influence large-scale changes in the Australian car market by creating clear demand signals, enabling a quality second-hand electric vehicle market and helping clean up the transport sector by advocating for policy measures like strong fuel efficiency standards. This section analyses where Australian businesses are up to on the road to renewable electric fleets.

Sending a demand signal

Corporate fleets can play a leadership role in enabling road transport electrification by collectively creating clear demand signals for electric vehicles. For global manufacturers to increase the supply of electric vehicles in Australia, there is a need for greater visibility and certainty on future demand trajectories, which can be created by corporate fleets by setting electric vehicle targets.

Bringing EVs to Australians through the second-hand car market

As fleet vehicles are usually turned over on a 3-5 year basis they are an important feeder for the second-hand car market, enabling the Australian public to access cleaner, more affordable and well maintained electric vehicles sooner.

Supporting better policy

Businesses with large corporate fleets can support the shift to electric vehicles by advocating for the Federal Government and state/territory governments to implement transition targets and strong fuel efficiency standards.



State of play: Corporate commitments and action

Despite global movement on electric vehicles - and fast building momentum after years of inaction - companies operating in Australia still have a way to go to catch up in the global race to renewable-powered electric fleets.

Recent research from the AFMA shows that: ¹¹¹

- 3.9 million vehicles are owned by Australian businesses
- Just 1,000 companies are responsible for around 1.5 million vehicles
- 21% of fleets plan to introduce electric vehicles by 2023
- 1% of fleet cars and SUVS are currently battery electric
- Only 5% of fleets currently use electric vehicles

In addition:

- 31% of large fleets (over 250 vehicles) are currently using electric vehicles
- 51% of large fleets are using hybrids as an interim solution
- 65-75% of corporate fleet operators expect that electric vehicles will see mainstream use in business fleets by 2030.¹¹²

These figures reinforce the findings of a recent Greenpeace corporate fleet survey, which identified that most companies are early in their transition to electric vehicles in Australia despite the economic, social and environmental incentives.

While all respondents self-identified as extremely committed to reducing their impact on climate change, only 20% have made definitive commitments to full fleet electrification, and only 10% received high scores for significant progress towards 100% renewable electricity and electric vehicles.

For full details on individual corporate progress, see the Greenpeace Electrify Fleets live rankings at <u>https://www.greenpeace.org.au/act/electrify-fleets</u>)

Many major fleets are at the electric passenger vehicle trial phase and into the early stages of scaling up their use. In addition to supporting infrastructure testing and enabling systems review, these trials are an important way to offer staff the opportunity to familiarise themselves with the technology ahead of implementation, however it is important that these companies move quickly beyond trials into target setting and implementation of full fleet transition.

Table: Corporate EV and renewable electricity targets.

NAME	HAVE THEY SET A TARGET TO ELECTRIFY THEIR FLEET?	HAVE THEY SET A CORPORATE TARGET FOR 100% RENEWABLE ELECTRICITY?	
RETAILERS			
Aldi	×	 Image: A set of the set of the	
Bunnings	×	 Image: A start of the start of	
Coles	×	✓	
IKEA	✓	✓	
JB Hi-Fi	×	×	
Kmart	×	✓	
Officeworks	×	×	
Woolworths	×	✓	
BANKING AND FINANCE			
АМР	×	\checkmark	
ANZ	×	\checkmark	
Bank Australia	✓	✓	
Commonwealth Bank (CommBank)	×	~	
National Australia Bank (NAB)	×	✓	
Macquarie Bank	×	\checkmark	
Westpac	✓	✓	
UTILITIES			
AGL	✓	×	
Australia Post	×	✓	
Optus	×	✓	
Origin Energy	✓	×	
Telstra	×	✓	
TPG Telecom	×	✓	
FOOD AND BEVERAGE			
Asahi	×	✓	
Coca-Cola	✓	✓	
Lion	×	✓	
Nestle	×	✓	
Mars Australia	×	✓	
Unilever	✓*	✓	
HIRE CARS			
Avis	×	×	
Europcar	×	×	
Hertz	×	×	
Sixt	×	×	

* Unilever Australia does not currently have plans to meet its EV100 commitment through 100% battery electric vehicles.

EV100 members are showing the way

EV100 is a global initiative run by the Climate Group, bringing together companies committed to switching their owned and contracted fleets up to 7.5 tonnes to electric vehicles and installing charging infrastructure for employees and customers by 2030.

128 member companies across 98 markets have made the pledge to switch 5.6 million vehicles to electric. Their members' ambitious commitments will save 85.6 million metric tons of climate pollution by 2030.¹¹³

Global members with operations in Australia include¹¹⁴: IKEA, Schneider Electric, Origin Energy, AGL Energy, Coca Cola Europacific Partners, Deloitte, HP Inc, and Unilever.

EV100+ is the Climate Group's initiative to kickstart the transition to zero-emission medium and heavy-duty vehicles by sending a demand signal with commitments to zero-emissions trucks by 2040 and policy advocacy.¹¹⁵



State of play: Advocating for change

Companies with corporate fleets are influential within the transport sector and have a responsibility to use their power for good in advocating for the rapid shift to zeroemissions vehicles.

Government action has an important role to play in facilitating the national transition to electric vehicles. The corporate sector can encourage and accelerate this by lobbying and advocating for policy that encourages electric vehicle affordability and uptake, like a strong fuel efficiency standard.

In late 2022, the Federal Government opened consultation on its plans for a National Electric Vehicle Strategy (NEVS) and businesses came out strongly in support of electric vehicles.¹¹⁶ Demonstrating the power of unified support, more than 100 businesses and organisations signed a joint statement alongside the Electric Vehicle Council of Australia calling for over 1 million electric vehicles on the roads by 2027 and introducing additional support measures including strong fuel efficiency standards.

A number of prominent businesses also took leadership on the issue by making submissions to the NEVS consultation in support of electric vehicles. The submissions highlighted corporate action toward electric fleets, and showed support for a number of measures including strong fuel efficiency standards, rapid phase-out of internal combustion engine cars, desire for new design standards to support new models of electric trucks and initiatives to increase charging infrastructure.

Corporate submissions to the National Electric Vehicle Strategy in 2022 included:

- AGL advocating for a wide range of policies and measures to support the adoption of electric vehicles including strong fuel efficiency standards and suggesting additional policy measures to rapidly phase out internal combustion engine vehicles.¹¹⁷
- Australia Post highlighting the need for a national electric vehicle roadmap that establishes a target and supporting policy initiatives, to give industry the certainty it needs to innovate and invest in electric vehicle infrastructure.¹¹⁸
- IKEA calling on the Federal Government to address market challenges, including by supporting the rollout of charging infrastructure, introducing sales targets, and amending the Australian Design Rules to support electric trucking supply.¹¹⁹

- Origin Energy supporting the introduction of a national fuel efficiency standard and increased measures to facilitate the transition of corporate and government fleets to support Australian electric vehicle demand and the second-hand car market.¹²⁰
- Uber advocating for fuel efficiency standards, zeroemissions vehicle sales targets, increased charging and other incentives to support electric vehicle uptake.¹²¹
- Westpac advocating for a fuel efficiency standard in alignment with other major economies, for the government to support lower-income people to access EVs, and support for corporate fleet electrification.¹²²
- Woolworths advocating to decarbonise the country's entire vehicle fleet, from light passenger vehicles to heavy commercial vehicles through measures including consistent national legislation, fuel efficiency standards, improved charging infrastructure, renewable electricity to power the electric vehicle transition and increasing local manufacturing.¹²³

Read more about why fuel efficiency standards are important here: <u>https://act.greenpeace.org.au/electrify-campaign</u>

"A strong, national electric vehicle strategy with targeted policy for the freight and logistics sector will enable the retail sector to accelerate its contribution to transport emissions reductions, enabling sustainable delivery options for Australians."

Brendan Groll, IKEA¹²⁴



Business case studies

Case study: IKEA (Ingka Group)

- Commitment to 100% renewable electricity by 2025¹²⁵
- EV100 commitment to electrify all vans including a target for zero-emissions last mile delivery by 2025¹²⁶
- Committed to zero-emission heavy duty trucks by 2040¹²⁷
- Over 500 zero-emission trucks are already operated globally for IKEA through more than 40 partners
- Commitment to install charging at all stores by 2030 and currently has charging stations available at almost all Australian stores.¹²⁸
- Ambition for zero-emissions ocean shipping by 2040 through Cargo Owners for Zero Emissions Vessels.¹²⁹

IKEA is a global furniture and homewares retailer operating 10 stores across Australia owned by Ingka Group. IKEA has a goal to become climate positive by 2030 by reducing more emissions than it creates. The retail business plans to halve emissions across the entire value chain by 2030 through electrification, generate more than 100% renewable electricity, improve energy efficiency by opting for materials, foods and choices that have a lower climate impact.

IKEA has committed to 100% renewable electricity by 2025. The Ingka Group has made its first Australian investment in large-scale renewable energy generation in a Victorian wind farm this year. Globally, IKEA is enabling its suppliers to access renewables by financing on-site renewable investments and enabling purchase of renewable energy in countries with limited access. IKEA is a global signatory to EV100 and a founding member of EV100+, led by the Climate Group. This includes a commitment to reach zero emissions for all last mile deliveries by 2025 and zero emissions trucking by 2040 across 30 markets including Australia.¹³⁰

Internationally, IKEA has been collaborating with Renault and MAN to produce a 20m3 box body electric truck, designed to meet the company's pallet requirements. The success of the design and implementation in Europe has lead to further collaboration with other manufacturers including heavy vehicles.¹³¹

"Customers have increasing expectations for the retail sector to reduce the environmental impact of its delivery services, and at IKEA Australia we are leading the way by accelerating the integration of electric vehicles into our delivery fleet. We've so proud of the progress we have made with our delivery partners so far, and there is much more to do as we journey towards a zero emissions future."

IKEA Australia CEO and Chief Sustainability Officer Mirja Viinanen



Case study: AGL

- Committed to 100% electric passenger vehicles by 2030
- 50% industrial vehicles by 2030
- Changed procurement policy to make electric vehicles the default purchase
- Leading on grid testing for energy system integration
- Advocated for a strong fuel efficiency standards in the 2022 National Electric Vehicle Strategy consultation¹³²
- Knowledge sharing to support customer and business electric vehicle uptake

AGL Energy was the first company in Australia to join EV100. To meet its commitment, AGL will electrify 100% of its 400 light vehicles and 50% of industrial vehicles by 2030.

To improve the business case for electric vehicles, AGL has optimised its leasing structure and updated total cost of ownership calculations to better reflect residual value. AGL cites lower cost of ownership and efficient fleet management as key to improving the business benefits.

The company is confident that it can meet the target given the emergence of fit-for-purpose models overseas, but sees availability of industrial vehicles (primarily utes) as a key challenge to overcome between now and 2030.¹³³

AGL is also working to increase knowledge on the opportunity to integrate electric vehicles into the energy system. Working with ARENA, AGL is conducting a large-scale, three-year charging trial involving 300 electric cars belonging to its residential customers. Through this trial, AGL aims to understand how electric vehicle charging could help the wider energy system, shifting peak demand and supporting grid integration with renewables, while also aiming to reduce customer bills.^{134 135}

AGL is also supporting staff engagement and education through training programs and implementing an extended insurance policy for staff to test the cars overnight with their family through 'educational' borrowing.¹³⁶

AGL is Australia's biggest domestic climate polluter, operating some of Australia's largest coal-burning power stations. But following sustained pressure from Greenpeace, other civil society groups, investors and notably its largest shareholder Mike-Cannon Brookes, AGL has brought forward its coal closure dates. With almost an entirely new Board committed to rapid decarbonisation, AGL is now well positioned to be a leader in Australia's clean energy transition. This includes playing a central role in accelerating Australia's uptake of electric vehicles.

Case study: Hertz

While Hertz does not have a formal 100% electric vehicle target, the rental giant has a long-term vision to switch its fleet to all-electric. Its interim target is to electrify 25% of its 400,000 vehicle fleet by the end of 2024.^{137, 138} Hertz is transitioning its high-use fleet for the significant cost savings available due to the 50-60% lower maintenance costs of electric vehicles compared to fossil fuel cars.¹³⁹

Globally several deals to purchase electric vehicles have been announced with leading car manufacturers including 175,000 from General Motors, 65,000 from Polestar and 100,000 from Tesla, boosting electric vehicle share from 5% to at least 25% of Hertz's total fleet within two years. Hertz's deal with General Motors alone is expected to save approximately 1.8 million metric tonnes of climate pollution based on an estimated 12.8 billion kilometres of travel.

General Motors alone is expected to save approximately 1.8 million metric tonnes of climate pollution based on an estimated 12.8 billion kilometres of travel.¹⁴⁰



CHAPTER 3: ROAD TO ACTION

This report has highlighted both the significant need for and benefits of - major corporations switching to renewablepowered electric vehicles. So how do you go about it? Taking the following steps will put your business in a leadership position.



1. SET YOUR SIGHTS ON THE FINISH LINE

Set targets that align with international leaders including electrifying 100% of passenger vehicles by 2030 and zero emissions trucking by 2040.



2. START YOUR ENGINES

Undertake a transition plan and start introducing battery electric vehicles and infrastructure to get on track for 100% electric cars, utes and vans by 2030



3. JOIN THE CHEER SQUAD

Push for government action on fuel efficiency standards

Support a leadership environment by knowledge-sharing



4. JUMP START SUCCESS FOR STAFF AND CUSTOMERS

Install charging infrastructure Enable public and active transport

Set your sights on the finish line

To align with international standards and meet expectations for limiting climate change to 1.5 degrees, Greenpeace Australia Pacific recommends businesses operating in Australia set the following targets for electrifying their fleets with battery electric or zero-emissions vehicles:

- 1. Electrify 100% of light vehicles by 2030 including cars, utes and vans, with an interim target of all new vehicle purchases to be battery electric from no later than 2025.
- **2. Strive for zero-emissions trucking by 2040** including an interim target for transitioning short-haul trucking including last mile delivery by 2030.
- **3. Set targets for electric and zero-emissions transport in supply contracts** signed or renewed from 2024.
- **4.** Power the transition with 100% renewable electricity by 2025.

Setting clear, timebound targets for 100% fleet electrification sends a strong message internally, to governments and to industries like charging providers and car manufacturers of the expected demand and transition timeframe.

This is important for supporting certainty for investment in charging infrastructure and signalling demand to overseas manufacturers. It also builds the case for government action, including the introduction of fuel efficiency standards to increase supply and expected scale of investment for supporting infrastructure and grid upgrades.

With staff and customers looking to business for action, driving towards renewable electricity and electric vehicles demonstrate that your business is on the road to zero emissions.



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Start your engines

Preparing for the transition to electric includes assessing the productivity of vehicles in existing fleets and reviewing systems of use. Reducing the number of poorly-utilised vehicles and downsizing models to shift away from large SUVs where not essential for the task should be considered within your plans.

Now is the time to deploy charging infrastructure to support introduction of electric vehicles and understand the best places to charge for your fleet. Engage with electricity network providers early in the process to understand if there are any upgrades required to energy infrastructure to support the transition.

Trial smart charging solutions to optimise your fleet's charging, benefit from cheaper electricity rates, and help manage grid demand. As part of early trials it is also important to investigate home charging for staff who take the vehicles home overnight if this is part of the overall charging strategy.

Get race-ready

Now to 2025:

- Set targets for operational fleets and supply chain including owned, leased and contracted vehicles
- Focus on light vehicles, but consider the plan for heavy vehicles
- Undertake a transition plan, begin preparation and trials
- Introduce a policy that prioritises electric vehicles where a fit-for-purpose alternative is available now
- Begin rollout of charging infrastructure for staff and customers
- Consider internal policies that support public and active transport for staff and customers
- Implementation of 100% renewable electricity targets by 2025

2025 to 2030:

- Scale up implementation of electric passenger vehicles to 100% of new vehicles
- Introduce light commercial vehicles reaching 100% of new vehicles as they increase in availability; ramp up light-duty trucking transition
- By 2030, electrify 100% of light vehicles and power them with renewables.
- Switch long-distance logistics to rail where applicable
- Refine solutions and iterate over time to improve efficiency, cost and emissions reductions

2030 to 2035:

- Continue transitioning trucking and specialist vehicles with all new or refurbished vehicles, prioritising electric models
- Integrate further advancements like hydrogen for heavy, long distance trucking as it becomes available if necessary

2035 to 2040:

- Hard-to-abate transport transition expected to ramp up with heavy duty and long distance trucking solutions including advancements in battery electric and hydrogen trucks
- Scale-up towards goal of zero-emissions trucking by 2040

Join the cheer squad

Businesses have an outsized impact on the environment and communities we live in and therefore have a responsibility to engage in leadership that builds support for, and understanding of, climate solutions. Senior executives can use their platform as business leaders to influence change by championing the shift away from fossil fuels and toward a renewable-powered electric future.

Joint advocacy can be backed by further actions including consultation submissions, championing action through media representation and talking to staff and customers about the clear time-bound targets your company has set.

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While it's important not to greenwash action or overstate the impact or role your business is playing, genuine advocacy and championing change that includes real and meaningful action is a powerful force that can create a ripple effect across the corporate sector.

Advocate for change

As large fleet users, businesses have a responsibility to engage in advocacy that supports the need for effective legislation, including strong fuel efficiency standards, to support a rapid transition away from polluting fossil fuel vehicles. Advocating for strong fuel efficiency standards has a dual benefit of also driving down costs of electric vehicles, which is good for the bottom line.

Jump start success for staff and customers

Companies have an important role to play in supporting staff and customers to reduce their personal transport pollution by travelling by public and active transport, and accessing clean, affordable electric vehicles powered by renewables.

Measures to help staff travel by active, public and electric transport can improve employee satisfaction and productivity. Initiatives that offer staff the opportunity to borrow electric fleet cars for weekends like AGL's educational borrowing program can help staff gain confidence and familiarity with electric vehicles.

Investing in charging stations at prominent locations at all stores and offices has been shown to benefit staff, customers and businesses by expanding charging infrastructure for the public, drawing new customers to stores and increasing time spent in the vicinity.¹⁴¹ A number of leading businesses have already set targets to add electric vehicle charging stations at all of their offices and stores by 2030 through EV100.

Many companies are also already providing their staff with discounted or free public transport, end of trip facilities, bike storage, and video conferencing or work from home initiatives to reduce commuting and air travel. All companies should continue to look for ways to help their staff cut transport emissions whether through vehicle electrification and/or reducing or eliminating their reliance on private vehicles.

Electric Vehicle Owner James Using App in Australia © Greenpeace / Marcus Coblyn



APPENDICES

Appendix 1: List of facts, figures and assumptions

Appendix 1.1: VFACTS Sales by sector

Estimated based on Federal Chamber of Automotive Industries VFACTS data published in Car Export for the years 2020-2022

	TOTAL SALES	BUSINESS	GOVERNMENT	RENTAL	PRIVATE
2020142	916,968	367,932	30,417	34,676	449,376
2021143	1,049,831	378,506	28,520	60,242	539,242
2022144	1,081,429	362,623	27,197	63,755	580,495

Appendix 1.2: Corporate fleet emissions calculations

Research commissioned from Evenergi Pty Ltd estimates emissions range from corporate fleet vehicles. The methodology and discussion is described below:

The share of corporate fleet vehicles to total emissions was estimated using data on the number of corporate fleet vehicles as reported by AfMA in its 2020 report, and data on the total number of vehicles in Australia reported by the Bureau of Infrastructure and Transport Research Economics (BITRE). In addition to the vehicle share data, there are other parameters that have an impact on the emission contributions, including the trip lengths and fuel mix (petrol, diesel, hybrid and electric) of corporate fleet vehicles compared to other vehicles. Since these parameters were not available for corporate fleets, a sensitivity analysis was conducted to assess the lower and upper bounds of emission shares (best and worst case emissions scenarios, respectively), based on different values of average trip lengths, fuel economy and emission factors. The following assumptions were made for the analysis:

- Worst case scenario (upper bound of emissions)
 - Average trip length for corporate fleet vehicles assumed to be 20% higher than other vehicles
 - Fuel consumption rate (litres per 100 kms) for corporate fleet vehicles assumed to be 10% higher than other vehicles
 - Emission factors (kgCO₂/l) for corporate fleet vehicles assumed to be 10% higher than other vehicles
- Best case scenario (lower bound of emissions)
 - Average trip length for corporate fleet vehicles assumed to be 10% lower than other vehicles
 - Fuel consumption rate (litres per 100 kms) for corporate fleet vehicles assumed to be 10% lower than other vehicles
 - Emission factors (kgCO₂/l) for corporate fleet vehicles assumed to be 10% lower than other vehicles

Based on the above assumptions, it was possible to arrive at a possible range of emission shares for corporate fleets for different vehicle types, as shown in the figure below. This approach enables arriving at ballpark ranges for emission shares, given the lack of detailed data for corporate fleets to allow for the estimation of exact numbers, while still providing insight into how the sector as a whole is contributing to emissions.



Figure 24. Share of corporate fleets to total emissions by vehicle type

Some key insights based on the analysis above:

- · Corporate fleets have a notable share of emissions (in the 15% - 30% range) of light commercial vehicles (LCVs) in Australia, primarily driven by the use of utes by many businesses
- The shares are relatively lower for passenger cars, (in the 5% - 10% range) as the total market for passenger cars is significantly higher with the market dominated by privately owned vehicles.
- The above assessment does not consider heavy commercial vehicles (HCVs), due to the lack of accurate data on total HCV market in Australia. It is expected however that the share of emissions would be the highest in the case of HCVs, given the role that HCVs play in business operations in Australia.

Appendix 1.3: Total Cost of Ownership (TCO) assessment for Passenger Vehicles

Source: Evenergi research commissioned by Greenpeace Australia Pacific

Passenger vehicle sales were close to 20% of the total new light vehicle sales in Australia in 2022 (FCAI 2023). Within corporate fleets, passenger vehicles are frequently found, especially within the rental car and banking sectors and more broadly in executive and sales vehicles roles across all sectors.

The internal combustion engine (ICE) vehicle chosen for this analysis is Toyota Camry ICE which has the highest number of sales in the value end of the Passenger Medium vehicle category. The market is also currently seeing much greater numbers of hybrid electric vehicles (HEVs) in this segment as an interim technology.

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Table 5. Input assumptions for medium passenger vehicles

The following table shows the assumptions used in the analysis:

VEHICLE TYPE	SPECIFICATION LEVEL	MAKE, MODEL AND VARIANT		UTILISATION (KMS)	FIRST USE VEHICLE HOLDING PERIOD (YEARS)
		ICE	EV EQUIVALENT		
Passenger medium	Medium	Toyota Camry SX	BYD Seal	15,000 20,000 25,000	6 4.5 3.6
	High	Toyota Camry SL	Tesla Model 3	30,000 35,000	3 2.6

The following graphs show the TCO gap for the medium specification of this model along with the emissions figures.

TCO gap timeline for ICE model to equivalent EV



Figure 28: Transition analysis for Passenger Medium - Medium specification

As seen in the figure above, by 2025, the TCO gap for this category falls below zero for all the utilisation bands, indicating a positive economic result from transition to EVs.



Annual operating CO₂ emissions comparison

For fuel-based vehicles, emissions increase in proportion to the amount of fuel used. Higher annual distances therefore translate into higher annual emissions. For EVs operated using grid power, this is similar. For EVs operated using 100% renewable energy, the operating emissions are zero regardless of the annual distances. Emissions savings are therefore greater for EVs that are operated on 100% renewable energy that replace well-utilised ICE vehicles. For example, an EV replacing a medium passenger vehicle will save 6 tonnes of CO_2 annually compared to the current ICE vehicle when operated using 100% renewable energy. The same EV operated using the "average grid" will generate only half the emissions savings, indicating the importance of using renewable energy to get the full emission benefit of EVs.



Emissions abatement cost (\$/ CO₂ tonne)

As seen in the graph above, the emissions abatement costs for this type of vehicle fall below zero just after 2025 for all utilisation levels considered, indicating a positive economic case for transition. From 2025 onwards, there is no financial penalty for abating CO_2 emissions.

Appendix 1.4: Battery prices

The transition to EVs has been made possible because of the development and scaling of the production of lithium ion batteries. This growth has seen lithium ion battery prices fall significantly from just under \$1,200 per kWh in 2010 to under \$150 per kWh in 2018. Battery prices will continue to fall as the industry scales further and new battery technologies come to market. By 2030, lithium ion battery prices could be as low as \$62/kWh if the current learning rate continues as predicted by BNEF, as shown in the figure below.

Lithium-ion battery pack price (real 2019 \$kWh)



Figure 26: Lithium-ion battery price outlook up to 2030 (Gooldie-Scot 2019)¹⁴⁵

Appendix 2: List of company profiles

The companies and institutions listed on the Greenpeace Electrify Fleets website have been selected based on the following criteria.

They are:

- A big brand or well recognised company or institution that was profiled under Greenpeace's REenergise campaign; and/ or
- A big brand or well recognised company with important cultural or sectoral influence; and/or
- Well recognised companies or institutions who have significant passenger vehicle fleets; and/or
- Global companies with significant operations, cultural or sectoral influence in Australia that have made commitments to 100% renewable electricity and/or transport electrificationThese companies are listed below.

Retailers

- Woolworths Group Limited*
- Coles Group Limited*
- ALDI*
- IKEA*
- Bunnings (Wesfarmers)*
- Target (Wesfarmers)*
- Kmart (Wesfarmers)*
- Officeworks (Wesfarmers)
- Jb Hi-Fi Limited*
- Myer Holdings Limited*
- David Jones

Food and Beverage

- Asahi Holdings (Australia) Pty Ltd
- Lion Pty Ltd*
- Nestle Australia Ltd*

Sally, Scott and Leo with Their Electric Vehicle (EV) in Sydney © Greenpeace / Isabella Moore





- Coca-Cola Europacific Partners Formerly Coca-Cola Amatil Limited
- Unilever Australia*
- Mars Australia

Banking and Finance

- National Australia Bank*
- Commonwealth Bank Of Australia
- Westpac*
- ANZ*
- Bank Australia*

Hire Cars

- Hertz
- Avis
- Europcar
- Sixt

Utilities

- Telstra Corporation Limited*
- Optus*
- Tpg Telecom*
- Australian Postal Corporation
- Agl
- Origin

* Denotes the companies and institutions that had responded to the Greenpeace corporate renewable transport survey as of 9 February 2023

Appendix 3: Vehicles coming soon

Source: Evenergi whitepaper, 2022, commissioned by Greenpeace Australia Pacific.

Table 1. EV model options in Australia - light vehicles

Passenger Light Mini Electric - Ora Goodcat 140000 More EV options are coming. & Small BYD Dolphin (14%) coming.		SUB CLASS	UNDER \$100K	2022	2023 AND BEYOND	ANNUAL SALES AND % SHARE OF MARKET (DOWLING 2022)	SEGMENT OVERVIEW	
& Small BYD Dolphin (14%) coming.	Passenger	Light	Mini Electric	_	Ora Goodcat	140000	More EV options are coming.	
Pouroot c2008	-	& Small			BYD Dolphin	(14%)		
reugeot e2008,					Peugeot e2008,			
Volkswagen ID.3					Volkswagen ID.3			
Fiat 500e,					Fiat 500e,			
Cupra Born					Cupra Born			
Medium Nissan Leaf – BYD Seal, Mercedes 30000 More EV options are		Medium	Nissan Leaf	-	BYD Seal, Mercedes	30000	More EV options are	
EQE (3%) coming.					EQE	(3%)	coming.	
Volkswagen ID.5					Volkswagen ID.5			
Hyundai Ioniq 6					Hyundai Ioniq 6			
Large Tesla Model 3 Mercedes EQS Genesis G80 6000 Entrants in the value		Large	Tesla Model 3	Mercedes EQS	Genesis G80	6000	Entrants in the value	
& Upper Large Polestar 5 (<1%) end of this segment		& Upper Large			Polestar 5	(<1%)	end of this segment	
years							years	
SUV Light MG ZS – Subaru Solterra, 180000 More EV options are	SUV	Light	MG ZS	-	Subaru Solterra,	180000	More EV options are	
& Small Hyundai Kona, Genesis GV60 (18%) ^{coming.}		& Small	Hyundai Kona,		Genesis GV60	(18%)	coming.	
Kia Niro Polestar 4,			Kia Niro		Polestar 4,			
Mazda MX 30 Toyota BZ4X			Mazda MX 30		Toyota BZ4X			
BYD Atto 3 Renault Megane E-Tech			BYD Atto 3		Renault Megane E-Tech			
Medium Hyundai Ioniq 5 Volvo C40 Genesis GV70 192000 More EV options are		Medium	Hyundai Ioniq 5	Volvo C40	Genesis GV70	192000	More EV options are	
Kia EV6, Skoda Enyaq Volkswagen ID.4 (19%) ^{coming.}			Kia EV6,	Skoda Enyaq	Volkswagen ID.4	(19%)	coming.	
Volvo XC40 Polestar 3			Volvo XC40		Polestar 3			
Mercedes EQA Nissan Ariya			Mercedes EQA		Nissan Ariya			
Lexus UX300e Ford MachE			Lexus UX300e		Ford MachE			
Tesla Model Y			Tesla Model Y					
Large – – Mercedes EQB, 168000 Entrants in the value		Large	-	-	Mercedes EQB,	168000	Entrants in the value	
& Upper Large Volvo EXC90 (17%) end of this segment		& Upper Large			VOIVO EXC90	(17%)	end of this segment expected in coming years.	
Hyundai ioniq 7, years.					Hyundai ioniq 7,			
Kia EV9					NIA EV9			

CLASS	SUB CLASS	CURRENT EVS UNDER \$100K	ADDITIONAL IN 2022	2023 AND BEYOND	ANNUAL SALES AND % SHARE OF MARKET (DOWLING 2022)	SEGMENT OVERVIEW
Light Commercial	Vans <2.5 T GVM	Renault Kangoo	Mercedes Vito	ACE Cargo	1000 (0.1%)	More entrants in the value end of this segment are expected in coming years.
	Vans >2.5 T GVM	-	EC 11	Mercedes Sprinter ACE Van Renault Master Ford E-Transit Custom Ford E-transit LDV eDeliver9	27,000 (2.7%)	Entrants in the value end of this segment expected in coming years.
	Utes	_	LDV T60 (2WD)	ACE Yewt BYD Ute Atlis XT Rivian (>=2024) ROEV	232,000 (23.2%)	Significant uncertainty about EV options in this segment before 2025/26. This could change as EV options are appearing overseas along with locally produced retrofits
People Movers	People Movers	_	Kia Niro Mercedes EQV	LDV Mifa Volkswagen I.Buzz Mercedes Vito Tourer	12000 (1.2%)	Entrants in the value end of this segment expected in the coming years.
Light Buses	Light Buses	-	Joylong	-	3000 (0.3%)	More participants in the value end of this segment are expected in coming years.

More heavy vehicle models are expected to be available as technology evolves, improving battery energy density and charging times, details provided as below.

 Table 2. EV model options in Australia - heavy vehicles

CLASS	SUB CLASS	CURRENT EVS	ADDITIONAL IN 2022	2023 AND BEYOND	HYDROGEN	MARKET SIZE (DOWLING 2023)	SEGMENT OVERVIEW
Heavy Commercial	Light (GVM from 3.5 to 8 tonnes)	Fuso Canter SEA 300 range JAC N55	Foton iBlue	Isuzu EFV EV Hino 300 Z EV	-	16000 (41%)	Urban duties will lead the transition due to improving battery technology, shorter distances travelled and the high inefficiency of diesel trucks in congested urban traffic
	Medium (2 axles and GVM > 8 tonnes	SEA 500 range Volvo FL Volvo FE	Janus Electric (retrofit)	Scania L Electric Mercedes eActros DAF LF Electric Denis Eagle e-Collect MAN eTGM Mack LR Electric	-	7850 (21%)	
	Heavy (3+ axles or 2 axles with GCM > 39 tonnes)	_	_	Kenworth T680e Freightliner eCascadia Volvo FH, FM, FMX Electric Scania R Electric Mercedes eActros DAF CF Electric	Volvo FH FCEV Mercedes Actros FCEV Kenworth T680 FCEV Freightliner Cascadia Fuel Cell Hino 700 series Fuel Cell Hyundai XCIENT Pure Hydrogen/ H2X	15000 (38%)	Megawatt charging, higher battery energy density expected to become commercially available by the end of this decade will enable the economical transition of heavy duty vehicles, especially in volume- limited applications Hydrogen options in early phases of development, targeted to long haul applications from approx. 2030

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