

National Electric Vehicle Strategy: consultation paper

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About Greenpeace

Greenpeace is a global environmental network dedicated to the mission of securing a world capable of nurturing life in all of its magnificent diversity. We are fully independent, accepting no funding from any government, business or political party anywhere in the world.

Greenpeace Australia Pacific is an autonomous entity headquartered in Sydney. More than 1.2 million people participate within the Greenpeace Australia Pacific network across all platforms, showing their support for ambitious climate action. Greenpeace considers the current trajectory of global warming to be the single greatest threat to human health, security, and well-being, as well as to global biodiversity. For these reasons we urge the Federal Government to take the strongest possible action on climate change, in line with credible pathways to limiting global heating to 1.5 degrees.

We thank the Federal Government and the Department of Climate Change, Energy, the Environment and Water for the opportunity to input into this important reform.

Responses

1. Do you agree with the objectives and do you think they will achieve our proposed goals? Are there other objectives we should consider?

Greenpeace Australia Pacific broadly supports the goals and objectives outlined in the strategy, noting the following comments.

- The top priority of the strategy must be the urgent and rapid reduction of emissions from the transport sector. With Australians already suffering from more severe and more frequent extreme weather events, dramatic action to cut emissions has never been more urgent. Australia must take strong action to help meet the Paris Agreement goal of limiting global heating to 1.5 degrees. This

requires at least a 74% reduction in domestic emissions by 2030 on 2005 levels and net zero by 2035.¹ Transport needs to do its fair share.

- While the objective of increasing demand for electric vehicles (EVs) is welcome, at present it is supply issues most holding back EV uptake in Australia. Addressing these supply issues, through the introduction of a strong and robust fuel efficiency standard in line with or stronger than other major markets, should be the immediate priority of the strategy.
- The current goals and objectives make no explicit mention of issues of accessibility, fairness or equity in the transition to electric vehicles. This could be addressed by adding “and accessible to all Australians” to goal one
- Greenpeace also asserts that this strategy should focus on support for uptake of battery electric vehicles only, given plug-in hybrids are much closer to internal combustion engine (ICE) vehicles in nature (see below for further discussion) and that hydrogen is increasingly likely to have a use case limited to decarbonising heavy freight.
- Finally, Greenpeace Australia notes that while the development of the NEVS is long overdue, that a switch to electric vehicles alone will be insufficient to achieve net zero emissions from the transport sector. Fewer cars, less driving and better designed cities are also essential to cutting transport emissions and it is urgent and imperative that alongside the NEVs an integrated and comprehensive Zero Emissions Transport Strategy is developed. This should focus on ensuring transport system design and investments are directed towards public and active transport and micro-mobility, rather than private vehicles. Such measures are critical to ensure a fairer, healthier and more efficient transport system overall.

2. What are the implications if other countries accelerate EV uptake faster than Australia?

Australia has some of the highest per-capita CO₂ emissions in the world, with a significant share of these arising from the transport sector. Due to the absence of up-to-date fuel efficiency standards, Australia’s domestic vehicle fleet is one of the most polluting and least efficient in the world.

According to the Australia Institute, in 2018 the average carbon dioxide (CO₂) intensity for new passenger vehicles in Australia was 169.8gCO₂/km compared to 129.9gCO₂/km in the United States, 120.4gCO₂/km in Europe and 114.6gCO₂/km in Japan.²

¹ J. Hewson et al. (2021) ‘Shifting the Burden: Australia’s emission reduction tasks over coming decades’, Climate Targets Panel

² A. Quicke (2022) ‘Fuel Efficiency Standards’, The Australia Institute

Other countries are indeed accelerating their EV uptake faster than Australia, and Australia is now lagging behind most comparable nations. In 2021, while EV uptake averaged 9% around the globe, only 2% of total light vehicles sold in Australia were EVs.

³ By comparison, in 2020 three quarters of all vehicles sold in Norway were electric.

Additionally, a quarter of the global car market is also covered by targets mandating the end of internal combustion engine sales in the early-mid 2030s. The UK has a phase out target of 2030, and in recent months major economies including California and the European Union have legislated the phase out of the sale of ICE vehicles by 2035.

Without strong measures to bring Australia into line with other major markets Australia risks remaining at the back of the queue for global supply of electric vehicles, and continuing as a dumping ground for the world's more inefficient and polluting vehicles. This risks further costing Australians financially, impacting public health, entrenching our reliance on foreign oil, driving up national emissions and jeopardising our ability to meet climate targets.

3. What are suitable indicators to measure if we are on track to achieve our goals and objectives?

Absolute emissions reduction from the transport sector should be the primary indicator for the strategy. Forthcoming research from Greenpeace Germany and the Institute for Sustainable Futures will show that in order to decarbonise road transport and limit global warming to 1.5 degrees with a 67% likelihood of success, no ICE light duty vehicles can be sold beyond 2030⁴. Full decarbonisation of the fleet will take an additional 20 years, due to the pre-existing vehicles remaining on the road for the duration of their life.

As such Australia should set a target for all passenger and light commercial vehicle sales to be electric by 2030.

In addition annual government-led tracking and reporting of at least the following indicators would allow for a robust monitoring of progress:

- EVs as a proportion of new vehicle sales
- EVs as a proportion of total vehicles on the road
- EVs as a proportion of vehicle fleet purchases
- EV as a proportion of second hand sales
- Number of models of EVs across a range of price brackets

³ Seivewright, B (2022) [EV sales boom presents change to capture serious electric benefits if government acts now](#), January

⁴ Teske, S; Bratzel, S; Tellermann, R; Stephan, B & Vargas, M (forthcoming), The Internal Combustion Engine Bubble.

- EV ownership by household income
- Availability of and distance between multi-bay charging stations
- % of locally manufactured EVs, chargers and components

Additionally, to support reporting against the above indicators and to track progress on goals and objectives, Australia will need robust and transparent data collection.

At present vehicle sales, emissions and other related data is collated and released by the automotive industry at their own discretion. There is a lack of transparency, reporting is not mandatory and not all vehicle manufacturers are included. To ensure industry is meeting emissions reduction requirements, this data must be collated and published by either a relevant government department or an independent public agency in the public interest.

4. Are there other measures by governments and industry that could increase affordability and accessibility of EVs to help drive demand?

Particular focus should be placed on targeted financial support to ensure all Australians can benefit from the EV transition and gain access to the lifecycle financial savings opportunity.

Greenpeace supports the proposal from the Australian Council of Social Services (ACOSS) that the federal government develop a package of measures to directly support uptake of EVs for lower-income households. The package could include measures such as:

- Allocating a percentage of second-hand cars to be made available to people on lower incomes.
- Targeted means tested subsidies.
- Access to no interest loans.
- Social leasing scheme to low-income families (as adopted in New Zealand).

5. Over what timeframe should we be incentivising low emission vehicles as we transition to zero emission vehicles?

Greenpeace asserts that so called 'low emission' technology should not be eligible for any government incentives over any timeframe due to:

- a) the need for a rapid shift to zero emission vehicles as soon as possible to cut emissions
- b) the underperformance of hybrid and PHEV on emissions savings grounds

c) the need to send a signal to global auto manufacturers that they can no longer delay a wholesale shift to zero emission production, by relying on the sales of hybrid technology
d) PHEV and hybrid technology already being cost competitive and therefore not needing additional support.

‘Low emission’ hybrid and plug-in hybrid electric vehicles (PHEVs) have been heavily promoted as a solution for reducing emissions from the transport sector, however life cycle and real-world usage analysis of hybrid and plug-in hybrid vehicles in countries with substantial uptake (particularly Europe) has revealed the significant limitations of this technology⁵, especially compared to battery electric vehicles.

The Transport and Environment ‘How clean are electric cars’ tool and report shows that in a lifecycle analysis hybrid vehicles only deliver a 21% reduction in emissions, and PHEV technology only a 26% reduction, when compared to battery electric technology.⁶ This makes them much closer to polluting conventional petrol cars than to battery electric vehicles (BEVs). These findings are reinforced by those of the International Council on Clean Transportation (ICCT) who recommend “to align with Paris Agreement targets, the registration of new combustion engine vehicles should be phased out in the 2030–2035 time frame.”⁷ This phase out includes hybrid and PHEV.

Transport & Environment attribute the higher emissions and underperformance of PHEVs to “their poor design; small batteries, underpowered electric motors and no fast charging make it hard for users to drive predominantly in zero emission mode.”⁸

ICCT has found that average real-world electric driving share is about 45-49% for private cars and about 11-15% for company cars⁹, with investigations finding cars are often not charged by owners, PHEVs regularly switch automatically out of electric mode (prompted by for example, cars travelling at a certain speed, or the turning on of heating or a demister).

⁵ Transport & Environment (2020) [Plug in hybrids: Is Europe heading for a new dieselgate](#), November 2020

⁶ Transport & Environment(2022) [UPDATE - T&E's analysis of electric car lifecycle CO₂ emissions](#), June

⁷ ICCT (2021) [A global comparison of the life cycle greenhouse gas emissions of combustion engine and electric passenger cars](#), July

⁸ Transport and Environment (2021) [PHEV policy brief](#), Cars CO₂ review: Europe's chance to tackle fake electrics, April

⁹ ICCT (2022) [Real world usage of plug in hybrid vehicles in Europe](#), June

6. What information could help increase demand? Is Government or industry best placed to inform Australians about EVs?

Australians are hungry for accurate and reliable information about the shift for electric vehicles and how they can take part in this shift.

Communications research conducted by Greenpeace Australia Pacific identifies that governments, non-government organisations, independent government bodies (eg, Climate Change Authority, CSIRO, ACCC) and member based motoring associations, are all seen as being focussed on the greater public good rather than profits, and therefore being trustworthy and unbiased sources of information.

Greenpeace has also identified a significant amount of mis- and disinformation about electric vehicles in the public domain. There is an important role for broad scale government funded communications campaigns, to share accurate information and address the many questions Australians have about electric vehicles.

Separately the government should consider what role it can play in *reducing* demand for high polluting vehicles including regulating and phasing out of advertising for high polluting ICE vehicles, as has been introduced in France, or product labelling as has been successfully used in tobacco campaigns.

7. Are vehicle fuel efficiency standards an effective mechanism to reduce passenger and light commercial fleet emissions?

Vehicle fuel efficiency standards are a proven mechanism around the world to reduce vehicle emissions by increasing sales of low and zero emissions vehicles.

Despite having committed to the Paris Climate Agreement goals of reducing CO2 emissions to limit global temperature rise to 1.5 degrees, and endorsing the COP26 Breakthrough on Road Transport, Australia is one of the last developed economies without government legislated standards that reduce CO2 pollution from vehicles. At least 80% of the global car market already have such standards, leaving Australia at the back of the pack alongside Russia, Indonesia and Turkey.

CO2 emissions standards are a simple and effective policy mechanism for reducing road transport emissions and have been implemented worldwide in nations such as the United States, European Union, United Kingdom, China, Korea, Japan, and New

Zealand. Without introducing internationally competitive standards, Australia risks remaining a dumping ground for stock that most other nations no longer accept.

Introducing policy to support emissions reduction and electric vehicle uptake will not only decrease a significant source of emissions but will save Australians a significant amount in fuel, maintenance and health costs.

8. Would vehicle fuel efficiency standards incentivise global manufacturers to send EVs and lower emission vehicles to Australia?

As per previous response, fuel efficiency standards designed correctly, and set at a level in line with other major markets including the EU, US and NZ, will incentivise manufacturers to send electric vehicles to Australia.

9. In addition to vehicle fuel efficiency standards for passenger and light commercial vehicles, would vehicle fuel efficiency standards be an appropriate mechanism to increase the supply of heavy vehicle classes to Australia?

The road freight sector accounts for 38% of transport emissions in Australia, but heavy vehicles make up only 4% of the road vehicle fleet. It is therefore important that the government introduces robust mechanisms for reducing heavy vehicle emissions and increasing vehicle supply that is of equivalent effectiveness to a fuel efficiency standard. Alternative measures include updating design standards, charging infrastructure, introducing ZEV sales targets and working with State and Local governments to introduce Low Emissions Zones in key metropolitan areas.

10. What design features should the Government consider in more detail for vehicle fuel efficiency standards, including level of ambition, who they should apply to, commencement date, penalties and enforcement?

Given the need to rapidly drive down national emissions, transitioning our vehicle fleet to zero emissions is an urgent priority. New standards must put Australia on a trajectory to keep global warming to less than 1.5 degrees, with all new vehicle sales to be electric by 2030 or as soon as possible thereafter.

Greenpeace recommends the following design features:

- Standards should be at least in line with or stronger than NZ, EU and USA. Without this, the policy measure will be ineffective for addressing the pressing supply issues, with Australia remaining at the back of the global queue
- The commencement date should be January 1 2024 at the latest, given the urgency
- The scheme should implement a single standard for all passenger vehicles – including all SUVs, without exception, and a separate one for light commercial vehicles. This is to ensure no inadvertent promotion of sales of more polluting heavy SUVs through being subject to less stringent standards.
- Annual targets should be set, to ensure a clear and transparent trajectory for industry, and regular reviews that enable ratcheting of ambition in line with market or technological developments
- The scheme should be based on the Worldwide Harmonised Light Vehicle Test Procedure (WLTP) measurement system
- No super credits or other special favours or loopholes should be considered, as such crediting can undermine the transparency and integrity of the scheme, undermine emissions reduction is delivers, and strong emissions limits alone should be sufficient to drive market change
- A penalty should be imposed on car manufacturers that exceed the fuel efficiency target. The penalty should be based on the number of grams of CO₂/km. This penalty should be based on the exceedance of the target in grams of CO₂ per kilometre multiplied by the total number of vehicles sold, and be broadly in line with overseas schemes
- The scheme should be enforced by a relevant government body

The federal government should also ensure it reviews the international experience on effectiveness of scheme design, and new standards reflect international best practice.

11. What policies and/or industry actions could complement vehicle fuel efficiency standards to help increase supply of EVs to Australia and electrify the Australian fleet?

NA

12. Do we need different measures to ensure all segments of the road transport sector are able to reduce emissions, and if so what government and industry measures might well support the uptake of electric bikes, micro-mobility and motorbikes?

Decreasing the size and weight of vehicles used in transit has a beneficial impact on reducing carbon emissions. By switching to lighter e-vehicles such as e-bikes and micro-mobility, electrifying public transport and encouraging active transport, Australia can rapidly reduce transport emissions. Outlined below are a number of suggestions for opportunities for the Federal Government to support uptake of electric bikes and electric cargo bikes:

- Review and update federal tax legislation to incentivise uptake of electric bikes, micro-mobility and e-motorbikes by considering FBT, GST and other concessional opportunities to reduce overall costs.
- Include small electric vehicles such as e-bikes and micro-mobility in electric vehicle subsidy programs, or create a new rebate program for e-bikes. We believe a flat rebate of \$1000-1500 would be cheaper than a subsidy program for electric cars but at the same time be much more effective at getting large numbers of people into new forms of clean personal transportation.
- Ensure electric vehicle charging stations can support e-bike charging in addition to cars on key bike routes.
- Create trade-in programs where old cars can be exchanged for a purchase incentive for zero emissions transport alternatives including e-bikes, car-share memberships, public transport and electric vehicles.
- Set targets for reducing automobile vehicle miles travelled (example: Vancouver BC).
- Invest in safe cycling infrastructure, particularly in areas where short car trips could be easily replaced with e-cargo bikes, such as around schools and on school drop off routes

Governments can provide access to affordable low-emissions transport very rapidly by significantly increasing support for Mobility as a Service (MaaS) by subsidising subscriptions to provide easy access to a range of electrified public, shared and active transport options, particularly for low-income households.

13. How could we best increase the number of affordable second hand EVs?

Two key opportunities for increasing the number of affordable second hand EVs should be considered: increasing second hand EV imports and supporting corporate fleet transitions.

The first opportunity for providing an immediate increase in affordable second hand EVs to the Australian market is to open up importing of second hand battery electric vehicles from compatible established markets such as Japan that already have strong safety and

emissions standards in place. Government oversight and standards should ensure vehicle and battery quality are maintained and warranties for consumer protection.

Secondly, given fleets contribute 50% of new vehicle sales in Australia, supporting the rapid acceleration of fleet electrification is a key pathway to increase the supply of more affordable second hand vehicles. To support this Greenpeace recommends the following measures by the Federal government

- Accelerating federal government fleet targets to meet 100% of all new vehicle purchases to be battery electric by 2025, and full fleet electrification by 2027.
- Working with state and local governments to set and meet similar goals
- Putting in place measures to support EV adoption in rental fleets given these cars are frequently turned over, and they also provide people with the opportunity to experience driving an EV on a short term basis, building familiarity and confidence with the technology.
- Investing in a Fleets Electrification Resource Centre (potentially through or similar to the EVC's Charge Ahead program) to provide fleet owners with the knowledge, tools and support to set targets, address barriers, and for accelerated full fleet electrification
- Consider short-term fleet incentives such as tax concessions and deductions to reduce upfront costs for charging installation. Further tax changes recommended by RACE for 2030 in 'Business Fleets and EVs' could also be considered.

Additional measures to increase accessibility of second hand EVs to a wider range of Australians:

- offering means-tested subsidies for second-hand vehicles
- supporting states in reducing registration costs for second-hand EV sales

14. Should the Government consider ways to increase the supply of second hand EVs independently imported to the Australian market? Could the safety and consumer risks of this approach be mitigated?

Greenpeace supports the further promotion of uptake of independently imported second hand vehicles to help address the supply issues Australia is currently facing and increase access to a wider range of more affordable EVs to more Australians.

As a small, right-hand drive market that has low uptake of electric vehicles there is an immediate opportunity to enable the international second-hand market to meet existing demand using stock from markets that have similar or greater safety standards and

emissions standards. All importers should be regulated to ensure accountability as current car dealers and subject to. All vehicles which enter the country must pass Australian Road Design safety criteria and be registered to a VIN database to ensure consumer notifications such as recalls are easy to undertake.

Second-hand battery electric vehicles sold in Australia must include battery diagnostics on all vehicles prior to purchase in the country of origin, mechanical and aesthetic checks, and meet roadworthy standards. Consumers should receive a warranty, transparent return policy, and ongoing support.

15. What actions can governments and industry take to strengthen our competitiveness and innovate across the full lifecycle of the EV value chain?

Australia has a massive opportunity to create a major new industry in minerals processing and manufacturing of EV batteries, components and even vehicles themselves. Greenpeace refers to the Centre for Future Work's research report "Rebuilding Vehicle Manufacturing in Australia: Industrial Opportunities in an Electrified Future"¹⁰ and its findings that Australia should develop a new EV Manufacturing Industry Strategy and comprehensive policy to realise the potential of Australia's unique combination of natural and human resources in this area.

On a federal level, more should be done to adopt initiatives similar to the European Union's Circular Economy Action Plan (CEAP), that requires manufacturers who sell to the EU market to be responsible for end-of-life recycling and handling. Further, the CEAP dictates that all batteries that enter the EU market must be "sustainable, circular and safe" - this is a commonsense approach that should be adopted in Australia and could be used to strengthen the Australian battery recycling industry.

Regarding nascent and ground-breaking innovations, many new types of more sustainable, longer lasting, better performing, and safer batteries are nearing commercialisation. Aluminium-based batteries, such as those developed by Brisbane based Graphene Manufacturing Group (GMG), are said to charge 70 times faster than a lithium-ion battery as well as having three times the lifespan. Government initiatives at various levels should encourage sustainable Australian-based innovations across the EV sector so that similar break-through tech may enter the market more quickly.

Similarly, supporting retrofitting initiatives for heavy vehicles such as Janus electric's trucking conversions provide an opportunity to electrify this sector more rapidly.

¹⁰Dean, M (2022) [Rebuilding Vehicle Manufacturing in Australia: Industrial opportunities for an electrified future](#), Centre for Future Work, March.

Additionally, legislation could be adopted that draws from the European Union's Ecodesign for Sustainable Products Regulation Proposal. Requiring that industry and business provide verification for their environmental claims, these initiatives aid supply-chain mapping and transparency efforts, and further push manufacturers to make these processes publicly available and widely transparent.

16. How can we expand our existing domestic heavy vehicle manufacturing and assembly capability?

NA

17. Is it viable to extend Australian domestic manufacturing and assembly capability to other vehicle classes?

NA

18. Are there other proposals that could help drive demand for EVs and provide a revenue source to help fund road infrastructure?

NA

19. What more needs to be done nationally to ensure we deliver a nationally comprehensive framework for EVs?

The framework must take an inclusive and equitable approach to deliver transport emissions reductions. It is critical that the strategy be designed to align with 1.5 degrees, that outcomes are fair and accessible, and that First Nations peoples are consulted as a priority. Potential cultural, social and environmental impacts of the electric vehicle transition must be considered and accounted for.

Implementing circular economy principles for managing electric vehicles and batteries reaching end of life is also critical to the development of a comprehensive national EV framework. At present in Australia, there is only one government-funded scheme for EV battery recycling - located in Victoria and in its early stages. While up to 97% of a battery's materials can be recycled, currently only between 2-10% of lithium-ion (non car) batteries are recycled in Australia, with the rest sent to landfill.¹¹ The framework

¹¹ Yanyan et al. (2020) '[Australian Landscape for Lithium Ion Battery Recycling and Reuse in 2020 - Current Status, Gap Analysis and Industry Perspectives](#)', CSIRO

should support the establishment of a recycling industry equipped for managing battery reuse and critical minerals recycling.

This obvious market void presents a huge economic and environmental opportunity that governments both state and federal could seize upon through targeted schemes or further investments in processing infrastructure. Further, it is predicted that an increase in domestic battery recycling needs will occur in 2027 as batteries have roughly an 8 year lifespan, and EV uptake kicked off in 2019. This leaves roughly 5 years for government-led initiatives to be drafted and launched.

20. How can we best make sure all Australians get access to the opportunities and benefits from the transition?

To make sure all Australians access the benefits of a rapid transition - and to ensure no one is left behind - the department should host a series of roundtables in early 2023 to explicitly bring together a range of stakeholders to identify risks and opportunities in relation to a fair and equitable EV transition. This should consider both how to ensure access to new technology for low income and disadvantaged households, as well as ensuring a just transition process for any displaced workers in coming decades.

As production of critical minerals required for the transition increases, it is also essential that mining expansion obtains free, prior and informed consent from Aboriginal and Torres Strait Island landowners, and that benefits of projects are shared with Traditional Owners.

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