

# PTUA Submission on Electric Vehicle Strategy

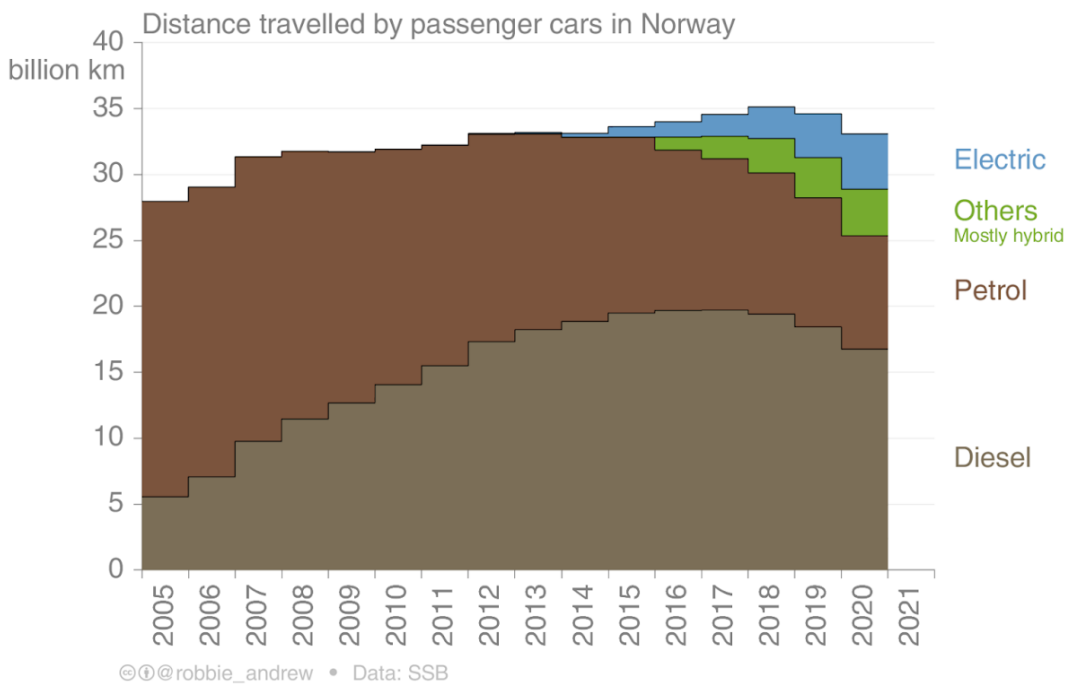
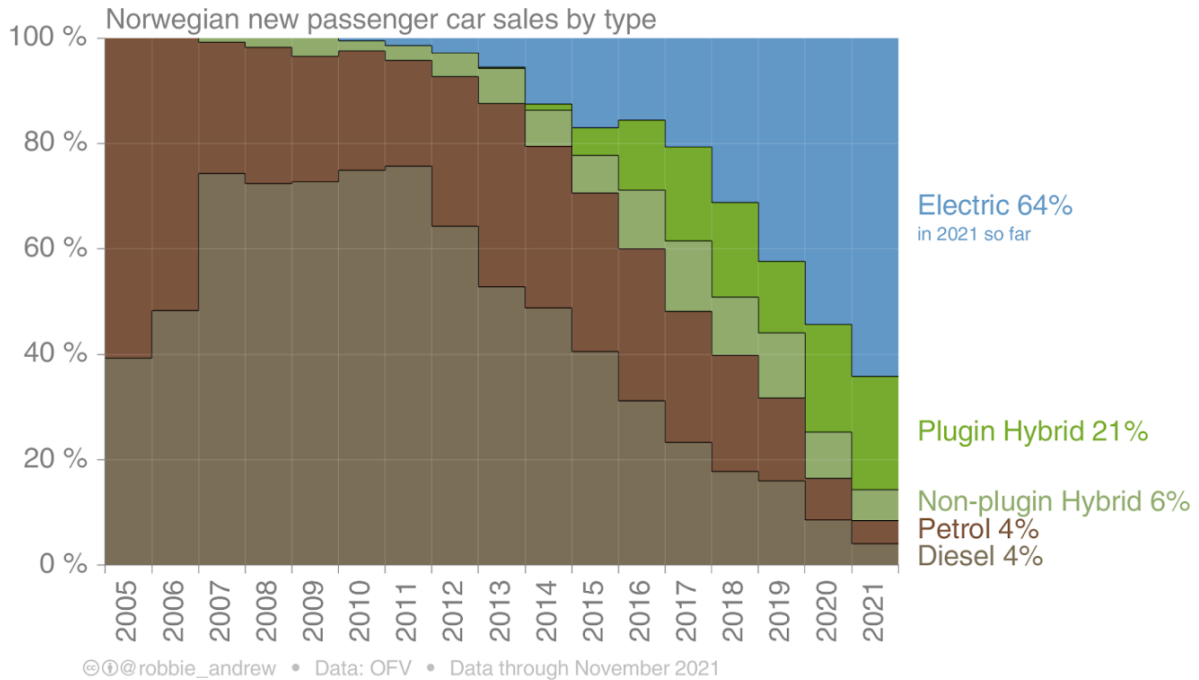
The Public Transport Users Association (PTUA) thanks the government for the opportunity to provide input into the National Electric Vehicle Strategy. Founded in 1976, the PTUA is the recognised consumer organisation representing passengers of public transport in Victoria. The PTUA is a non-profit, voluntary organisation with no political affiliation, which lobbies governments and public transport authorities in the interest of all users of public transport. Environmental sustainability is a core pillar of the PTUA's mission, and we are committed to cleaning up Australia's transport sector as quickly and justly as possible.

## Context

Australia must make significant cuts to its overall emissions by 2030 if we are to contribute our fair share to keeping the world to 1.5°C of warming. Transport is Australia's third-largest, and fastest-growing, [source of emissions](#) - it is not a sector we can afford to ignore, or put off to later years, if we are to achieve our 2030 goals. We must reduce transport emissions as quickly as possible.

It is clear that EVs will form an important part of our clean transport future, and it is imperative that the government implements ambitious policies to ensure that the transition from ICEVs to EVs happens at an appropriate pace. However, it is equally clear that EVs cannot contribute enough emissions reductions in this crucial decade - transitioning all of Australia's 20.1 million registered vehicles will be a long process of attrition, even with strong and ambitious policy backing, simply because cars are such long-lived products.

Assuming a target of eliminating ICEV sales by 2035 (as advocated by ClimateWorks Centre, Solar Citizens, the Grattan Institute, and others), Australia would still be putting brand new ICEVs on the roads in 2030-34. The average car on Australia's roads is approximately 10 years old, with 20 years being a common lifespan for passenger vehicles; this means that in 2030, the average car on Australia's roads will have been built in 2020, a year in which just 0.78% of new car sales were EVs. The vast majority of cars on Australia's roads will be ICEVs in 2030, even with ambitious policies in place.



New passenger car sales and distance travelled by passenger cars in Norway (source: [@robbie\\_andrew](#))

This is borne out by the experience of Norway, often revered for its ambitious EV policies. Substantial policy support for EVs has meant that just 8% of *new* vehicles sold in Norway in 2021 were pure ICEVs, with 27% being hybrids and 64% pure EVs - a remarkable achievement that puts them on track to eliminate ICEV sales by 2025. However, in 2021 the vast majority of vehicle-kilometres travelled (VKT) on Norway's roads were still travelled by petrol and diesel vehicles, since the bulk of their car fleet remains fossil fuelled. Even with the most ambitious EV policies in the world, EVs alone are not enough to cut our transport emissions in time.

Setting up the right EV policies is like planting a tree. It's crucially important, and we should do it as early as possible. But it's clear that the tree will not bear fruit for many years, so we must find additional sources of emissions cuts in the meantime.

By contrast, shifting trips from cars to walking, cycling and public transport can make significant cuts to transport emissions virtually overnight. If we can give people better non-car options to travel around, they can adopt them as soon as they're implemented; most people will not ditch their cars entirely, but by shifting many of their most common trips (like the commute to work, or trips to the local shops), they could significantly reduce their VKT and therefore their carbon footprint. This does not necessarily require big, expensive infrastructure that takes decades to build - though we should still proceed with big or transformative projects that make sense. The big and quick gains are to be had from using spare capacity on existing infrastructure: running trains and trams more frequently between peaks, in the early mornings and evenings, and on weekends; and running fast, direct, frequent buses on existing arterial roads, all day every day.

For this reason, the UN IPCC has adopted the “**Avoid/Shift/Improve**” framework for cleaning up the transport sector. Analogous to the Reduce, Reuse, Recycle framework for reducing materials waste, the highest priority is to **Avoid** travel (through better-planned cities with dense, walkable, mixed-use neighbourhoods); the second-highest priority is to **Shift** trips from unsustainable modes of transport (like planes and cars) to sustainable modes (like walking, cycling and public transport); while the third priority is to **Improve** our vehicles (shifting from petrol and diesel cars, buses and trains to electric or hydrogen versions).

While a detailed description of the public and active transport policies needed to achieve these shifts is beyond the scope of this strategy, the Avoid/Shift/Improve framework does provide very important context for which EV policies should be adopted and which would be counterproductive. We should be doing as much as we can to Avoid, Shift and Improve at the same time, and we can and must move quickly to set the policy framework for a speedy transition of the car fleet - but it does have implications for how we prioritise funding, and which policies might be counterproductive. **Incentives for Improving vehicles must not hinder the higher goals of Avoiding and Shifting by encouraging driving overall.**

## 2 Strategy Framework

### 2.1 Goals

The discussion paper lists 5 goals:

1. Make EVs more affordable
2. Expand EV uptake and choice
3. Reduce emissions
4. Save Australians money on fuel
5. Increase local manufacturing

Goals 1 and 2 should not be listed here, for two reasons. Firstly, they are more appropriately framed as objectives than goals; they are means to achieving goals 3 and 4, rather than ends in themselves. Secondly, given that the Avoid/Shift/Improve framework requires us to reduce overall driving as well as shift to cleaner vehicles, making EVs more affordable and expanding uptake may - in the absence of balancing policy measures - be counterproductive.

Australia is an extraordinarily car-dependent nation, not because of inherent factors like our size but because of generations of pro-car policy from local, state and federal governments. Because funding for expanding road and parking capacity has always been prioritised over expanding public and active transport infrastructure and services, many households find that the car is their only viable option for most trips; this leads to households owning 3, 4 or more cars, as every adult needs their own car to be able to move around independently.

The ideal scenario for a sustainable transport future is for overall car ownership to decline, with most households needing one car at most, but for EVs to represent an ever-increasing percentage of the cars on our roads. It is therefore important that measures to increase the EV percentage do not inadvertently increase car ownership - and especially usage - overall.

EVs should be more affordable than ICEVs, and uptake of EVs should increase as a *percentage of total vehicle sales*, but this must not increase the number of vehicle sales overall.

## 2.2 Objectives

**“Encourage rapid increase in demand for EVs”** is not an appropriate objective. Today, demand for EVs is outstripping supply; manufacturers are supplying a very limited number of vehicles in the Australian market, and the allocations typically sell out very quickly. Clearly, Australians want to buy EVs - the problem right now is that there aren't enough for them to buy. Efforts to further stimulate demand are not a high priority at this time - not only because they are unnecessary while supply constraints remain, but because efforts to stimulate demand (like additional financial incentives) could incentivise people away from active and public transport, which would be counterproductive.

**“Efforts to increase the supply of affordable and accessible EVs to meet demand across all segments”** is a broadly appropriate objective, which will increase EV sales as a percentage of overall sales, will reduce emissions and will save Australians on fuel. We will discuss how this objective can best be achieved below.

It is important to have a clear understanding of what is meant by “affordable”. It is expected that EVs will reach “price parity” with ICEVs in coming years, however it must be pointed out that this will still mean tens of thousands of dollars in upfront costs, plus the costs of running, storing, registering, and insuring the car. A car is the second-largest purchase a household is ever likely to make, second only to the house itself, and buying a brand new car is well out of reach of the majority of Australians - most buy their cars on the second-hand market. Furthermore, car ownership of any kind is a considerable cost pressure on many low-income families, one they either avoid entirely in order to put food on the table, or struggle with because they would not be able to access jobs and services without their car. On a fair playing field, public and active transport will always be cheaper than driving - but so often they are avoided because underinvestment has rendered them unsafe or impractical.

We should use appropriate measures (discussed below) to make EVs as affordable as ICEVs, but we should never forget that they will always be more expensive than not owning a car at all. Locking in car-dependence means continued high transport costs for households.

Every dollar that could be used to subsidise the price of EVs should be weighed up against the utility of that dollar being used to improve public or active transport options, which can provide low-emissions mobility at a fraction of the cost (to government and to households).

**“Establish the systems and infrastructure to enable the rapid uptake of EVs”** is also a broadly appropriate objective. We note that the private sector is already making considerable progress on rolling out EV fast-charging infrastructure, so government financial support for fast-charging should be focused on providing equitable access in areas the private sector would not find commercially viable, such as rural and remote areas.

It is certainly appropriate that the federal government puts in place the appropriate legal systems and structures that would enable EV uptake, for example working with other levels of government to ensure that building codes require new homes with off-street parking to be EV-ready, and that technical standards are in place to ensure charger compatibility.

**“Address barriers to EV uptake, such as...Range anxiety due to gaps in EV charging networks and hydrogen refuelling infrastructure”** is a partially appropriate objective. There may be some role for the federal government to play in addressing range anxiety through targeted support of the EV charging network, and through providing clear consumer information about ranges, however the government should not be providing any support for hydrogen refuelling infrastructure.

Evidence from around the world suggests that Hydrogen will have a much smaller role in our zero-emissions transport future than its boosters claim (though it may have roles in other sectors beyond our expertise). As shown in Saul Griffith’s book *The Big Switch*<sup>1</sup>, the process of electrolysing water into hydrogen gas, compressing it, transporting it, and running it through a fuel cell to produce electricity again, is extraordinarily inefficient, losing energy at every stage - meaning just 37% of the starting energy is usable for moving the vehicle forward. By contrast, charging and discharging a lithium battery leaves around 83% of the starting energy - and of course, a train powered by Overhead Line Electrification (OLE) can utilise practically all of the starting energy. This means that in the long run, hydrogen will likely cost at least 2-3 times as much per kilometre as the electricity for a battery vehicle. It cannot possibly compete at these prices.

Right now, while batteries are relatively limited in range and slow to charge, hydrogen may have a fighting chance in some commercial vehicle applications - but this niche will rapidly erode as the technology improves. Investing in hydrogen refuelling is a bad bet for the government to make.

Furthermore, there is reason for concern that the push for hydrogen is just a way for large fossil fuel companies to continue to emit, and continue to profit from the destruction of our environment. Although hydrogen *can* be made in a green way, using renewable electricity to electrolyse water, currently most of it isn’t; around 95% of hydrogen is made using fossil fuels<sup>2</sup>, in processes that can be even more emissions-intensive than just burning gas directly<sup>3</sup>. The companies that produce this dirty hydrogen are doing their best to greenwash their product, and to overstate the role hydrogen will play in powering our transport future - the government must see through this lobbying.

While battery-EVs may currently struggle to deal with the rigours of long-distance trucking, the government should not use this use-case as a reason to invest in hydrogen refuelling. Instead, the government should seek to invest in serious mode shift, to get more freight off

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<sup>1</sup> Griffith, S. (2022). *The Big Switch: Australia’s Electric Future*. Black Inc: Melbourne.

<sup>2</sup> Dincer, I. & Canan, A. (2015). Review and evaluation of hydrogen production methods for better sustainability. Retrieved from:

<https://www.sciencedirect.com/science/article/abs/pii/S0360319914034119>

<sup>3</sup> Stock, P. (2021). Renew Economy: Study finds blue hydrogen worse for climate than burning coal or gas. Retrieved from: <https://reneweconomy.com.au/study-finds-blue-hydrogen-worse-for-climate-than-burning-coal-or-gas/>

trucks and onto rail (particularly on the key corridors like Melbourne-Sydney-Brisbane which would most likely be targeted for hydrogen infrastructure). In the medium term, government should also look to decarbonise freight rail lines with OLE. While such projects may not take place for some years, current projects should be future-proofed to allow for this - namely, the Inland Freight Rail project should build bridges and other structures with clearances capable of handling both OLE and double-stacked containers.

**“Address barriers to EV uptake, such as...Information for consumers”** is an appropriate objective. There are many myths about the capabilities of EVs, and a lot of important information about things like the availability of charging infrastructure is incomplete and/or locked up in proprietary subscription services. Ensuring this information is free and easily accessible to all would help address some issues going forward.

## 2.3 Actions

The PTUA notes that Figure 4 on page 4 includes a number of “existing and potential actions” to meet the objectives, not all of which are mentioned in section 2.3 - however these need to be addressed in detail.

The Avoid/Shift/Improve framework means that we should be prioritising walking, cycling and public transport over driving as much as possible, while ensuring that any driving that does occur is in zero-emissions vehicles. The broad implication of this is that we must reduce VKT, while at the same time making the kilometres that we travel greener. As such, we should be wary about directly subsidising the *purchasing* of cars, and we should avoid at all costs incentives to *drive* cars.

**“Measures to increase the supply of more EV options in all road transport segments, for example fuel efficiency standards, retrofitting.”** Fuel efficiency standards very neatly and elegantly incentivise low- and zero-emissions vehicles over dirtier vehicles, without any inadvertent incentivisation of driving overall. As such, the PTUA is strongly supportive of fuel efficiency standards which tighten to zero emissions by 2035.

Currently, retrofitting is limited by the bespoke nature of conversions driving up labour costs, the difficulty in retrofitting modern cars with complex computer systems, and the availability of batteries and electric motors with which to perform the conversions; the supply chain constraints on key components mean that manufacturers are only willing to supply these to car manufacturers, so retrofit garages must source parts from crashed EVs. These supply chain constraints should reduce in time, while firms should develop skills and knowledge to bring down the labour costs of conversions (and/or provide kits, as is beginning to occur in Europe<sup>4</sup>). The market for conversions is likely relatively small, but it can help overcome nostalgia barriers for some Australians, and is very sustainable when it occurs - effectively reusing the body of the car rather than requiring a new one to be built. As such, it should receive government support where practical.

A key example for how the government could support retrofitting is by working with the states and territories, as well as firms engaged in retrofits, to ensure the legal frameworks are in place for retrofitted cars to be assessed as roadworthy and re-registered after conversion is complete. Ideally this process should be as streamlined as possible, particularly where kits exist to convert models, and the outcomes are therefore a known quantity.

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<sup>4</sup> Fully Charged Show. (2022). An ultra-cheap electric car conversion kit is FINALLY here! Retrieved from <https://youtu.be/98mJ1N50DU>

**“Access to financing and concessions such as stamp duty and registration incentives, and tax measures”** should be approached with caution, as these can potentially encourage the purchase of additional cars, growing overall car ownership, as well as diverting large sums of taxpayer dollars that would be better spent on improving public and active transport. However, acknowledging that some amount of financial support for purchasing EVs is inevitable, the PTUA recommends that incentives be as mode-agnostic as possible. Many jurisdictions around the world are providing subsidies for e-bikes and/or annual public transport tickets - wherever governments are subsidising electric cars, they should also be offering significant subsidies for these other sustainable modes of transport. In many cases EV subsidies are conditional upon the retirement of an ICEV, which is consistent with increasing the *percentage* of EVs on the road and not just adding EVs to the road along with existing ICEVs.

**“Non-financial incentives such as transit lane access and free car parking and charging”** would provide a direct incentive to drive more, and indeed would provide a direct incentive to use transit less. In particular, these incentives are most valuable in exactly the places where private motor vehicle use should be discouraged, due to congestion and other traffic impacts. Furthermore, the negative impacts are likely to be exacerbated by causing delays to public transport services in transit lanes and thus reducing the appeal of public transport relative to both EV and ICEV use.

These styles of incentives were trialed in Norway during the early days of their EV transition, but were scrapped when it was found<sup>5</sup> that they were not just incentivising people out of ICEVs and into EVs, they were incentivising people off public transport (and to a lesser extent, bikes) as well. We must learn from Norway’s failures - **the PTUA strongly opposes the introduction of such non-financial incentives to drive EVs.**

Similarly, the PTUA is broadly supportive of well-designed Road User Charge systems. Such systems should ideally take into account all externalities caused by vehicles, including congestion, road damage, pollution, injuries and deaths. This would broadly mean that base charges should reflect:

- the size and weight of the vehicle (encouraging smaller and lighter vehicles)
- the pollution caused by the vehicle (including carbon emissions, but also particulates, including brake dust and tyre microplastics)
- statistical data on vehicle aggressivity<sup>6</sup> (noting that danger to pedestrians and cyclists has increased with larger vehicles in recent years) and/or the history of the driver (with more dangerous drivers charged more)

These base charges could then be supplemented by congestion charges in city centres and/or at peak times.

**“Increase EV uptake in government and commercial fleets to help deliver more affordable second hand EVs to the market.”** This is a sensible action that the PTUA would support, subject to general caveats around financial incentives discussed above.

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<sup>5</sup> Norwegian Road Administration Road Directorate. (2009). Rapport 176: Trafikk i kollektivfelt. Kapasitet og avvikling. Elbilens rolle. (*Report 176: Traffic in public transport lanes. Capacity and liquidation. The role of the electric car.*) Retrieved from: <http://www.prosam.org/index.php?page=report&nr=176>

<sup>6</sup> Monfort, S. S., & Nolan, J. M. (2019). Trends in aggressivity and driver risk for cars, SUVs, and pickups: Vehicle incompatibility from 1989 to 2016. *Traffic Injury Prevention*, 20(sup1), S92-S96. <https://www.tandfonline.com/doi/full/10.1080/15389588.2019.1632442>

**“Ensuring households, buildings, carparks and the national electricity grid and market are ready for higher penetration of EV charging, including bidirectional charging.”** This is broadly a sensible action that the PTUA would support, however there is one key caveat.

Many planning schemes have historically required new residences and commercial properties to provide off-street parking for residents or customers, with the intent of ensuring the burden of parking is not put onto neighbouring streets. However, the effect of such policies has been to make it easier to park, and further incentivise driving over other modes (in addition to driving up the costs of housing); in recognition of this, many planning schemes are being altered and/or exemptions put in place to remove or reduce these parking minimums, particularly where new builds are well-served by public and active transport.

These steps away from mandatory parking minimums are a big positive for sustainable transport, and these trends must continue. Therefore, any regulations which require parking spaces to be provided with EV charging must be crafted in such a way that they do not entrench or require parking minimums.

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

If Australia does not introduce fuel efficiency standards that are comparable to other countries, it is likely EV manufacturers will continue to prioritise those countries over Australia. This will prevent Australia from transitioning its fleet to EVs in a timely and efficient manner, meaning ongoing emissions and high costs for the public.

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

Given the need to keep the EV transition in the perspective of transport emissions as a whole, the most important indicator is overall greenhouse gas emissions from transport per capita, including upstream emissions from EV charging. This will ensure that government is incentivised to give appropriate attention to the Avoid and Shift components of the framework, not just the Improve component.

Other useful indicators include:

- Mode share of walking, cycling, public transport and private cars (across all trips, not just journey to work)
- EV sales as a proportion of new vehicle sales
- EVs as a proportion of the full vehicle fleet
- Average energy efficiency (e.g kWh/100km) of new EV sales<sup>7</sup>
- Total vehicle fleet per capita (should trend down, or at worst hold steady, not rise)
- EV VKT as a proportion of total fleet VKT
- Total VKT per capita (should trend down)

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

As above, government should take a broader view, and seek to increase affordability and accessibility to low-emissions mobility as a whole; EVs will provide part of the solution, but

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<sup>7</sup> Huether, P. (2022). 9,000-Pound Electric Hummer Shows We Can't Ignore Efficiency of EVs. Retrieved from: <https://www.aceee.org/blog-post/2022/06/9000-pound-electric-hummer-shows-we-cant-ignore-efficiency-evs>



not all of it. Governments can provide access to affordable low-emissions transport very rapidly by:

- significantly increasing the availability of safe walking and cycling infrastructure
- subsidising e-bikes
- providing frequent public transport services using existing infrastructure (including extra trains at off-peak times, and extra buses on existing roads)
- building out further public transport infrastructure capacity and extent

#### **#5 Over what timeframe should we be incentivising low emission vehicles as we transition to zero emission vehicles**

Fuel efficiency standards are a market mechanism which will allow car manufacturers to use a combination of low- and zero-emission vehicles to meet their fleet-wide emission caps, until eventually only zero-emission vehicles are sold by 2035. Government should allow this within the fuel efficiency framework, but should otherwise not directly incentivise low-emissions vehicles; for example, any financial subsidies/tax waivers should only apply to zero-emissions vehicles, not to low-emissions vehicles.

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

Information on range of vehicles, and on charger availability, could help ensure the transition happens smoothly. Government is best placed to provide this information, or at least regulate it - eg provide clear standards for manufacturers to test car range and to report that information to buyers, provide clear standards for chargers to indicate location/charger type/availability through an API.

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

It is well-established that fuel efficiency standards are an effective mechanism to reduce passenger and light commercial fleet emissions, if they are well-designed to broadly match other nations with whom we are competing for EV supply, and to avoid any loopholes. The PTUA strongly supports the introduction of well-designed fuel efficiency standards.

However, as outlined elsewhere in this submission, they only reduce emissions on new cars, and therefore take a long time to work through the whole car fleet. As such, we stress that other policies must be implemented to encourage people out of their cars and onto more sustainable modes of transport, particularly in the crucial years to 2030.

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

Yes, as above.

#### **#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?**

Yes, it is crucial that comprehensive standards for all classes of vehicle are designed in concert, to avoid double-standards and loopholes incentivising negative outcomes.

When the USA first introduced the Corporate Average Fuel Economy standards in 1975, they initially only applied to "passenger vehicles"; from 1978 "light trucks" were included, but

with a looser standard. At the time, these light trucks were genuinely mostly work vehicles, and comprised less than a quarter of total sales - but since then, there has been a huge increase in the sales of these light trucks, with manufacturers pushing them on customers who previously would have bought a standard passenger vehicle. There are a number of factors behind this shift, but the emissions double-standard is clearly one incentive - if you give the car manufacturers a loophole that allows them to opt out of the fuel efficiency standards by changing which models they push, they will opt out of it.

Australian cars and light vehicles have followed a similar trend to the US in recent years, with an increasing number of large truck-style utes on our roads being used for normal passenger duties, and rarely coming close to a farmyard or construction site. Fuel emissions standards which did not cover the entirety of a manufacturer's fleet would only further incentivise the switch to these vehicles.

This would not only mean a failure to reduce road transport emissions in a timely manner; these unnecessarily large cars being used for normal passenger duties also means an increase in tyre and brake dust particulate pollution, and an increased road toll due to the significantly higher danger they present to pedestrians and cyclists.

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

The PTUA encourages a high level of ambition that matches our international peers - those we will be competing for EV supply with.

We recommend a single standard that covers all vehicle sales, commencing at 95g/km in 2024, and tightening to 0g/km no later than 2035. The standards should be enforced by a government body such as the Climate Change Authority, and penalties must be significant enough to act as a deterrent, rather than just "the cost of doing business".

We encourage regular reviews of the standards between now and 2035, benchmarking against international best practice.

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

Transitioning government and corporate fleets to EVs could significantly help increase supply, particularly on the second-hand market.

**#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?**

As above, the Avoid/Shift/Improve framework requires us to significantly increase non-car modes of transport as a way of decarbonising and cleaning up the transport sector. Government must take a holistic view of transport emissions, and must create an overarching policy framework of which the EV Strategy is just one component.

As above, significantly improving the provision of public transport will be crucial to this. Running bus, tram and train services at high frequencies (at least every 10 minutes) from

6am to midnight, 7 days a week, would do a huge amount to encourage people out of their cars. The PTUA's Every 10 Minutes To Everywhere policy<sup>8</sup> discusses this in more detail.

Specifically addressing the question of electric bikes and micro-mobility, research indicates<sup>9</sup> that by far the biggest barrier to people riding bikes for transport purposes is a lack of safe cycling infrastructure which protects them from cars. As such, by far the biggest thing governments can do to encourage cycling is to build safe cycling infrastructure. Given that eBikes have significant potential to replace cars in many circumstances, and that many eBikes (especially eCargo Bikes) can cost thousands of dollars, it is also appropriate for government to provide subsidies/rebates for them. As above, this is especially true if subsidies are being provided for EVs - for equity's sake it is crucial that eBikes are included in such programs.

The literature on so-called "micro-mobility" is quite limited at this early stage, however anecdotal evidence suggests that riders of eScooters have much the same needs as riders of bicycles. They are similarly vulnerable to cars, so infrastructure that keeps them safe from cars is likely to be a significant predictor of uptake. Also, they have a similar kinetic energy profile to cyclists, so mixing with pedestrians on shared paths should be limited to low-traffic scenarios. Constructing bike lanes and directing scooter-riders to use them is therefore likely to be the best step government can take to support this mode.

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

As above, transitioning government and corporate fleets will do the most to increase the second-hand market.

### **#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?**

Australia principally imports cars from Japan and the UK, both right-hand-drive countries with strong safety standards. The safety risks from these imports are no greater than any other second-hand car bought in Australia. Consumer protections can be tied to the companies that import the cars. Streamlining the processes to import these vehicles would increase supply and reduce upfront costs to consumers.

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

N/A

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

N/A

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

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<sup>8</sup> Public Transport Users Association. (n.d.) Every 10 Minutes to Everywhere. Retrieved from: <https://www.ptua.org.au/campaigns/every10minutes/>

<sup>9</sup> Pearson, L., et al. (2022). Adults' self-reported barriers and enablers to riding a bike for transport: a systematic review. Retrieved from: <https://www.tandfonline.com/doi/full/10.1080/01441647.2022.2113570>

It is worth noting that Australia already has domestic manufacturing and assembly capability for non-car vehicle classes, including trains, trams and buses, but no longer has this capability for passenger cars. The PTUA would strongly support government investment in expanding and renewing public transport fleets across Australia, to run more buses, trams and trains more often, and to replace diesel buses and trains with electric equivalents.

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

Road User Charging schemes are the optimal way to provide an ongoing revenue source to help fund transport infrastructure and services (whether roads, railways, or otherwise), as individual drivers can provide revenue proportional to the externalities they produce. Charges can be set at different rates for different areas and/or different times, such as a city-centre cordon or a peak hour surcharge, to help manage demand for driving.

Many of the groups submitting to this enquiry will no doubt have called for Victoria's EV RUC to be scrapped. It is the PTUA's view that the RUC as it stands today is imperfect and in need of tweaking, however the approach should be to improve it rather than scrap it. The transition to EVs is a once-in-a-lifetime opportunity to introduce a sensible but politically challenging policy measure; if we scrap it, we'll never have another chance.

The PTUA's preferred model for an RUC has been detailed in previous sections.

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

The National EV Strategy must be integrated into a broader strategic framework for reducing transport emissions - one that includes Paris-aligned emission reduction targets for the transport sector, and which includes a significant mode shift to walking, cycling and public transport.

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

As above, the best way to ensure all Australians get access to the opportunities of our cleaner future transport system is to ensure that as many Australians as possible have access to cheap non-car modes of transport. Highly walkable neighbourhoods, safe cycling infrastructure, direct and frequent public transport - these should be available to everyone, not just those in inner-city areas. These options are cheaper, healthier, more accessible to people with disabilities, and low- or no-carbon - they must form the centrepiece of Australia's strategy to decarbonise the transport sector.