Investing in cheaper, cleaner energy and the net zero transformation inquiry

Questionnaire response 32

Name: Electric Vehicle Council

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1. Reduce the cost of meeting carbon targets

1. What could be done to improve the cost-effectiveness and alignment of policies to reduce emissions across the industrial, electricity and transport sectors?

The transport sector is currently the second-largest contributor to Australia's greenhouse gas emissions and is set to be the leading contributor in the coming decade due to rapid improvements in the energy/electricity sector.

For much of the past 20 years, the transport sector has received little to no support to decarbonise, and as a result, Australian now is faced with the challenge of a relatively inefficient vehicle fleet – at least relative to many similar international markets.

Given how far behind the transport sector is, we cannot afford to simply undertake a cost-effectiveness comparison exercise against other sectors, and in turn determine that the cost of abatement in transport is too high. Transport is a critical sector to decarbonise, and spills over into the supply chain emissions of all industries throughout Australia. The cost of abatement will necessarily be higher – largely due to the lack of action until recently, and it is the Electric Vehicle Council's view that while existing policies are encouraging, now is the time to confirm existing mechanisms and implement further mechanisms to reduce transport emissions.

There is a critical need for short-term supply and demand support to ensure Australia's transport sector gets onto a trajectory consistent with achieving net zero by 2050. If measures are simply ruled out on a cost-effectiveness measure based on short-term carbon abatement, this will ignore the reality that the magnitude of carbon produced in the transport sector cannot be offset by other sectors, and that the cost is in part higher due to the longer-term nature of decarbonisation for this sector.

It is critical to also consider the alignment of existing mechanisms towards net zero targets, especially in the transport sector. There are tax incentives currently in place which encourage private investment in petrol/diesel vehicles which take us further away from net zero. These instruments are not aligned with the importance of reducing transport emissions and in fact, increase the cost of abatement in other sectors.

Finally, it should also be noted that while some transport decarbonisation policies may be more expensive than other sectors, they deliver other economic benefits, including reduced air pollution leading to improved health outcomes, reduced transport costs to improve productivity, as well as supporting Australian-produced energy via electric vehicle (EV) charging. These co-benefits should not be ignored.

2. Are there gaps in the emissions-reduction policies in the industrial, electricity and transport sectors which should be addressed?

The Australian transport sector faces several challenges in rapidly reducing carbon. The national vehicle fleet is comprised of around 20 million vehicles, many of which are expected to have a lifespan of up to 20 years. This means that the vehicles entering the fleet in 2025, are likely to remain in the fleet until the 2040s. This slow turnover rate also means that carbon abatement takes time, but there is a limited window to achieve the rate of change required to align with net zero by 2050.

Supply & Demand Policies

Until recently, Australia has lacked a clear set of policy signals to encourage the supply of more efficient vehicles. From 1 July, 2025, Australia's New Vehicle Efficiency Standard will come into force with a penalty to encourage an improvement in the supply of efficient light vehicles into Australia. A similar policy does not yet exist for the heavy vehicle sector.

Australia also utilises unrealistic test cycles for measuring fuel efficiency. This leads to challenges when comparing the cost-effectiveness with new technologies, as the emissions produced by existing technologies are significantly underestimated. As shown by the Australian Automobile Association's recent real-world testing work, some light vehicles are consuming over 30% more fuel than stated by the official test-cycle, and in turn, producing 30% more emissions than the Green Vehicle Guide states1.

In addition to supply-side policies, demand side incentives remain a critical pillar for driving change. Again, transport is unique in that most assets are owned by private households or businesses. Particularly during the recent high inflationary environment, consumers in general are not only risk-adverse to change but limited in their economic ability to cover higher upfront costs of new technologies – even where the total cost of ownership may be at parity or below incumber technologies e.g. EVs vs petrol/diesel vehicles. This presents a major challenge when trying to mainstream new technologies – particularly without the use of demand-side incentives.

We note the Productivity Commission in 2023 previously advocated against the use of demand-side incentives for the EV market. To our knowledge, no international market has been successful in accelerating EV adoption beyond 30% without the use of demand-side incentives, and international bodies – such as the International Energy Agency – continue to highlight the important role demand-side incentives playing in supporting EV adoption2. Even EV markets where adoption is around 50% or above (e.g. China, Norway, etc), have continued demand-side incentives. The EVC does, however, support a gradual phase-out of temporary incentives once the market achieves 30% adoption; with an emphasis on the need for a phase-out to ensure there are no major shocks to the market.

Fringe Benefit Tax (FBT) Exemption

At present the FBT exemption (the 'Electric Car Discount') is the key demand-side incentive for encouraging EV uptake in Australia and will remain essential over the next few years to ensuring the market is supported to achieve the targets set under the New Vehicle Efficiency Standard (NVES). Importantly, the FBT exemption for battery electric

vehicles needs to be extended beyond 2027 to continue providing an important demand mechanism to avoid the type of significant drop-off in EV demand seen in New Zealand following the removal of similar measures. In fact, it is the view of the Electric Vehicle Council that additional demand-side incentives in addition to the FBT exemption – albeit temporary - will be required across both federal and state jurisdictions, to support the emissions reduction rate set under the NVES.

The EVC has concerns about previous attempts to assess the cost/cost-effectiveness of the FBT exemption, for the following reasons:

1) As previously mentioned, the true carbon abatement assessment requires an assumption of a real-world emissions rate for petrol/diesel vehicles. The rate of 146.5 g/km assumed in the PC's 2023 report is unrealistic as it is based on the official test cycle, and not in line with average real-world consumption of Australian new vehicles.

2) The FBT exemption provides an additional benefit beyond the standard tax deduction benefits available to ICE vehicles (see below) that are purchased via a company or leased via salary packaging arrangements. The actual cost of abatement is the marginal cost difference of an EV being purchased under this arrangement, as opposed to a petrol/diesel vehicle. This varies across circumstances, but the EVC estimates this marginal benefit to be in the order of $2,000 - $3,000/year, with vehicles receiving this benefit generally for a 3 to 4 year period. As such, we estimate the average marginal benefit per EV is approximately $10,000 per vehicle. In other words, this is the marginal reduction in tax revenue collection under this policy.

Separately, the PC's cost of abatement estimations should evaluate the efficacy of applying the FBT exemption to vehicles that do not contribute to emissions reduction at all.

Under current arrangements, the purchase of high-cost, high-emission vehicles are given favourable tax treatment that materially undermines the policy intent of the Electric Car Discount. In effect, it incentivises the opposite consumer behaviour to that required for the net zero transformation. The FBT exemption on non-EVs acts as a substantial cost of non-abatement and is clearly counter-productive to improving the cost-effectiveness of transport abatement policies.

However the PC calculates the Electric Clean Car Discount's cost of abatement, continued subsidisation of high emission vehicles through the FBT exemption has no place as part of coherent sector-wide emissions reduction signals.

Second-Hand Market

One of the clearest gaps in the emissions reduction policies for transport is in the second-hand market. The NVES, the FBT exemption and most demand-side incentives (e.g. at state level) focus exclusively on the sale of new vehicles, notwithstanding that most motorists buy from the second-hand market. Per the above, a vehicle purchased today will likely remain on the road until 2045 with a second, third and even fourth owner before retirement.

Policy responses to the second-hand market have largely been indirect. Most new

vehicles are purchased by corporate or government fleets and are held between 3 to 5 years before being turned over. Faster EV adoption by fleets therefore helps accelerate supply to the mass (second-hand) market. Nevertheless, policies to date have overlooked the importance of second-hand EV uptake as a transport emissions reduction measure.

Demand-side policies for second-hand EVs offer potentially lower cost of abatement relative to subsidies for brand new EVs. Depreciation of used EVs appears to be stabilising now that technology has superseded many first-generation EV models with low resale values. Nevertheless, the value of demand-side incentives required to drive behaviour change (e.g. via subsidy amounts) is likely to be far lower than for new vehicles.

Beyond a purely economic lens, incentivising second-hand purchases of EVs would also embed ‘just transition’ principles into transport emissions reduction policy; both low-income consumers and SME fleets are more likely to benefit from such policies and less likely to be able to access EV benefits absent policy support.

Commercial & Freight Vehicles

There are currently no meaningful policy measures to reduce emissions from heavy road vehicles (i.e. vans, trucks and truck combinations, typically defined as 4.5 tonnes gross vehicle mass, or more). This contrasts with the 22% of transport emissions attributable to road freight. Historic framing of road freight as a ‘hard to abate’ sector ignores the meaningful deployments of electric rigid trucks and electric prime movers that are already available on the Australian market and already being purchased under commercial arrangements. EVs will not suit all operators in all trucking duty cycles. However, with hundreds of heavy EVs already operating on Australian roads in 2025, electrification is easily the most mature decarbonisation pathway for road freight.

Commercial fleet buyers are more likely to evaluate a heavy EV on a Total Cost of Ownership (TCO) basis. For some operators, applications and routes, the TCO of an EV is already competitive or at parity with diesel operations. The biggest constraint identified by the industry remains high depreciation rates and resale value in the nascent Australian market.

Depreciation for electric freight vehicles, even under a 1- or 2-year trial period, can be substantial, quickly eroding TCO savings from reduced fuel burn and maintenance. Anecdotally, this excessive drop in residual value can single-handedly destroy the business case for switching to electric. Under a lease-plan arrangement, the depreciation can result in monthly payments costing an operator up to 200% those of a comparable diesel lease.

The second-hand resale market for heavy EVs remains relatively untested in Australia and depreciation assumptions for heavy EVs are likely to remain excessively conservative so long as the chicken-and-egg dilemma remains: adoption requires accurate residual values, but accurate residual values depend on greater adoption.

Industry has nominated a ‘guaranteed residual value’ via concessional finance as a potential circuit breaker for EV uptake in road freight. A clear floor under resale

assumptions could immediately boost the TCO for adoption at relatively low cost. Precedent for such an approach already exists for passenger EVs (e.g. CEFC support for third-party financiers).

3. Are there any duplicative emissions-reduction policies in the industrial, electricity and transport sectors which could be streamlined?

As stated previously, it is the Electric Vehicle Council's strong view that now is not the time for cutting back on efforts to decarbonise the transport sector, indeed more mechanisms are required to push transport decarbonisation. This sector has for too long been ignored, and as a result is significantly behind other sectors in its trajectory towards net zero.

Further support, particularly in the short-term, will be necessary to setup the sector to decarbonise over the coming 25 years, consistent with net zero, and while costs may be higher, this does not mean these policies are any less important – particularly when considering the major co-benefits from transport decarbonisation, and in particular, the adoption of EVs.

That said, we would encourage the PC to explore other policies that are increasing the challenge of decarbonising the transport sector. For example, the light commercial vehicle market has seen rapid growth over the past decade, largely due to significant tax breaks afforded to this type of vehicle. While a proportion of the market is purchasing these vehicles for genuine commercial uses, there is a growing segment that has shifted to these vehicles due to the tax breaks. These tax breaks include the absence of a car limit for depreciation, opportunities to reduce/avoid FBT, and full GST claims on purchases.

While this is a complicated area of tax policy, changes should be made to reduce the subsidisation of high-polluting light commercial vehicles, encourage a shift towards more efficient vehicles, including EVs, and tighten the eligibility requirements for receiving these tax benefits.

EVs as Distributed Energy Resources

There is growing alignment between government efforts to incentivise household energy storage and the uptake of EVs – effectively 'batteries on wheels'. The recent policy focus recognises that self-consumption of household solar will likely be more cost-effective than an ever-greater build-out of distribution infrastructure and EVs have a similar role to play in managing load, consumption and storage of electricity going forward.

Like Battery Energy Storage Systems (BESS), EVs can feed energy into the home at periods of peak demand. Vehicle-to-Home technology (V2H) is already available in a range of EV models currently on the Australian market. Even without V2H capability, however, all EVs also offer load shifting benefits in smoothing grid demand and/or solar surges by absorbing excess renewable energy generation during the day. Further incentivisation through attractive Time of Use tariff reform would only bolster these co-benefits.

Broadly speaking, EVs hold several advantages over traditional home batteries/BESS:
1) EVs can hold five-times more energy than a typical 'wall battery'

2) Most EVs on the market can store energy equivalent to 3 days of a typical Australian household's energy consumption
3) EVs have a secondary function as the preferred mode of transport in Australia; irrespective of BESS uptake, most Australians will have an EV at home under any net zero scenario.

For this reason, the Electric Vehicle Council advocates for broader integration between energy policy on 'consumer energy resources' and EV uptake efforts. The most productive policies on home energy storage would prioritise EVs as a preferred storage solution, in light of their dual function as a transport decarbonisation measure. At a minimum, any battery programs should at least not exclude EVs, given the evident synergies, and could allow for bi-directional chargers that enable V2G or V2H to be eligible for rebates. Policy signals that incentivise home batteries without extending to EV uptake represents the biggest potential duplication of emissions reduction policy across the energy and transport sectors.

Notably, EVs that support V2H can also assist Australians during climate disasters such as bushfires and floods by giving them power during times of grid outage. Indeed, it has been a common feature of recent Australian natural disasters that the small number of Australians with cars offering V2H have been able to power their homes and assist their communities for days while the energy grid has been disconnected. There is serious potential here for alignment between adaptation to climate change while helping reduce emissions through the uptake of V2G/V2H enabled EVs.

2. Speed up approvals for new energy infrastructure

1. Are planning and approvals processes for large energy infrastructure taking too long? If so, what causes the most delay?

   The participant did not respond to this question.

2. How can planning and approvals processes be sped up without unduly compromising regulatory standards?

   The participant did not respond to this question.

3. Should clean energy projects be treated differently to other projects for the purpose of environmental and other approvals? If so, how?

   The participant did not respond to this question.

4. What can be done to build local community support for new energy infrastructure projects?

   The participant did not respond to this question.

5. Please outline any evidence showing the productivity benefits of faster approvals for energy projects.

   The participant did not respond to this question.

3. Encourage adaptation by addressing barriers to private investment

1. What are the barriers and enablers impacting decisions by owner-occupiers, landlords and developers about how housing is built and updated over time so that it is resilient to the effects of climate change?

   The participant did not respond to this question.

2. What information do people need to make decisions about where to live, how to build and how to upgrade their homes to appropriately factor in climate change?

   The participant did not respond to this question.

3. What are the most cost-effective retrofitting options for improving the resilience of Australia's existing housing stock? What are their costs and benefits?

   The participant did not respond to this question.

4. What role might minimum standards play in ensuring the resilience of Australia's housing stock?

   The participant did not respond to this question.

5. The impacts of climate change are being factored into the regulation of where and how houses are built in different ways around Australia. What does leading practice look like? Where is there room for improvement? Are there lessons we can learn from other countries?

   The participant did not respond to this question.