



AHC Submission in response to the National Electric Vehicle Strategy

Australian Hydrogen Council

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Submission to the Department of Climate Change, Energy, the
Environment and Water

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About the Australian Hydrogen Council

The Australian Hydrogen Council (AHC) is the peak body for the hydrogen industry, with 103 members from across the hydrogen value chain.

Our members are at the forefront of Australia's hydrogen industry, developing the technology, skills and partnerships necessary to build Australia's hydrogen economy.



Australian's have signalled their desire to switch to more sustainable motoring choices with a 65% increase in EV sales in 2022¹. While this growth is primarily in the passenger transport segment, industry is also looking at transportation as a way to reduce emissions.

Efforts to do so are however being hampered by a number of factors including; lack of availability of electric vehicles; lack of access to recharging/refuelling infrastructure; and an absence of data on the total cost of ownership of electric vehicles for commercial use. AHC recommends targeted policy to address these challenges which are holding back the decarbonisation of our road transport sector.

AHC broadly support the objectives of the EV Strategy. While many of the issues facing hydrogen fuel cell electric vehicles (FCEVs) require similar policy solutions to those of EVs more generally, AHC does believe that there are some additional considerations to be addressed. Chief among these is the informational requirement for potential purchasers of EVs for who are seeking total cost of ownership information to allow them to make the best decision regarding the type of EV to purchase.

While battery electric (BEV) and plug in hybrid electric vehicles (PHEV) are likely to dominate sales in the light vehicle segment, we consider that FCEVs will still play a role. This is likely to be in circumstances there is no convenient access to charging infrastructure (eg, dwellings with a lack of off street parking) or where vehicle duty cycles do not allow for the 'down time' required by even relatively fast charging stations. With these comments in mind, AHC support all technologies which will contribute to the decarbonisation of Australia's vehicle fleet and welcome policy approaches which are relatively neutral in order to allow consumers to choose the technology which best suits their needs.

We urge policy makers to ensure that FCEVs remain front on mind in determining Australia's pathway towards a zero emissions fleet due to their unique attributes which make them particularly suited to some applications where decarbonisation would otherwise be difficult.

AHC propose the following actions to increase the number of EV on Australian Roads.

Fuel efficiency standards

The absence of ambitious fuel efficiency standards in Australia is contributing to the slower than desirable uptake of electric vehicles. As outlined in the consultation paper, over 80% of the global car market has fuel efficiency standards in place. The existence of such standards elsewhere in the world provides an incentive for vehicle manufacturers to direct their most efficient fleet towards markets other than Australia. This means that as older, highly polluting vehicles on our roads are retired, they are not being replaced by the most efficient alternative. It also deprives consumers of choice with only 45 light EV models (with 95 variants) available in Australia. By contrast, 180 variants are available in the United Kingdom.²

Australia's failure to adopt the Euro 6 standard has seen the availability of zero emissions vehicles available for purchase significantly curtailed relative to the rest of the world. Adopting the standard

¹ Electric Vehicle Council, State of EVs, October 2022

² Ibid

would implement penalties for OEMs whose fleets do not meet the standard and incentivise manufacturers to provide a wider range of models to Australian consumers.

AHC understands that Government will be consulting on the adoption of fuel efficiency standards in due course and look forward to engaging in that process.

Roll out of refuelling/recharging infrastructure

For most motorists, refuelling infrastructure for internal combustion engine vehicles is ubiquitous. Petrol, diesel and even LPG is readily available at locations across all but relatively remote areas. It is vital that our future vehicle fleet has access to infrastructure to allow it to recharge or refuel conveniently so that widespread EV ownership does not result in undue productivity loss or inconvenience.

AHC support the rollout of a well developed national charging infrastructure network. Acknowledging that PHEV or BEV are likely to be the dominant technologies for most light duty vehicles, AHC considers that a recharging network can act as a blueprint for the future rollout of a hydrogen refuelling network.

Analysis from AEMO has identified that electrification of Australia's fleet will impact electricity network infrastructure planning and design. It will be crucial that recharging stations are integrated into the electricity network and we suggest that, in many circumstances, the co-location of hydrogen refuelling infrastructure may assist with this challenge. On site electrolyzers can provide network benefits such as evening out demand which increases network efficiency and assist with infrastructure planning.

Revise Australian Design Rules

FCEVs are likely to play a significant role in the heavy vehicle sector. Commercial operators seeking to transition to a zero emissions fleet are constrained by Australian design rules which limit vehicle availability.

AHC recognise that Australian conditions for the transport of freight are unique but consider that relatively minor variations on width and weight requirements will not compromise safety and consequently should be revisited to allow access to the vehicles which are currently, or will soon be available to other markets.

This step will allow greater access to FCEVs and other electric vehicle types and, in doing so, may place downward pressure on vehicle purchase prices leading to both efficiency gains and emissions reductions.

Data is required to provide customers with certainty

Consistent with the view that Australia will be more heavily reliant on FCEVs in the heavy transport sector, AHC is calling for additional trials of heavy vehicles on key freight corridors. Although heavy duty FCEVs are becoming more prevalent in Europe and the United States, Australian conditions differ markedly from those in other parts of the world and data relating to performance and total cost of ownership is not directly transferable.

This lack of data creates an issue for fleet owners who are examining technology options to reduce emissions from their vehicles as they are unable to make purchasing decisions based on real world experience. Ultimately, trials such as the Hume Hydrogen Highway initiative will provide fleet owners with the data needed to make commercial decisions, but in the more immediate term, will serve to demonstrate the fitness for purpose of FCEVs for their operations.

In its 2021 White Paper, AHC called for the Australian Government to fund:

- At least two heavy vehicle trials of large fleets, at a minimum amount of A\$200 million each, focussed on heavily-trafficked truck routes (e.g. Sydney-Melbourne).
- At least three larger trials for lighter trucks for logistics near hydrogen centres, at A\$25 million each.
- At least two larger trials for bus routes near hydrogen centres, at A\$45 million each for 40 buses (or a combination of smaller and larger, at A\$12 million per small trial for 10 buses).

The Hume Hydrogen Highway initiative will provide valuable learnings but needs to be expanded in size and scope and across other routes so that a fleet owners can have access to a network of refuelling infrastructure.

While data relating to the total cost of ownership is a key input for businesses making decisions regarding heavy vehicle purchases, similar information will also be of use to users of light vehicles for whom BEVs or PHEVs may not be suitable. While these technologies are likely to dominate the passenger vehicle market in years to come, a number of light duty FCEVs are currently operating on Australian roads. It is unlikely that these vehicles will be generally available in the immediate future however we consider that where possible, FCEVs should make up a portion of government fleets as a pathway towards more widespread integration into the Australian motoring landscape.

We note that ACT and Queensland are currently trialling FCEVs in their fleets and NSW has an explicit target in its hydrogen strategy.

Increasing sales numbers for EVs suggest that the Australian motoring community is becoming comfortable with these technologies, however hydrogen (both in transport applications and more broadly) is less familiar to most Australians. The use of FCEVs in government fleets will not only provide cost data to guide purchasing decisions when passenger FCEVs are available to the public, but will also help to drive community acceptance of the hitherto unfamiliar technology.

We note that a number of states have committed to trialling FCEV buses and consider that these will also provide visibility for the hydrogen industry as commuters will in effect become passive consumers of hydrogen and become more familiar with the technology.

We recommend that the Australian Government implement a target for FCEVs in its fleet.

Re-establishing Australian manufacturing

World-wide supply chain issues have demonstrated the importance of domestic manufacturing capability. The transition to a decarbonised vehicle fleet presents an opportunity to reinvigorate vehicle manufacturing in Australia. A number of AHC members are currently assembling FCEVs in Australia or manufacturing FCEVs from an internal combustion engine based vehicle. Government

has a role in ensuring that suitable investment conditions exist to ensure that these activities remain, or even expand in Australia.

Even a small to moderate sized manufacturing presence in Australia will require complementary infrastructure required to support vehicle manufacturing. In the case of EVs this obviously involves a well developed network of recharging and refuelling stations to ensure that there is a viable market for the end product. Investment in battery manufacturing and other parts will also play a strong role in ensuring that Australia is seen as viable location for OEMs to establish a presence. In addition, incentives to invest in research and development will promote the development of new technologies to ensure that Australia once again manufactures world class vehicles.

We note that a range of factors will impact the viability of vehicle and parts manufacturing in Australia but consider that the transition to a zero emissions fleet at the very least presents an opportunity which should be explored.

Summary

AHC welcomes the Australian Government's commitment to reducing road transport emissions through its EV Strategy. Consumers and industry are keen to play a role in reducing their carbon footprint but must be supported by a policy framework which ensures that doing so will result in minimal impact on finances, productivity or lifestyle.

Increasing access to vehicles, recharging/refuelling infrastructure and consumer information will ensure that purchasers of vehicles for both business and personal use have the confidence to move away from carbon emitting internal combustion engines; and a focus on supporting local manufacture will ensure that Australia is resilient to adverse global trends.

We look forward to continuing to engage on this matter.

If you wish to discuss any element of this submission in further detail, please contact Joe Kremzer, General Manager, Policy on 0413 266 081 or email jkremzer@h2council.com.au