



11 March, 2024

Inquiry into the transition to electric vehicles

SUBMISSION ON VEHICLE EMISSION STANDARDS BY ARRCC

The Australian Religious Response to Climate Change ([ARRCC](#)) recognises that we are in a global climate emergency with the likelihood of severe climate change impacting on every aspect of life well into the future, affecting our children, grandchildren and beyond. We hold to the sacred trust we have been given to care for and nurture the natural world which we hold to be sacred. Everything must be done to ensure that global warming is brought under control through meaningful reductions in greenhouse gas emissions, by all nations including Australia. This is a moral imperative of unprecedented urgency. The establishment and implementation of Vehicle Emission Standards (VES) can assist to achieve this moral imperative.

The necessity to reduce greenhouse gas emissions through a transition to electric vehicles (EVs) will only be achieved with the adequate deployment of a charging system driven by renewable energy sources. Many owners of EVs are already charging their cars through rooftop solar systems, thus making their cars a battery system for their home. This should be encouraged through subsidies as a means of stabilizing the grid through increased domestic storage. It should be a legislative requirement of commercial charging stations that they source their electricity from renewable supplies. Otherwise, the shift to EVs will not result in significant greenhouse gas emissions.

Nonetheless, some in the community are less moved by the moral imperative to reduce greenhouse gas emissions and remain more concerned about our national self-interest and financial benefit to the Australian public. We will address these areas of concern and demonstrate that, even in these terms, the VES are wise and potentially beneficial.

The concerns can be summarised under four headings:

1. Balance of trade issues
2. Strategic vulnerability of our reliance on imports of petroleum
3. Health issues
4. Lowering costs of batteries and associated EVs and hybrid vehicles

Balance of trade issues:

Around 90% of Australia's petroleum is imported and in 2022 it constituted around 15% of our total imports (12.9% refined, 2.21% crude petroleum); in dollar terms this was around \$44 billion dollars. In fact, petroleum is our largest single import.¹ Every 10% reduction in our petroleum imports would produce a saving of over \$4 billion to our balance of trade. VES will help reduce our national petrol bill, money that can then be spent in other ways.

As the invasion of Ukraine has made evident, petroleum costs are subject to strong fluctuations in the market price. In an increasingly unstable world, our trade balance is difficult to manage because our leading import can rise in cost significantly with little to no warning. This can cause instability in our economy and in the value of the AU\$.

Strategic vulnerability of our reliance on imports of petroleum

As already noted, some 90% of Australia's petroleum is imported. This means that our petroleum supply chain is highly vulnerable to disruption of sea trade lanes. Most of our petroleum imports are from the Middle East (through Singapore) or South East Asia, both sites of potential conflict that would disrupt our petroleum supplies. Under International Energy Agency rules, each country has an obligation to hold emergency oil stocks equivalent to at least 90 days of net oil imports to avoid a major disruption to oil supplies. However, as of December 2022, Australia had 59 days of stock held onshore, according to the latest Australian Petroleum Statistics.²

In the event of a breakout of hostilities that caused a major disruption of supply we could meet our national need for petrol for only 59 days. Given the likelihood that the government would seek to control the end use of this supply for strategic and other national priorities, ordinary consumers would quickly find their Internal Combustion Engines (ICE) running on empty.

¹ <https://oec.world/en/profile/country/aus?yearlyTradeFlowSelector=flow>

² <https://www.energy.gov.au/publications/australian-petroleum-statistics-2022>

VES can help reduce this strategic vulnerability by extending our national fuel supply through efficiency savings. This extension can be achieved without the costs of building extra storage or the actual fuel, simply by reducing demand.

Health issues

The latest research of Melbourne Climate Futures Academy fellows, Ms Clare Walter and Dr Kelvin Say, shows that vehicle emissions in Australia may cause:

- 11,105 premature deaths in adults per year;
- 12,210 cardiovascular hospitalisations per year;
- 6,840 respiratory hospitalisations per year;
- 66,000 active asthma cases per year.³

These are real costs both to the individuals involved and to the national health system. For individuals and their families is suffering and loss, funeral expenses and/or costs of medicines and allied health services, as well as pressure and direct costs to the health system itself. Hospitalisations are particularly expensive. These health system costs are funded by Australian tax-payers. According to the Australian Institute of Health and Welfare, the average cost of a hospital stay in a major public hospital is \$4,680.⁴ VES can help reduce this cost to Australian tax-payers by significantly reducing these related medical expenses.

Lowering costs of batteries and associated EVs and hybrid vehicles

Since the introduction of hybrid cars and EVs the main disincentive has been the additional cost of the vehicle, making these vehicles less attractive to consumers. People chose to buy them either for environmental reasons or for trying out the latest technology. The reason for this price premium is the cost of the batteries, which can constitute 50% or more of the total cost of production. Apart from this cost, EVs are mechanically much simpler than ICE cars, as they lack the need for a gear system, cooling system, lubrication processes and the like.

This price premium is rapidly disappearing. EV battery costs have dropped over 80% from 2013–2023. This price decrease means EVs will soon reach price parity with ICE vehicles. In fact, Australia's Electric Vehicle Council expects EVs will reach price parity with internal combustion engine (ICE) vehicles by 2025.

VES will ensure that Australia has access to a wider range of EVs at a price parity to ICE vehicles. While there are some contexts where ICEs will remain needed because comparable EVs are not yet available, VES will help push manufacturers to move into these markets all the sooner. Certainly, in the passenger and SUV vehicle market EVs will offer the consumer substantial savings in fuel and maintenance costs. Currently passenger and the popular SUV car types constitute over 73% of the new vehicle market and already there are a number of EVs of these types that are readily affordable (below \$50k).

Conclusion

While we have outlined a number of significant practical advantages to the establishment and implementation of SEV as soon as possible, there remains the overriding moral consideration of global warming to address. As Pope Francis has stressed, global warming impacts most directly on the world's poorest peoples, particularly indigenous populations, as well as undermining the cycles of nature which make life possible on our planet. He calls us to listen to "the cries of the poor and the cries of the earth." Species loss, degradation of the land and oceans, deleterious changes in the weather patterns and ocean currents are already happening because of global warming. Every possible step must be taken to reduce our greenhouse emissions to avert a climate catastrophe. The VES are one small step that needs to be taken to achieve this reduction.

Authorised by Ms Thea Ormerod,
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³ <https://www.unimelb.edu.au/newsroom/news/2023/february/vehicle-emissions-may-cause-over-11,000-deaths-a-year,-research-shows#:~:text=Other%20health%20consequences%20include%20a,the%20effects%20of%20air%20pollution>

⁴ <https://compareclub.com.au/health-insurance/the-cost-of-staying-in-hospital-in-australia/>

