Fuel Efficiency Standard Submission

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Australia has become a dumping ground of expensive, inefficient, polluting vehicles. The demand for EVs in Australia is much higher than supply.

Australia has some of the lowest numbers of electric cars and charging stations of any developed country. We should seek not only to catch up, but to exceed and lead the way. Australia will be stuck playing catch-up with the rest of the developed world unless Australia can look further forward and try to do even better, with more forward-thinking about where this is all headed, and what we will need to prepare for this future.

The introduction of fuel efficiency standards is a welcome step towards catching up with other developed nations in terms of air pollution, cost of living, and energy sustainability.

Extra care must be taken to avoid loopholes and credit systems that allow polluters to buy their way out of complying with the standards (e.g., if the fines or the credits are cheaper than the profits they would make, then they won't comply with the standards).

However, the current wording seems to conflate "fuel efficiency standards" with "transport emissions standards" by using CO2 per km as its measure. A true fuel efficiency standard for transport would be in terms of Wh per km, or km per kWh. Both a fuel efficiency standard and an emission standard are needed, but they are not the same thing. It is true that CO2 emitted per km will correlate with the efficiency of ICE vehicles, but obviously not with BEVs (Battery Electric Vehicles) and hydrogen vehicles, which have no CO2 emissions per km. But BEV and hydrogen vehicles do vary in their energy efficiency per km, with some using far more Wh per km than others, making them more expensive to run by forcing their drivers to purchase more energy from electricity providers. Purchasers of BEVs have just as much right as purchasers of ICE vehicles to know whether

the car they are buying is going to be more expensive to run in the long term. And automakers selling EVs should be incentivised to be responsible with energy consumption so as not to force consumers to buy more energy than they really need, and not to put completely unnecessary stress of Australia's electrical grid and energy providers. All vehicles, regardless of power source (combustion engine, battery, or hydrogen fuel cell) should be compared on their efficiency in terms of Wh per km, ensuring consistency and transparency for consumers and encouraging manufacturers and retailers to ensure they have competitively efficient vehicles, regardless of power source.

Furthermore, automakers should be encouraged to put efficient-driving front-and-centre on the dashboard and HUD. Efficient driving should be encouraged, should be easy and fun to do. Many electric cars already give drivers numbers and graphs explaining how efficiently they are driving and letting them challenge themselves to see how many km they can get out of their battery. But most ICE cars do not, letting their drivers burn excessive amounts of fuel unnecessarily in blissful ignorance.

Additionally, a transport emissions standard should also be paired with clean air targets for various areas (primarily cities). This is a necessary mechanism to check whether the goals of the policies are being achieved, and to monitor and improve air quality to reduce respiratory illness. Some cities around the world have prohibited vehicles from driving within certain zones at certain times if they do not meet emissions standards. This is a policy that may be worth considering (giving citizens ample warning ahead of time when the policy will come into effect).

A similar system to the proposed Fuel Efficiency Standard should be introduced that focuses instead on total carbon footprint in the supply chain of producing a vehicle and its total lifecycle (including second-life uses of batteries, etc). The aim would be to encourage manufacturers to minimise the carbon footprint of their entire supply chain and to ensure their products have robust second-life uses and are easy to recycle at the ends of their second or third lives.

However, a major element of transport emissions and fuel efficiency was scarcely mentioned in the consultation paper: Non-car-centric transport systems. That is:

- Extensive bike lane networks with adequate safety for cyclists with city and suburban planning that aims to put as many amenities as possible within cycling distance.
- Extensive pedestrian path networks with city and suburban planning that aims to put as many amenities as possible within short walking distance.
- Comprehensive public transport systems that minimise or eliminate the need to drive cars or use domestic air travel. For example, a comprehensive high-speed all-electric train network for passengers and freight.

I could not find mention of how fuel efficiency standards can help transition away from diesel buses or trains. This should also be considered.

The exception to motorcycles seems questionable – There are plenty of models of fully electric motorcycles and scooters available globally, and Australia would benefit from having them sold here to Australians.

Most of the other exemptions (namely heavy vehicles, law enforcement, emergency services agricultural equipment, etc), should not necessarily be entirely exempt, but should really have their

own, separate fuel efficiency and emissions standards (as for LCVs). There is no particular reason why ambulances, police squad cars, and tractors need to be dirty and inefficient – there are already fully electric models available on the global market. All industries should be part of the energy transition, but may have different requirements and constraints, and therefore separate efficiency and emissions standards may be warranted. But no standards at all is simply short-sighted.

Australia should demand standards at least equalling those of any other developed nation (i.e., with CO2 ceilings that at least match them where they are today). There is no reason for Australia to "go easy" on automakers and retailers.

The consultation paper states, "Immediately adopting an annual emissions ceiling from another market would likely disrupt the Australian vehicle market by not providing sufficient time for suppliers to establish a pipeline to Australia of vehicles fitted with more efficient ICE technologies and LZEVs."

I do not see what the problem is – The "pipeline to Australia" is international shipping routes, and those do not need to be "established" because they already exist. And **the efficient vehicles already exist and are being sold, just not in Australia. It is only a matter of where they ship the vehicles they are already making**, and ramping up production to meet demand of right-hand-drive versions. Automakers do not need R&D time to create new vehicles (although that should be encouraged as well). Furthermore, there is no way these automakers and retailers did not see this coming, and should have been pursuing efficient vehicle production and importation for the past decade to account for this inevitable global trend away from dirty, inefficient vehicles. Therefore, I would support the "Start Strong" approach, but I don't see that extra exemptions or credits would be necessary – that would defeat the purpose of starting strong, would it not? What would be the point of starting strong and deliberately weakening its effect? One may as well simply not start strong. As the consultation rightly points out: Australia is lagging far behind other developed nations and needs to catch up as soon as possible.

The standards should start immediately, or as soon as possible.

The idea of limit curves based on mass or vehicle footprint seems sensible on its face, but ultimately the actual benefit or need for limit curves is highly questionable. After all, a NZ-style system (where it levels off completely flat at a specific floor value, and at a specific ceiling value) shows the benefit in just having a flat value that applies across a wide range of vehicles. If the same job can be achieved with smaller size and less mass (whether that be the job of a utility vehicle, a people mover, or a city micro-car), then that is preferable. And indeed there are low and zero emission vehicles available on the global market for all of these roles. So why not have them in Australia.

As pointed out, one of the best ways to make a more efficient vehicle is to make it smaller and lighter, but with limit curves based on those variables, it effectively nullifies the efficiency gains by automatically raising the bar. Therefore, such limit curves discourage automakers from making cars smaller and lighter, to instead focus on other solutions (e.g., aerodynamics). Any incentives to encourage the adoption of smaller and lighter vehicles should be prioritised because these design factors are some of the most impactful and simplest to get large improvements in efficiency, and reduces consumption and waste of high CO2 materials like steel, and of course the CO2 emissions of shipping (fewer large vehicles will fit on a cargo ship, thus requiring more ships than it would to

transport the same number of small vehicles, and of course heavier vehicles will take more energy and thus emit more CO2 when shipped internationally than do lighter vehicles).

A separate limit curve for LCVs is more justifiable, but if one is adopted, I do not think it should include ordinary four-wheel-drives, SUVs, or other cars commonly available to the average person.