



Organisation questionnaire response

Privacy Setting: I agree for my response to be published with my name and position withheld.

What organisation do you represent? (required)	Driven Women Magazine
Please rank the proposed options in order of preference. (optional)	Option A - 0th, Option B - 0th, Option C - 0th
Briefly, what are your reasons for your choice? (optional, 3000 character limit)	The numbers are all smoke and mirrors designed to make the Government look good. They will not make Australia a leader in this area.
Do you support the Government's preferred option (Option B)? (optional)	NULL
Do you have any feedback on the analysis approach and key assumptions used? (optional, 3000 character limit)	NULL
Briefly, describe how the NVES might impact your organisation (optional, 3000 character limit)	NULL
Who should the regulated entity be? (optional, 3000 character limit)	NULL

The Australian Government is in the process of implementing a Fuel Efficiency Standard for new cars sold in Australia. According to the Government the standard will save Australians money, unlock greater choice of modern, safer and cleaner cars, and help Australia achieve our emissions reduction target of 43% below 2005 levels by 2030.

The Climate Council claims that Australian individuals could save up to \$1,200 a year on vehicle running costs if the federal government delivers strong fuel efficiency standards by 2035 from reduced vehicle running costs, cleaner air and less environmental damage if we design new fuel efficiency standards well. But if the current new car sales figures are anything to go by, Australians do not seem to be concerned about the fuel consumption of the vehicles they buy with 38.3 per cent of new car sales in October 2023 either being in the light commercial utes, large, or upper large SUVs vehicle categories. Conversely, EV sales softened to represent 5.7 per cent of the market.

The Fuel Efficiency Standard is also only concerned with the air quality and greenhouse gas emissions in Australia, so to be a global leader in this area should we go further? A Life Cycle Analysis (LCA) looks at the resources used for the manufacture, use and disposal of an item. A LCA is commonly done for Greenhouse Gas (GHG) emissions as a robust measure of the GHG impact of products, including motor vehicles. GHG emissions are just one measure of environmental impact and a LCA can also be done for human health impacts, eutrophication, acidification, smog formation, particulate matter, and ozone depletion.

For some time now I have called for LCAs to become the standard measure of GHG impact for motor vehicles rather than using a fuel efficiency standard. Some consumers are led to believe that electric vehicles are 'emissions free' and the Australian Competition and Consumer Commission have warned car companies that making such claims could result in prosecution under Australian Consumer Law.

Polestar publishes full details of the carbon footprint of all its models. The Swedish EV-maker believes the car industry should be a driving force in the shift to sustainable mobility, and that transparency is a key enabler. Polestar is one of the few car companies in Australia that does this.

These reports consider a range of factors in a car's life cycle, from supply to manufacture and recycling, and summarise the climate impact in one easily understood number. This enables consumers to make quick and educated decisions when buying a car. The LCA figures stated in this release disclose the cars' cradle-to-gate carbon footprint which includes material acquisition through the production of the product and excludes the use and end-of-life stages.

The latest data to be released by Polestar is for the Polestar 4, which is initially available in China only. Aluminium represents 23-24% of the carbon footprint, while steel and iron constitute 20%, and battery modules account for the highest share of the carbon footprint of materials production and refining at 36-40%.

The study includes the vehicle life cycle from cradle-to-grave, starting at extracting and refining of raw materials and ending at the end-of-life of the vehicle. The time boundary of the study is manufacturing of the vehicle in 2023, and operating the vehicle over 15 years, from November 2023 to November 2038, after which end-of-life handling occurs. The vehicle lifetime driving distance for Polestar vehicles is set to 200,000 km, and energy use of the vehicle corresponds to driving according to the WLTP driving cycle.

The carbon footprint for Polestar 4 Long range Dual motor using the Global Electricity Mix shown in tonne CO₂-equivalents per functional unit (200,000 km lifetime range) is 37 Tonnes CO₂-e and

reduces to 23 CO₂-e using wind energy only for electricity production. Li-on battery modules are responsible for 7.6 CO₂-e in the Polestar 4 Long range Dual motor and materials production is responsible for 13.3 CO₂-e.

How this data compares to internal combustion engines vehicles can be difficult to ascertain as there is no one LCA methodology adopted by all vehicle manufacturers globally. This can mean that the consumer has no way of knowing if they are comparing apples with apples, even if they can find the data for vehicles.

Volvo, a sister company of Polestar, also publish their LCA data for GHG, so this allows a direct comparison between the same electric and petrol-powered vehicle. Using EU-28 electricity mix the Volvo XC40 Recharge creates 44 Tonnes CO₂-e over its lifetime, assumed to be 200,000km, and this drops to 27 Tonnes if wind energy is the electricity source for charging. The Volvo XC40 (ICE) powered using E5 petrol will create 59 Tonnes CO₂-e over the same lifetime.

The Australian Government needs to go further than simply implementing a fuel efficiency standard, if they are serious about GHG emissions from motor vehicles. Failing to disclose the emissions from the manufacture, use, and disposal of electric vehicles is simply shifting GHG emissions offshore. And the last time I checked we all live on the same planet and where the GHG emissions are produced doesn't matter to our atmosphere.

I urge the Government to be a global LEADER in how vehicle emissions are reported by car companies to give Australian consumers a clear understanding of the emissions associated with their new car purchase. The standardisation and public sharing of LCAs for GHG emissions for all new cars sold in Australia needs to be the standard we strive for!