

Polestar

## **Polestar Australia Australian Fuel Efficiency Discussion Paper**

### **General comments**

Polestar was founded on a mission to accelerate the shift to sustainable, electric mobility. Together with design and technology, sustainability is one of the three pillars that form the foundation of everything the brand stands for. As a young company, Polestar is legacy free and stands behind a powerful climate solution. This puts Polestar in a prime position to challenge old notions, lead with transparency, and embrace the power of exponential technology.

Polestar Automotive welcomes the decision by the Australian Government to introduce a Fuel Efficiency Standard. Australia remains one of only a handful of countries without a compliance standard for its light vehicle fleet. Transport is currently the third largest source of emissions in Australia, behind electricity generation and is responsible for nearly 25% of Australia's total national greenhouse gas emissions. Establishing transparent and robust fuel efficiency standards is a natural extension of Australia's commitment to stronger action on climate change, and particularly its 43% below 2005 levels by 2030 and net zero 2050 commitments.

Australia's current light vehicle CO<sub>2</sub> intensity is 173.6g CO<sub>2</sub>/km and is heavily influenced by the model mix available for sale, including the prevalence of SUVs and Light Commercial Vehicles (LCV) in new car sales. This CO<sub>2</sub> intensity sits higher than comparable markets in Europe, New Zealand and North America.

In 2020, Australia recorded higher fleet-average CO<sub>2</sub> emissions for new vehicles, measured in grams per kilometre on the New European Driving Cycle (NEDC), compared to the European Union (EU). The emissions

were 46% higher for passenger cars and 37% higher for light commercial vehicles.<sup>1</sup>

Similarly, in comparison to the United States, Australia's passenger car emissions were 31% higher, while its light commercial emissions were 24% higher.<sup>2</sup> The absence of a fuel efficiency standard is attributable to this higher overall CO2 intensity.

As the experience of Europe illustrates, achieving strong and robust standards are possible across multiple jurisdictions, diverse geographies and varied fleet mixes and requirements. With 27 individual member states, the European Union's diverse requirements have not been an impediment to delivering a regulatory framework that delivers ongoing improvements in fleet-wide emissions reductions. The International Council on Clean Transportation (ICCT) noted in its *European Passenger and Light Commercial Vehicle Registrations January-December 2022* report that all manufacturers were able to meet their specific CO2 targets for that year, with industry-wide over-compliance of 12g/km.<sup>3</sup> This proves that strong action is possible while delivering choice to consumers and market-specific requirements. It also shows that car manufacturers can and will meet legislated requirements when clear expectations are supported by a strong regulatory framework.

While the European experience is a positive proof-point for how strong policy action can deliver fuel emissions reductions, it also highlights that even these steps are insufficient in isolation. For a country like Australia, the opportunity is to 'meet and beat' standards like those in Europe if we are to do our part in driving down fleet-wide emissions. This is underscored by the International Energy Agency (IEA), which highlights that more concerted efforts by national governments must be taken to meet their stated ambitions.

Delaying - or going 'slow' - on taking responsibility for our share of a global challenge isn't an option. The IEAs Global Fuel Economy Initiative provides a global benchmark on fuel efficiency objectives and standards.

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<sup>1</sup> [https://theicct.org/wp-content/uploads/2022/12/Australia-FE-standards\\_final.pdf](https://theicct.org/wp-content/uploads/2022/12/Australia-FE-standards_final.pdf)

<sup>2</sup> [https://theicct.org/wp-content/uploads/2022/12/Australia-FE-standards\\_final.pdf](https://theicct.org/wp-content/uploads/2022/12/Australia-FE-standards_final.pdf)

<sup>3</sup> <https://theicct.org/wp-content/uploads/2023/02/market-monitor-eu-jan-to-dec-feb23.pdf>

In 2019, It identified that despite the commitments of national governments, total fuel efficiency improvements have been significantly lower than the 2.8% yearly fuel economy improvements needed to meet the IEAs target of halving the fuel consumption of new light-duty vehicles by 2030 relative to 2005 levels. It also identified that achieving this target will require significantly stronger annual decreases in excess of 4% annually on average from 2019 to 2030. Put another way, this effectively requires a tripling of the average annual improvement since 2005.<sup>4</sup>

This aligns with the 2023 report *Joined in Climate Action: the Pathway Report*, commissioned jointly by Polestar and EV brand, Rivian.<sup>5</sup> The report identified that based on its current trajectory, the global automotive industry is expected to overshoot its part of the global contribution to limit global warming to 1.5 degrees Celsius by 2050 by 75%. Clearly, more action is needed to ensure the automotive industry is held to account and accepts its share of the heavy lifting when considering global decarbonisation targets.

Government policies supporting aggressive measures to reduce fuel emissions are essential for achieving these ambitious targets. This applies to all nations, including Australia, which must align its fuel efficiency goals with its climate commitments. The IEA has confirmed that current national government policies, as indicated by the Stated Policies Scenario, are inadequate to meet the Global Fuel Economy Initiative 2030 target.

On the other hand, if countries align their fuel efficiency standards with their stated national policies and plans to fulfill their nationally determined contributions, they can successfully reach their targets. This requires proactive government intervention to decrease average fleet emissions and increase the market share of zero-emission vehicles and efficient technologies in internal combustion engines, coupled with improved fuel quality standards. A testament to this approach is the fact that between 2017 and 2019, CO2 emissions decreased at a faster rate than fuel economy due to the increased adoption of electric vehicles. In 2019, the global average rated CO2 emissions were 167 grams of CO2 per kilometre (g CO2/km), representing a 1.6% decrease from 2017.

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<sup>4</sup> <https://www.iea.org/reports/global-fuel-economy-initiative-2021/executive-summary>

<sup>5</sup> <https://www.kearney.com/industry/automotive/article/-/insights/polestar-and-rivian-pathway-report->

As a nation solely reliant on imported light vehicles, Australia is a technology taker. Government cannot rely on domestically developed solutions to address our vehicle emissions challenges. Consequently, the regulatory framework bears a greater responsibility in establishing strong signals for both car manufacturers and consumers. Voluntary compliance is also insufficient, as has been witnessed with the industry's own voluntary standard – a standard set by industry, for industry, and which industry did not meet for MC + NA class vehicles (heavy SUV and Light Commercial Vehicles).

## **Responses to select questions**

Polestar Automotive supports the positions outlined by the Electric Vehicle Council and makes the following general comments relating to the discussion paper.

### *Design assumptions*

While appreciating that Australia faces unique circumstances for its vehicle fleet, it is also true that all countries confront circumstances based on geography, vehicle requirements and lifestyle choice. Assumed consumer preferences by Australians for bigger vehicles and drivetrains fail to recognise that consumer behaviour is informed by a variety of factors, of which lifestyle and work needs are only part.

Taxation arrangements send a strong signal to consumers about which vehicles can be considered for purchase. This was most recently seen with the Government's introduction of Fringe Benefits Tax (FBT) concessions in December 2022 to encourage the uptake of electric vehicles. This has seen a tripling of EV car sales in the first four months of 2023 compared to the same period 2022.<sup>6</sup> It can also be seen with the cumulative impact of FBT concessions on light commercial vehicles, where the introduction of 'dual cab utes' in eligible FBT concessions from 2000 has coincided with the growth in sales of light commercial vehicles

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<sup>6</sup> <https://www.carexpert.com.au/car-news/electric-car-sales-in-australia-have-tripled-in-2023>

and their variants, which have continued to grow at a faster rate to their passenger motor vehicle equivalents, albeit from a lower base.<sup>7</sup> Factors like tax treatment of vehicles are strong determinants in consumer behaviour and are a powerful policy lever to shift consumer preference.

Polestar advocates that Government can overcome consumer barriers and our unique geographic and consumer circumstances with strong policy settings and measurable, verifiable targets and initiatives working in concert to drive tailpipe emissions down. Part of this needs to include recognition that other policy levers, like taxation, also have a significant role in driving consumer behaviour. To be effective a future FES must also work in conjunction with taxation arrangements like the FBT.

*Exclusions for military, law enforcement, emergency services, agricultural equipment and motorcycles*

Polestar Automotive considers that Australian governments must lead by example to demonstrate the importance of transitioning the Australian new car fleet – in all its guises – to zero-emissions. If government fleets are mandated to transition to electric powertrains, Australia is likely to see a faster response from manufacturers to supply the Australian market, driven in part at least by a desire to maintain sizeable government contracts.

Of emergency response vehicles, police cars should be the first to transition to electric vehicles. The responsiveness of an electric vehicle drivetrain is a significant advantage, and electric vehicles have been recognised in other jurisdictions as having significant operational benefits.<sup>8</sup> Australian police forces can be early adopters of this technology and undertake evaluation trials.

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<sup>7</sup> See <https://www.bitre.gov.au/sites/default/files/documents/light-vehicles-info-sheet-108.pdf> p.5;

<https://www.ato.gov.au/law/view/document?docid=MTR/MT2024/NAT/ATO/00001&PiT=20000119000001>

<sup>8</sup> See <https://www.police1.com/police-products/vehicles/patrol/articles/electric-vehicles-prove-they-can-handle-police-work-kh6xMkZRKTGuuZzF/>

Similarly, Australian ambulance services tend to use Mercedes-Benz Sprinters. Discussions with EU-based partners should be in progress as those brands will likely transition faster than other manufacturers. Fire trucks may be an exception until the gross weight of electric trucks can be resolved.

Ongoing evaluation by governments of vehicles that are 'fit for purpose' should occur as the vehicle supply landscape is changing quickly.

The discussion paper identifies that the Fuel Efficiency Standard will not apply to motorcycles. This is a missed opportunity. According to the Californian Air Resources Board, motorcycles are approximately ten times more polluting per 'mile' than a passenger car, light truck or SUV.<sup>9</sup> In response, the California Air Resources Board has determined a series of measures to assist in the transition of motorcycles to zero-emission alternatives.<sup>10</sup>

### *FES Design Features*

Polestar Australia acknowledges the challenges presented by the introduction of a FES. However, the Australian FES is not without precedent. In Europe, a mandatory FES was introduced in 2009, across all 27 member states. It has continued to deliver significant annual reductions in tailpipe emissions from the European car parc. This extends to LCVs too.

In 2022, all manufacturers in the European Union (EU) experienced a decline in new registrations of light commercial vehicles, with an average decrease of 18% compared to 2021. However, the market also witnessed a rise in the average proportion of battery electric light commercial vehicles, which increased from 6% in the third quarter to 8% in the fourth quarter. Among the manufacturers, only the Stellantis group surpassed the market average with a share of 10% battery electric light commercial vehicles. Overall, the average share of battery electric light commercial vehicles in 2022 (5%) rose by two percentage points compared to 2021.

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<sup>9</sup> See <https://www.latimes.com/news/la-hy-throttle11-2008jun11-story.html>

<sup>10</sup> <https://ww2.arb.ca.gov/zero-emission-motorcycle-incentives>

Germany emerged as the country with the highest proportion of battery electric light commercials in 2022, reaching 8%.

With the exception of the Renault-Nissan-Mitsubishi group, all manufacturers successfully achieved their CO2 targets for 2022. Notably, Stellantis demonstrated surpassed its 2022 CO2 targets by 25 g/km, leading in terms of overcompliance.<sup>11</sup>

With the right ambition and supporting policy settings, Australia can achieve similar results, from a higher base. However, allowing the Australian automotive industry to have a 'slow start' to the introduction of a FES as suggested in the discussion paper at p.18 risks Australia remaining a dumping ground for high-emission vehicles – and for longer. This would do little for Australia's emissions profile to 2030 but would enable global manufacturers to meet global sales targets with cheaper vehicles.

Having a slow start to the introduction of a FES also does not guarantee that the industry would accelerate the introduction of lower emission vehicles at a later date. The standard must be designed around the ability for the market as a whole to meet the government's annual targets, not catering to the needs of individual car makers.

Polestar Automotive agrees with the EV Council's position that to be effective, an Australian Fuel Efficiency Standard must:

- Clearly demonstrate how the Standard will support the government's legislated emissions reduction targets, and at minimum be consistent with delivering a reduction in total transport emissions approximately equal with, but preferably lower than 2005-levels by 2030.
- Ensures the transport sector makes an equitable contribution to emissions reduction and block efforts being made by some groups to actively shift the burden from global car makers onto Australian consumers, households, and businesses to cut harder and faster to meet Australia's emission reduction targets.

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<sup>11</sup> <https://theicct.org/wp-content/uploads/2023/02/market-monitor-eu-jan-to-dec-feb23.pdf>

- Enables the achievement of the electric vehicle (EV) targets adopted in the majority of Australian states and territories i.e. at least 50% EV sales by 2030, which were recently endorsed by the Federal Government via inclusion in its National Electric Vehicle Strategy.
- Catches up to major global markets like the US and EU by, or ideally before 2030, in recognition of the fact that if Australia continues to remain behind, other countries will continue to be prioritised for the supply of low and zero-emissions vehicles.
- Recognises much of the technology already exists overseas but we need a standard that brings it to Australia, and therefore there is no excuse to follow a proportional reduction in emissions targets. We must aim to catchup this decade.
- Includes a penalty rate consistent with other major countries, after accounting for the broader design of the standard, including the overall stringency of targets and inclusion of any concessions/bonus credits.

Additionally, Polestar believes the following features should be designed into an Australian Fuel Efficiency Standard:

- The Standard should be mandatory and be introduced as soon as reasonably practicable following the passage of legislation, but not later than end 2024.
- The Standard should set targets for fuel efficiency in the light vehicle fleet and be subject to ongoing and regular review to take account of changing model preferences and CO2 emissions reductions. There should be at least two such reviews before 2030 – nominally in 2026 and 2029, and these should consider future targets, concessions or credits and other design features in response to both the market as it operates at that time and progress against Australia’s rate of emissions reduction and Zero Emission Vehicles (ZEV) sales as a percentage of overall new vehicle sales.
- Targets for the Standard should only be varied three years ahead of the standard review year to provide market certainty.
- The government should provide clear guidance on projected EV sales under the proposed FES to inform broader EV policy and secure further private investment in the EV industry, particularly infrastructure.
- For administrative and transparency reasons, there should be minimal concessions or bonus credits. This will ensure there is greater visibility of the true emissions rates of new vehicles for both car manufacturers and consumers.



- In the event that credits are to be considered, early movers should be recognised. While some markets are moving away from super credits, Australia is further behind, and so accelerating change is important – multiplier/super credits can assist with catching up to the rest of the world. Companies providing ZEVs to the market and increasing their availability is an important signal from government that this is supported.
  - This could be in the form of additional (multiplier or super) credits for ZEV sales.
  - To preserve integrity of the FES, multiplier credits could be reduced over time as more ZEVs enter the new car market. The important principle here is the need to need to incentivise supply side and if no super credits, then ZEV producers will be disincentivised to provide vehicles.
  - Multiplier credits need to be considered in coordination with other consumer specific measures and taxation arrangements.
- Keeping the design of the Standard simple will also reduce the administrative burden for the Regulator (DIRD) and car makers.
  - While car manufacturers should be provided with some flexibility to bank, trade and pool credits with a carry-back period, this should be aligned to the review period of the Standard. Other credits, like off-cycle credits for air-conditioning should not be included. Air conditioning gases in particular is dealt with under the Montreal Protocol and to include it would constitute a form of double accounting, which should be discouraged. Technology super-credits should only be considered where there is an identified need and justification for their inclusion to further encourage supply of low and zero-emission vehicle models in specific vehicle segments or price brackets. These credits must be minimal, temporary, capped and have a clear phase-out timeline - in line with global best practice.

### *Targets*

In setting Fuel Efficiency Standard targets across passenger cars (MA) and another set for off-road SUVs (MC) and light commercial vehicles (NA), the Government must be mindful to avoid leakage of one class to a higher class to enable higher emissions. Recognising that there are different tiers of vehicle class, we should note that the difference is on the

models intended purpose- PMV based SUVs and LCV based SUVs serve the same core market and should be assessed accordingly. The intended end application for vehicles (LCV and derivatives) should be considered as part of the Government's consideration given the collective use of these vehicles is increasingly less focused on genuine trade and commercial duty and is intended for predominantly household purposes.

The Government can assist clarification on this by setting one set of targets for passenger cars (MA) and another set for off-road SUVs (MC) and light commercial vehicles (NA). Setting different targets for different size vehicles via a mass limit curve and ensuring that the use of a mass limit curve does not incentivise the supply of heavier vehicles or disincentivise the supply of light vehicles by either setting relatively flat slopes, or flattening the curves above 2,000 kg for MA and 2,200 kg for MC/NA, and flattening the curves below 1,400 kg for MA/MC/NA. It will be important to recognise that the difference between these two sets of targets should be minimised to reduce the risk of a shift in the new vehicle market towards larger and less efficient vehicles.

### *Tracking and tracing emissions*

The integrity of any proposed Fuel Efficiency Standard is essential to track emissions reductions across the national car parc and to ensure community confidence in the Standard. While the Government could establish an independent data source, industry already maintains a robust database through VFACTS. An appropriate data sharing arrangement between the FCAI and the Federal Government would likely be more cost-effective and deliver a timely and accurate data set for Government requirements.

### *Conclusion*

The establishment of a robust, credible and globally competitive Fuel Efficiency Standard is an important first step to decarbonise the Australian transport sector. Passenger vehicles and LCVs make up over 10% of Australia's total emissions<sup>12</sup> and therefore play an integral role in achieving

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<sup>12</sup> <https://www.dceew.gov.au/energy/transport>

Australia's stated national emissions reduction commitments to 2030 and beyond to Net Zero by 2050.

The blueprint is already available, and as demonstrated in the EU, when governments set clear fuel efficiency targets, supported by a strong enforcement framework, car companies comply. In fact, they're on track to exceed targets in the EU. But as the data shows, the automotive industry is a long way from doing its fair share. Given the global automotive industry is on track to a forecast 75% overshoot of Net Zero by 2050, it is clear that more must be done by governments globally to better regulate the tailpipe emissions of new vehicles produced. To do otherwise would force other sectors of the economy to wear an additional burden.

With the right policy settings through the establishment of a strong Fuel Efficiency Standard, the Australian Government can not only meet - but beat - efforts already taken around the world to drive down the tailpipe emissions.

Polestar would like to conclude this submission with the following quote(s) from the Intergovernmental Panel on Climate Change (IPCC) Chair, Hoesung Lee, commenting as part of its Synthesis Report for the Sixth Assessment Report during the Panel's 58<sup>th</sup> Session held in Switzerland from 13 – 19 March 2023:

*Transformational changes are more likely to succeed where there is trust, where everyone works together to prioritise risk reduction, and where benefits and burdens are shared equitably...We live in a diverse world in which everyone has different responsibilities and different opportunities to bring about change. Some can do a lot while others will need support to help them manage the change.<sup>13</sup>*

The Australian automotive industry has a responsibility to do a lot.

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<sup>13</sup> <https://www.ipcc.ch/2023/03/20/press-release-ar6-synthesis-report/>