

POLICY BRIEF 2023

FUEL EFFICIENCY STANDARDS: BENEFITS EVERY AUSTRALIAN WILL SHARE



OVERVIEW

Australians are paying too much for fuel, and driving vehicles that spew out all sorts of harmful pollutants into the air. It's time we change that.

Fuel efficiency standards cover 85 percent of the global car market.¹ Because Australia has been so slow to catch up, we have become a dumping ground for polluting petrol and diesel cars that are much dirtier and less efficient than those commonly sold in other markets. We can fix this.

This short brief highlights the benefits strong fuel efficiency standards can deliver for Australians, including for our health, household budgets and the choice of vehicles available locally. Everyone will win if we get this right.

WHAT ARE FUEL EFFICIENCY STANDARDS?

Fuel efficiency standards aim to make new vehicles more efficient so that they consume less petrol or diesel. Making new vehicles more efficient reduces the amount of harmful carbon pollution they produce when driven. This can be achieved either by changing technology altogether - by introducing more zero emissions vehicles - or improving existing technology so that petrol and diesel vehicles run more efficiently and use less fuel.

How do they work?

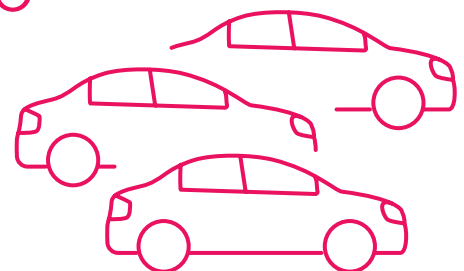
Fuel efficiency standards are applied in most major markets - including the USA, European Union and New Zealand. A fuel efficiency standard sets a maximum average level of carbon

pollution allowed across a manufacturer's overall new car sales. This provides an incentive for car makers to supply efficient lower and zero emission vehicles - or face penalties if they don't. A summary of the fuel efficiency standard settings in place in key comparison markets is provided on page 10.

Over time, fuel efficiency standards can be tightened so that vehicles produce less pollution. Eventually, the goal is to see new vehicles produce zero emissions because we have fully transitioned the new vehicle fleet to electric and other zero emission technologies. On the way there, making petrol and diesel cars more efficient will deliver a wide range of benefits that are explored in this brief.

Introducing a strong fuel efficiency standard will slash the annual fuel bill for Australian drivers, cut the national air pollution death toll and save the health system billions,² improve national security and provide Australians with a wider choice of modern, safe vehicles. At the same time, this will drive down transport emissions and put Australia on a clear path to zero emissions in the transport sector.

Fuel efficiency standards will benefit all Australians - no matter what type of new car they are buying.





HEALTHY AIR, HEALTHY PEOPLE

A strong fuel efficiency standard will help improve the quality of the air in our cities and towns by slashing transport emissions, saving thousands of lives.³

The latest research from the University of Melbourne has found that air pollution from cars, trucks and fossil-fuel powered buses kills **11,105 Australians every year** and results in 12,210 cardiovascular hospitalisations, 6,840 respiratory hospitalisations and 66,000 asthma cases annually.⁴

TRANSPORT AIR POLLUTION'S ANNUAL HEALTH IMPACTS



11,105

DEATHS



12,210

CARDIOVASCULAR
HOSPITALISATIONS



6,840

RESPIRATORY
HOSPITALISATIONS



66,000

ASTHMA
CASES

By establishing a strong standard that tapers to zero emissions from new vehicles by 2035 at the latest, Australia will lock in significant health benefits and lower the national healthcare spend through a reduction in harmful air pollution in our cities and towns.

This will reduce air pollution by promoting the use of cleaner technologies, such as more efficient petrol and diesel engines, as well as higher uptake of electric vehicles. The better the efficiency, the less CO₂ emissions are produced. If all cars sold in 2021 were 'best in class' for emissions, Australia's total 2021 emissions would have been 91 percent lower for passenger vehicles and small SUVs, and 47 percent lower for larger SUVs and utes.⁵

More efficient vehicles also pump out fewer other pollutants caused by the burning of petrol and diesel, such as nitrogen oxides (NO_x); particulate matter (PM_{2.5} & PM₁₀) - tiny particles ranging in size from 2.5 to 10 micrometers that can penetrate into the lungs and bloodstream causing a range of health problems; carbon monoxide (CO), sulfur oxides (SO_x) and other volatile organic compounds (VOC).^{6,7} Electric vehicles contribute even less particulate matter than petrol or diesel cars, and have zero toxic tailpipe pollution (NO_x, hydrocarbons and carbon monoxide).⁸

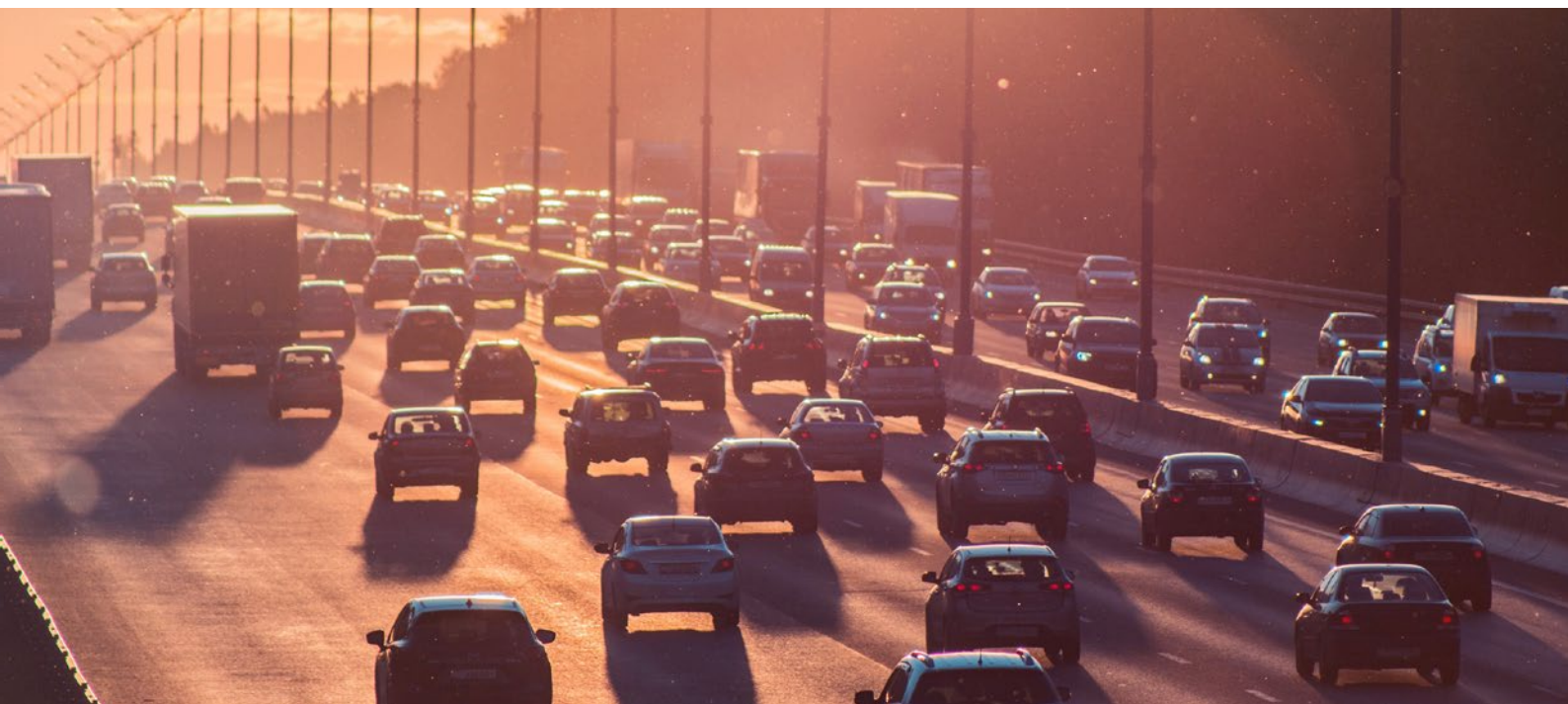
Fuel efficiency standards reduce the quantity of NO_x and VOC released into the air which contributes to ground-level ozone pollution (such as smog). Ozone is most likely to reach unhealthy levels on hot sunny days and can lead to respiratory problems, especially in children and the elderly.⁹

The International Council on Clean Transportation estimates that transport-related air pollution caused an economic cost of about \$10 billion in Australia in 2015.¹⁰

THE TAKEAWAY:



Fewer emissions from our cars means fewer pollutants released into the air and better health for all Australians.





CUTTING THE COST OF LIVING

Introducing a strong fuel efficiency standard will slash fuel costs for Australian drivers.

Research by Solar Citizens has found that a fuel efficiency standard aligned with the EU settings (95g CO₂/km for light vehicles) would **save Australian drivers \$11.2 billion dollars in fuel costs** over the next five years. The financial benefits of a strong Fuel Efficiency Standard would be greatest for regional drivers due to longer average commutes, higher regional fuel prices and higher rates of car ownership.¹¹

Australian drivers have long commutes and are paying high prices for fuel, yet currently drive some of the least fuel efficient vehicles in comparable markets due to our lack of fuel efficiency standards.¹² One of the immediate benefits of making cars more fuel-efficient is that the average new car will consume less fuel to drive the same distance, lowering fuel bills and helping Australians tackle cost of living pressure.

Adopting a fuel efficiency standard aligned with New Zealand would see the efficiency of new vehicles sold in Australia improve 42 percent by 2026¹³ - almost halving the fuel use and fuel cost of the average new car. The fuel savings add up quickly. A 42 percent reduction would **cut the average weekly fuel bill from \$98.30¹⁴ down to \$57.00 a week - delivering a fuel cost saving of more than \$2,100 each year.** The money saved will create more economic opportunities in our local communities by reducing the amount of money flowing offshore to fossil fuel giants. In this way, fuel efficiency standards will keep more money here at home, supporting the community and local businesses.



THE TAKEAWAY:



By making cars more fuel-efficient, a fuel efficiency standard will help ease the financial burden on families and reduce their exposure to high and volatile fuel prices.

MORE MODELS, MORE CHOICE

Delivering a strong fuel efficiency standard will see a greater range of car models become available for Australian consumers. This includes both electric vehicles and more efficient petrol and diesel vehicles which are cheaper to run and produce less harmful carbon pollution.

Internationally, car manufacturers have to supply plenty of these lower and zero emission vehicles to other markets to meet fuel efficiency standards and avoid penalties. But in Australia, there is no incentive for them to do so because we don't have the same standards. This is denying Australians the choice of great new vehicles that are on offer in other markets.

In late 2022, there were only 45 electric car models¹⁵ available for sale in Australia. This compares with 80 in the UK, 184 in the EU, and 300 models in China.¹⁶

Jurisdiction	Number of EV models available
Australia	45
California	65
UK	80
EU	184
China	300
Global	450

The lack of models and low sales figures also means Australians are likely paying more than we should for new lower and zero emissions vehicles. In international markets where fuel efficiency standards have already been implemented, this has had the effect of dramatically increasing the supply of these cleaner and more efficient vehicles while driving down their price.¹⁷



Caption: Minister for Climate Change and Energy Chris Bowen with Transgrid CEO Brett Redman launching Transgrid's fleet of electric utes in February 2023.

THE TAKEAWAY:



A strong fuel efficiency standard will provide an incentive for manufacturers to offer cheaper, cleaner low and zero emissions vehicles to Australian drivers, giving us all more choice about which car to drive.



BOOSTING ENERGY SECURITY

Fuel efficiency standards have a role to play in strengthening Australia's energy security by reducing our reliance on foreign oil and vulnerability to oil supply chain disruptions.

Australia consumed more than 57 billion litres of fuel in 2022.¹⁸ More than 90 percent of this was either imported from overseas or refined from imported crude oil.¹⁹

The transportation of oil and other petroleum products can be risky, with potential for spills, accidents, supply shocks and risks to international shipping lanes. By reducing the overall demand for oil and the need for transportation of petrol products, fuel efficiency standards can help to minimise these risks and improve our national security.

Australia is particularly vulnerable to petroleum supply chain shocks, a risk brought sharply into focus in recent years. We are vulnerable because only two local refineries remain and they produced less than 15 billion litres of fuel in 2022, far below total demand.^{20, 21} Domestic storage is limited too, **Australia has only enough reserves to meet 21 days of diesel usage and 29 days of petrol on average.**²²

THE TAKEAWAY:



Reducing the amount of fuel Aussie cars use by introducing a strong fuel efficiency standard will see us take more control of our energy security and improve Australia's resilience to price shocks and supply disruptions.



IMPROVING VEHICLE SAFETY

If Australia implements a strong fuel efficiency standard, this will see car manufacturers send their newest models with the latest safety technology to our market.

As these new models replace older and less advanced models, Australia's fleet will become safer overall. The newest models sold overseas often feature up to date safety technology like autonomous emergency braking, advanced driver assistance systems, lane departure warning systems, adaptive cruise control, following distance warning, adaptive headlights, fatigue warning and blind spot monitoring as standard.^{23, 24} All of these features can help reduce accidents on Australia's roads and continue driving down our national road toll. Australia shouldn't be a dumping ground for older model cars simply because our policies are lagging behind other countries.

THE TAKEAWAY:



A strong Australian fuel efficiency standard can help drive continued improvement in the safety of our fleets.



WHAT ARE OTHER COUNTRIES DOING?

Australia is one of the only rich countries around the world that does not already have fuel efficiency standards in place. The table below outlines the key settings for three important comparison markets: New Zealand, the European Union and the United States of America.

Country	New Zealand	European Union	United States
Current average CO₂ emissions	171g CO ₂ /km fleetwide (2020)	108g CO ₂ /km passenger cars (2020) 155g CO ₂ /km vans (2020)	197.6g CO ₂ /km passenger cars (2019)
Passenger vehicle target for 2025	112.6g CO ₂ /km	95g CO ₂ /km (2020-2024) Cars	91.1g CO ₂ /km
Light commercial vehicle target for 2025	155g CO ₂ /km	147g CO ₂ /km (2020-2024) Vans	132g CO ₂ /km
Most ambitious set target	Passenger: 63.3g CO ₂ /km Light commercial: 87.2g CO ₂ /km (2027)	0g CO ₂ /km all (2035)	Light duty vehicles (including passenger cars and light trucks): 44g CO ₂ /km Medium duty vehicles (heavy duty pickups and vans): 179.8g CO ₂ /km (2032)*
0g CO₂/km target year	Not yet	2035	Not yet
Penalties (\$AU)	\$41 (\$45NZD) per CO ₂ /km of target exceedance for fleets (2023-2024)	\$155 (€95) per CO ₂ /km of target exceedance	\$21 (\$14USD) per tenth of a mile per gallon
Market features	Manufacturers can trade and bank credits	Manufacturers can trade and bank credits. Manufacturers can pool to meet their targets	Manufacturers can trade and bank credits

Source: Penalties converted to AUD 18 April 2023, United States' standards converted via the ICCT Conversion Calculator. Sources for NZ²⁵, EU²⁶, US^{27,28}, AUS (FCAI)^{29,30}. Acknowledging the work undertaken by Climateworks Centre, Accelerating EV Uptake Report, which has informed this comparison table.³¹

*In the US settings for 2023-2026, Passenger cars include cars and smaller crossovers and SUVs, while the truck category includes larger cross-overs and SUVs, minivans, and pickup trucks (US EPA 2021). In the updated 2027-2032 proposed standards, light duty vehicles include passenger cars and light trucks, while medium duty vehicles (a new category introduced) includes primarily large pickups and vans (US EPA 2023).

ENDNOTES

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