



# PROPOSED CO2 STANDARD FOR LIGHT VEHICLES AAA RESPONSE



Australian  
Automobile  
Association

Submission August 2017



## Table of contents

<b><u>Introduction</u></b>	<b>3</b>
<b><u>Section One: Response to the Government’s proposed CO2 standard</u></b>	<b>4</b>
<b>1.1 Overview</b>	<b>4</b>
<b>1.2 Consultation process</b>	<b>5</b>
<b>1.3 Proposed CO2 target and timeline</b>	<b>6</b>
<b>1.4 Proposed flexibility provisions</b>	<b>7</b>
<b>1.5 Proposed penalty system</b>	<b>7</b>
<b><u>Section Two: Consequence of the Government’s proposal</u></b>	<b>8</b>
<b>2.1 Reduced vehicle choice</b>	<b>8</b>
<b>2.2 Increase vehicle cost</b>	<b>10</b>
<b>2.3 Increase in fleet age</b>	<b>10</b>
<b><u>Section Three: Other issues</u></b>	<b>11</b>
<b>3.1 Limit value curve</b>	<b>11</b>
<b>3.2 Electric vehicles</b>	<b>11</b>
<b>3.3 Fuel savings</b>	<b>12</b>
<b>3.4 Comparison of vehicles from other countries</b>	<b>12</b>
<b><u>Section Four: AAA position going forward</u></b>	<b>13</b>
<b><u>Endnotes</u></b>	<b>14</b>

## Introduction

The AAA and member clubs are committed to reducing the environmental impact of motoring and support a CO2 standard for light vehicles which is appropriate for Australian conditions and does not unduly restrict vehicle choice and increase the cost of a new car.

The AAA acknowledges there are many views on what is the most appropriate CO2 standard for the Australian light vehicle fleet. The AAA is committed to working with the Government to develop an approach to CO2 standards that balances the need to reduce vehicle emissions while not unduly impacting on consumer preferences and costs.

Critical to the development of a CO2 standard is understanding its relationship with noxious emissions (Euro 6) and fuel quality standards. The AAA believes a CO2 standard must be considered as a consolidated package with Euro 6 and fuel quality standards, with one Regulation Impact Statement to assess the combined costs and benefits. All three issues must be considered as a consolidated package to fully understand all the costs and benefits.

The AAA believes there are three key issues fundamental to the operation of a CO2 standard and likely to have the most impact on consumer preferences and costs. These include:

- The timeframe for introduction. The AAA believes a standard needs to provide reasonable lead times and compliance periods to avoid adverse impacts on vehicle choice and costs. An early adoption could encourage Australians to retain their existing vehicles longer, which will affect overall CO2 reductions and air quality outcomes, and have a negative impact on road safety.
- The flexibility provisions. CO2 standards in the United States (US) and the European Union (EU) have multiple flexibility provisions, which allow manufacturers to achieve targets in different ways while still maximising vehicle choice. A CO2 standard without these provisions will impact vehicle choice.
- The limit value curve. The limit value curve is integral to the operation of the standard, as the specified “target” is not ultimately defined in the regulation which establishes the standard. The gradient of the curve determines whether the standard puts pressure on manufacturers with a product range of larger vehicles or a range of smaller vehicles.

As a CO2 standard only applies to new car sales, the AAA proposes that the Government should also consider achieving CO2 abatement from the existing light vehicle fleet. These include:

- Campaigns to educate drivers to modify their driving behaviour to reduce fuel consumption. This has the ability to reduce CO2 emissions, not only for new vehicles, but for the entire vehicle fleet.
- The provision of information on fuel consumption that better reflects real-world experience would be of great assistance to consumers when considering purchase of a new vehicle. This will be particularly important if a CO2 standard is introduced, as the overseas experience suggests that vehicles have been designed to meet CO2 limits under laboratory conditions, but this does not necessarily translate into real world performance and the relative fuel consumption between two vehicles in the lab is not necessarily indicative of the relative fuel consumption on the road.

Such complementary approaches would assist in achieving CO2 abatement without imposing overly stringent CO2 standards that may unduly distort the market, restrict vehicle choice, or impose additional costs on consumers through fines incurred by vehicle manufacturers when vehicle technology is insufficient to be able to meet the required target.

# Response to the Government's proposed CO2 standard

## Overview

---

The AAA welcomes the opportunity to comment on the Government's proposed CO2 standard, which was released on 10 July 2017.

The AAA is concerned the proposed standard has been released ahead of a policy decision on Euro 6 and fuel quality standards. A CO2 standard necessitates the introduction of Euro 6 to manage the expected increase in diesel engine vehicles (plus other issues), which necessitates a change to fuel quality standards. More fuel-efficient cars entering the market may also necessitate a change to minimum octane ratings for petrol. The AAA has been calling for consultation which provides stakeholders with an opportunity to assess the three regulatory proposals as one consolidated package, before a Cabinet decision is made.

The AAA believes the Government's proposed CO2 standard will impact vehicle choice, increase costs and increase the age of the vehicle fleet. This is because the Government's proposal seeks to achieve one of the strongest targets in the world in the shortest of timeframes, with limited flexibility provisions.

The Government's proposal requires a 40 per cent reduction in CO2 emissions from new cars within 7 years (assuming legislation passes in 2018). This is compared to the US, which provided a 13-year lead time to reduce emissions by 43 per cent by 2025, as they passed necessary legislation in 2012. The Australian Government's proposal seeks to achieve a similar reduction to the US in almost half the time.

In the EU, CO2 targets were set at effectively business as usual projections. The Government's own commissioned analysis shows that in 2025, Australia's average CO2 emissions from the light vehicle fleet will be 148 g/km<sup>1</sup>, 29 per cent above the Government's 105 g/km target. Further analysis shows that not one of the current top 10 selling brands in Australia will be close to complying with the 105 g/km target by 2025 under business as usual assumptions. These business as usual projections take account of expected technological advancements and impacts on regulations in other regions.

It is clear the Government's proposed timeline requires significant reductions in CO2, well beyond what is required in the US and EU. This will require significant change to the composition of the light vehicle fleet, resulting in loss of vehicle choice and a loss of vehicle attributes valued by Australians today.

The Government's proposal is expected to further impact on vehicle choice and costs because it excludes flexibility provisions which are common in the US and EU standards. These provisions allow manufacturers in those regions to achieve targets in different ways while still maximising vehicle choice. For instance, the US and EU systems include different targets for passenger cars and light commercials, or in the case of the US, light trucks. In addition, the US and EU systems include trading and pooling arrangements and 'off-cycle' credits, such as improvements to air conditioning systems or electrical systems. The Government's proposal does not include any of these flexibility provisions.

The Government's proposal also includes heavy penalties for non-compliance. Given the strong target and tight timeframe, coupled with minimal flexibility provisions, the AAA is concerned that car makers will face penalties that will add thousands of dollars to the cost of new cars. These financial penalties were not considered in the Regulation Impact Statement released by the Government in December 2016 and are therefore not part of the cost benefit analysis. The Government must update its cost benefit analysis to include the impact of penalties that may be imposed on vehicle brands, and passed on to consumers. Furthermore, the Government should explain what revenue it expects to receive as a result of the CO2 standard and how this revenue would be spent.

The following sections provide further information on why a more robust consultation process is required, and why the AAA believes the Government's proposed standard will affect vehicle choice, raise costs, and increase the age of the vehicle fleet.

## Consultation process

---

The Government first established a Ministerial Forum and an interdepartmental working group in October 2015 to “...coordinate a whole-of-Australian-government approach to addressing vehicle emissions...”.<sup>2</sup> However, the Government has instead examined a CO2 standard, Euro 6, and new fuel quality standards as separate entities, ignoring their interrelationship and flow-on effects. The AAA has sought a commitment from the Government to extend the consultation process as a result, to allow all three issues to be considered as a consolidated package, consistent with the original intent of the Ministerial Forum.

The AAA has raised its concerns about the process on many occasions. On 13 February 2017, the AAA, along with the Australian Institute of Petroleum (AIP), and the Federal Chamber of Automotive Industries (FCAI), wrote to the Government outlining reasons why all three issues are interrelated and why they must be considered as a package. The joint letter stated that the “...consultation process needs to allow stakeholders to fully understand the complex interrelationship between the Government’s preferred approach to fuel standards, CO2 regulation and Euro 6.”

In a forum with Ministers and industry representatives on 17 February 2017, the AAA raised its concerns about the issues being considered as separate entities. The AAA called for further consultation for stakeholders to comment on a combined cost-benefit analysis which consolidates all three regulatory proposals – CO2, Euro 6, and fuel quality standards. This would allow for detailed consideration of the interrelated impacts and ensure all costs and benefits are considered, including flow-on impacts to existing vehicle owners, and what it may mean for specific communities, such as regional Australia. This request was re-iterated in the AAA submission to the Regulation Impact Statement (RIS) on CO2 and Euro 6, and fuel quality discussion paper.

The release of the Government’s proposed CO2 standard for light vehicles on Monday, 10 July 2017, was not the consultation process requested by the AAA in its joint letter to Ministers, in the stakeholder forum, or in meetings with the departmental officials and Ministers. It is important that stakeholders are offered an opportunity to comment on a combined cost-benefit analysis which brings together all three regulatory proposals – CO2, Euro 6, and fuel quality standards.

The interrelationship between the three regulatory issues is complex, but important. Petrol-engined vehicles with very low CO2 emissions are in the future likely to be designed to comply with Euro 6 noxious emissions requirements, and a lack of suitable fuel in Australia to support the Euro 6 technology may be a barrier to bringing these vehicles to Australia. This may limit the ability for car makers to bring vehicle technology to Australia that would deliver large CO2 abatement.

Furthermore, the use of gasoline direct injection and diesel engines to deliver CO2 abatement is likely to result in increased noxious emissions that would necessitate the introduction of Euro 6 regulations. For instance, analysis commissioned by ABMARC shows that in order to meet a 105 g/km target by 2025, diesel cars will need to make up 36 per cent of new passenger car sales, up from current 4.6 per cent in 2015. Diesel SUVs will need to make up 62 per cent of new car sales, up from 32 per cent in 2015. Without Euro 6, the expected dieselisation of the fleet will have a negative effect on air quality. However, Euro 6 technology is not compatible with much of Australia’s current fuel standards. Therefore, changes to fuel standards are required.

## Proposed CO2 target and timeline

---

Overall, the Government's proposal will require average CO2 emissions from the new light vehicle fleet to reduce from 182 g/km today to 105 g/km in 2025. This is one of the world's strongest CO2 targets for light vehicles, to be achieved in the shortest of timeframes.

For instance, the US provided a lead time of 13 years to reduce CO2 emissions by 43 per cent by 2025. Given legislation will not pass the Parliament until 2018 at the earliest, the Government's proposal will require a 40 per cent reduction in vehicle emissions within 7 years. The Government's proposal seeks to achieve a similar reduction to the US but in almost half the time.

Even if legislation passes Parliament in 2018, it is unlikely that CO2 emissions will reduce beyond business as usual projections until at least 2020. Therefore, assuming business as usual projections, the Government's proposal will require CO2 emissions to reduce from a projected 166 g/km in 2020<sup>3</sup> to 105g/km by 2025, which equates to a 9 per cent annual reduction.

According to the Government's CO2 RIS, a 105g/km target for the new light vehicle fleet effectively means that passenger cars would need to achieve an average emissions target of 95 g/km by 2025, and 149 g/km for light commercials.<sup>4</sup> Again, assuming business as usual assumptions until 2020, this means the Government's proposal would require passenger cars (and SUVs) to reduce average emissions by more than 10 per cent each year between 2020 and 2025, and 6 per cent for light commercials.

By way of comparison, the EU standard requires an annual reduction of just 3.6 per cent for passenger vehicles and 2.3 per cent for light commercials, and the US standard, which requires an average annual reduction of just 4 per cent.<sup>5</sup> South Korea's standard, which requires an average annual reduction of 5.8 per cent<sup>6</sup>, looks modest compared to the Government's proposal.

The lower annual reductions in the US and EU are because of longer lead times in these jurisdictions. In the US, legislation for their 2025 target passed in 2012, providing a lead time of some 13 years. The European target for 2021 also became law in 2012, providing a lead time of 9 years. And in both instances, there was an existing CO2 standard in operation. The Australian Government, on the other hand, is proposing to provide just 7 years notice (assuming legislation passes next year) to achieve one of the strongest targets in the world.

It should be noted that when the Climate Change Authority released its 2014 report, *Light vehicle emissions standards for Australia*, on which much of the Government's analysis is based, it recommended a CO2 standard with an eight-year compliance period, operating between 2018 and 2025. However, this was on the assumption that a policy decision would be taken in 2015. The report stated: "A start date of 2018 preceded by a policy decision and announcement in 2015 would provide a three-year lead time to the start of the first phase."<sup>7</sup>

Effectively, the Climate Change Authority proposal provided a 10-year lead time from the policy decision date to the target date. Given it is now mid-2017, and a policy decision is yet to be made, it is only reasonable the Government extend the compliance end date.

## Proposed flexibility provisions

---

The Government's proposal does not separate passenger cars and light commercial vehicles. This is unlike the US and the EU, which have separate targets for passenger cars and light commercials, or light trucks in the case of the US. This adds flexibility for car makers, allowing them to sell a wider range of vehicles.

The Government's proposal also does not include flexible arrangements such as trading and pooling provisions, provisions which are integral to standards in the US and EU. These provisions provide car makers with flexibility around how they meet their targets. For instance, a car maker recording emissions above their target may pool with another car maker whose emissions are below theirs.

In addition to these flexible provisions, the standards in the US and EU include 'off cycle' or 'eco-innovation' credits, which are not recognised in official testing procedures. For the EU, car makers can apply for eco-innovations up to 7 g/km. These innovations include the use of LED lamps, advanced alternators, and improved battery systems.<sup>8</sup>

The US system allows car makers to claim credits of up to 18.8 grams/mile for passenger cars and 24.4 grams/mile for light trucks for improving air conditioning efficiencies and reduction in leakage.<sup>9</sup> In other words, in 2025, car makers can claim up to 13 per cent of their emissions from air conditioning credits for passenger cars, and 12 per cent for light trucks.

The Government's proposal includes a credit transfer system and credits for the supply of ultra-low CO2 emitting vehicles. However, it does not include pooling, trading, or off cycle credits, all of which are fundamental to the operation of CO2 standards in the US and EU.

## Proposed penalty system

---

The Government's proposal would implement one of the world's harshest penalty systems.

The proposal would fine car makers \$100 for each g/km debit not offset. The EU system will move to a more stringent penalty system from 2019, however the first CO2 standard introduced in the EU had a penalty system based on a sliding scale. Car makers faced fines of €5 for the first gram of exceedance, €15 for the second gram, €25 for the third gram and €95 for every subsequent gram exceedance.<sup>10</sup>

In the US, the car makers can be fined \$5.50USD for each tenth of a mpg that its average fuel economy falls short of the standard.<sup>11</sup> The AAA estimates that this converts to approximately \$30USD for each g/km.

The impact on the cost of new cars as a result of the Government's proposed penalty system is expected to be significant. The Government's own figures estimate the cost of vehicles increasing by \$1,922 for passenger cars and \$3,120 for light commercials, due to increased technology and administrative costs.<sup>12</sup> However, the industry believes the additional financial penalties imposed by the proposed standard would escalate the cost of light commercials and SUVs, potentially adding several thousand dollars in emission "penalties" to the current price of an average one tonne light commercial or medium-sized SUV.

## Section Two

# Consequence of the Government's proposal

### Reduced vehicle choice

Given the steep annual CO<sub>2</sub> reductions, together with limited flexibility arrangements, and significant penalties for non-compliance, the Government's proposal is likely to have a substantial impact on the composition of the Australian light vehicle fleet. This means that vehicle choice may be diminished, or valued attributes like towing capacity and boot space may be restricted. The loss of choice and attributes raises potential utility costs, which need to be factored into the cost benefit analysis.

The reasons why the AAA believes the Government's proposal will impact on the composition of the Australian light vehicle fleet is best explained by looking at the current fleet composition and where it needs to be by 2025 in order to meet the 105 g/km target.

Firstly, research commissioned by the Government shows there were only 18 vehicles available in Australia in 2015 that fall below a limit value curve for a 105 g/km target, highlighted in the graph below. The cars that fall below the limit value curve include variants of Jaguar, Audi, Porsche, BMW and Mercedes-Benz vehicles, with their average cost being more than \$120,000. It should be noted that the Toyota Prius does not fall under the limit curve of a 105 g/km target. Nor do any of the top 20 selling vehicles.

Secondly, figures from the National Transport Commission show that average emissions intensity of cars from the micro segment (for example, Mitsubishi Mirage, Nissan Micra, Holden Barina), was 127g/km in 2016. Therefore, even if every Australian purchased the smallest cars in the market in 2016, Australia would not have met a 105g/km target. In fact, given the degree to which the target would have been exceeded, financial penalties would have applied. This again demonstrates the degree of change required in the Australian light vehicle fleet to meet a 105 g/km target by 2025.

These two examples show how far vehicle emissions would need to reduce to meet a 105 g/km target. Further research commissioned by the Government shows how far away the fleet is expected to be from a 105 g/km target in 2025 under business as usual assumptions, which takes into consideration new technologies. The graph on the following page shows that not one of the top 10 selling manufacturers would be close to complying with a 105g/km target in 2025. While the reason for a standard is to reduce emissions beyond business as usual, the graph illustrates just how far away Australia's top selling manufacturers are expected to be from a 105g/km target in 2025.

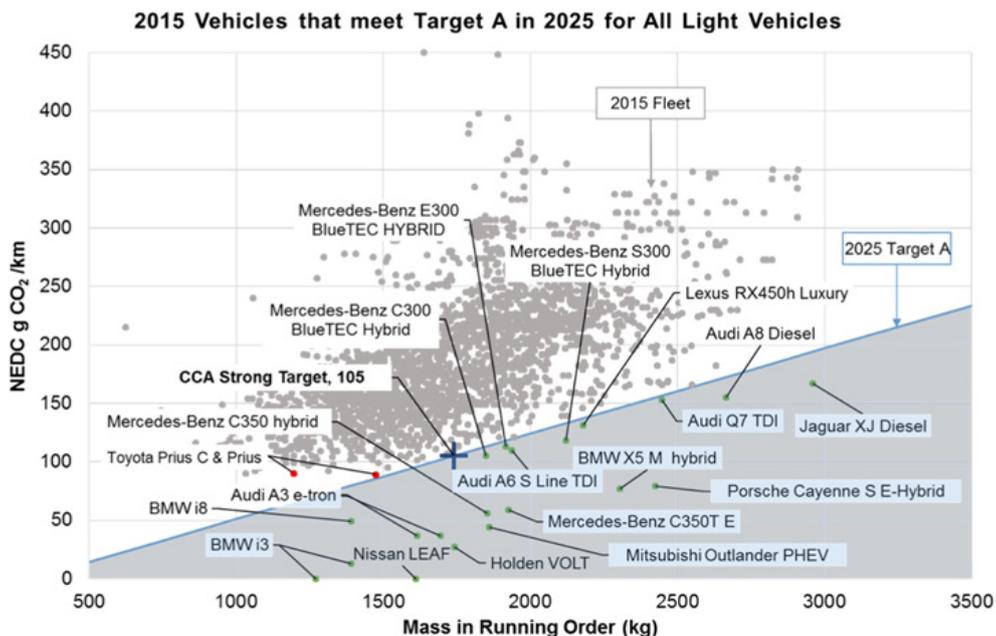
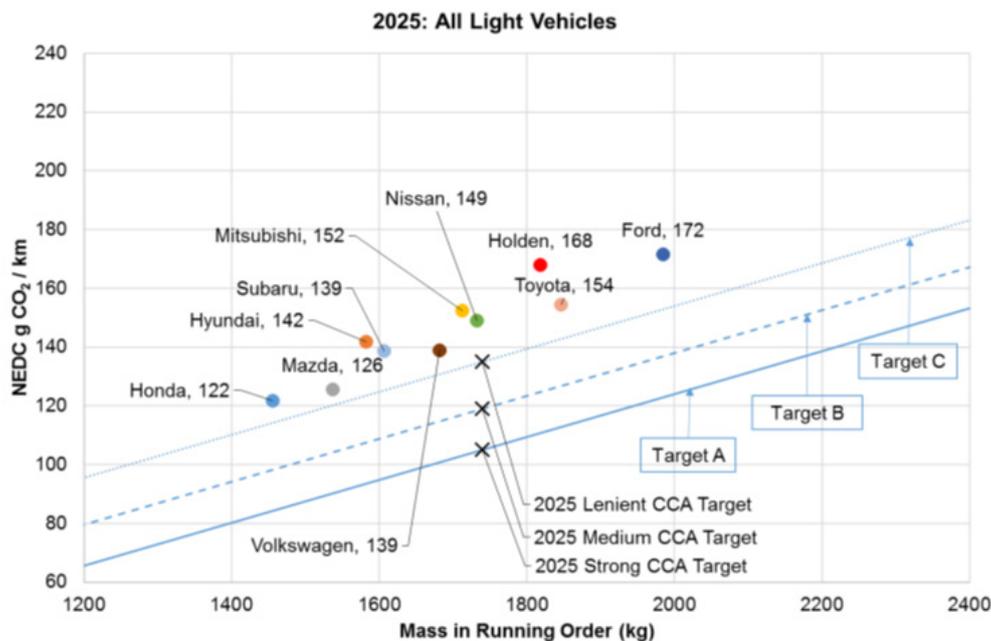


Chart 63 – 2015 Vehicles that already satisfy the 2025 Target A

Source: ABMARC, *Analysis of the Australian 2015 new light vehicle fleet and review of technology to improve light vehicle efficiency, 2016, p.96*



Source: ABMARC, Analysis of the Australian 2015 new light vehicle fleet and review of technology to improve light vehicle efficiency, 2016, p.81

By analysing the current composition of the light vehicle fleet and considering business as usual projections, which takes into consideration new technologies, it becomes clear that achieving a 105 g/km target by 2025 will require significant change to the fleet. Car makers will take different approaches, but it is highly likely they would need to reduce engine capacity, change the proportion of large and small vehicles on sale, or pay significant fines.

The required change in the composition of the light vehicle fleet to meet the Government’s proposed target is not in line with current consumer preferences. The current light vehicle fleet composition reflects Australia’s geography, lifestyle, and road safety profile. Australians prefer larger cars, highlighted by the fact that the Toyota Hilux was Australia’s most popular selling new vehicle in 2016.<sup>13</sup> In 2016, SUVs and light commercials made up 57 percent of Australia’s new cars sales, up from 41 percent in 2011.

Restricting choice and removing features valued by customers today – such as carrying and towing capacity, and vehicle performance – results in a utility cost. The AAA has previously quoted from a report by the Centre of International Economics before; this remains relevant to the current proposal:

*...if emission standards impose fuel savings on drivers - that is, the standards force drivers to purchase efficient vehicles they would not otherwise buy - then we cannot simply assume the standards create straight (net) benefits. While the standards create fuel savings, they also impose opportunity costs on drivers, such as loss of utility, by forcing them to switch to vehicles with characteristics that are not necessarily preferred.<sup>14</sup>*

The Government acknowledged the potential for a CO2 standard to limit vehicle choice in its CO2 RIS, but does not quantify it in the estimates of costs to consumers, but includes a sensitivity analysis with a note: Possible utility losses to new car buyers form one of the most uncertain parts of these BCA results—with such losses potentially, under certain conditions, being able to negate a large part of the estimated net benefits. Given the Government’s proposal would require significant reductions in CO2 in such a short timeframe, without common flexibility provisions, the composition of the Australian light vehicle fleet will need to change and there is a high probability that features valued by consumers today will be lost. This could result in motorists retaining their existing vehicles for longer which would have negative effects on emissions and road safety.

## Increase vehicle cost

---

The Government's CO2 RIS states that a 105 g/km target will add over \$3,000 to the cost of a new vehicle.<sup>15</sup> However, the AAA believes these costs are a conservative estimate. The estimate essentially depends on whether the cost of developing new vehicle technology to meet standards is additive or not additive, i.e. can be factored into business as usual costs or is added to the final vehicle cost. The Centre of International Economics noted that costs could be up to \$4,863.<sup>16</sup>

The costs mentioned above relate mainly to technology costs. However, the potential penalty costs for non-compliance was not considered in the Government's CO2 RIS. Given the steep cuts that are required in the Government's proposal, without common flexibility provisions, the AAA is concerned that technological and fleet mix changes may not be sufficient to comply with the standard.

These additional penalty costs were not factored into the Government CO2 RIS and the cost benefit analysis. If the Government believes no financial penalties will apply, then it needs to confirm that it will not receive any revenue as a result of the standard. If any revenue is collected from non-compliance, it should be re-invested in emissions reduction initiatives, potentially real-world driving emissions tests and eco-driving.

## Increase in fleet age

---

The effect of more expensive cars and reduced features and choice may result in Australians staying in their existing vehicles for longer than what they would have under business as usual. This has far reaching implications, not just for reducing emissions, but for vehicle safety.

The current average age of the light vehicle fleet is 10.1 years.<sup>17</sup> Previous Government policies have tended to support a reduction in the fleet age. The Government's proposal, on the other hand, may have the opposite effect. The AAA will not support a policy that could lead to an increase in the average age of the vehicle fleet as this would have negative consequences for road safety.

# Other issues

## Limit value curve

---

A major omission in the Government's proposal is the lack of a proposed limit value curve. While the paper released by the Government on 10 July 2017 stated that the standard would be applied through a limit value curve, the preferred curve was not included.

The limit value curve is integral to the operation of the standard, as the "target" is not specified in the regulation which establishes the standard. The gradient of the limit curve can have a significant impact on the outcomes of the standard. For instance, if the gradient of the limit value curve is steep, it is likely to put more pressure on manufacturers of predominantly smaller cars to meet the standard. If the curve is flatter, it is likely to put more pressure on manufacturers of larger cars. The AAA has assumed that the Government would use the relevant limit value curve developed by ABMARC in its commissioned research. However, the Government has not detailed a proposed limit value curve. The AAA believes that further consultation must occur on the proposed limit curve.

## Electric vehicles

---

There is a general acceptance that electric vehicle sales would need to increase substantially to meet the Government's proposed 105 g/km target. ABMARC modelling suggests electric vehicles will need to make up 9 per cent of the fleet by 2025.<sup>18</sup> This means that around 112,000 electric vehicles will need to be sold in 2025, up from 219 sold in 2016.<sup>19</sup> Yet, beyond small credit incentives in the proposal, the Government has not made any significant announcement around how to incentivise and support the uptake of electric vehicles in Australia. The Government must be able to demonstrate how it expects to achieve a significant uptake in electric vehicles, as experience in Europe indicates that uptake of electric vehicles is extremely sensitive to financial incentives.

Notwithstanding the enormous challenge in achieving the required uptake in electric vehicles, the AAA questions whether the Government has considered the net CO<sub>2</sub> benefit of electric vehicles, given Australia's current energy mix. Analysis of the government's Green Vehicle Guide shows that fuel lifecycle of a Tesla electric vehicle ranges from 174 g/km to 212 g/km, essentially equalling the average tailpipe emissions from the current vehicle fleet. If Australia's energy mix remains similar to what it is today, the uptake of electric cars may not have a major impact on reducing overall CO<sub>2</sub> emissions. Electric cars have the potential to reduce fuel costs for motorists, and the AAA supports the uptake of electric vehicles, however the Government must be able to demonstrate the net CO<sub>2</sub> benefit from the uptake of electric cars in its analysis.

## Fuel savings

---

The expected fuel savings as a result of a CO2 standard are based on laboratory test results, which are not a good representation of how vehicles perform on the road. This is because vehicle technologies and strategies are optimised to perform in a laboratory setting and not in the real world.

The AAA real-world emissions test program of 30 vehicles has found that real-world fuel use and greenhouse gas emissions are an average of 22 per cent higher than the mandatory laboratory results.

The results from the AAA testing program are consistent with other analysis around the world on the divergence between laboratory testing and real-world results. The International Council on Clean Transportation (ICCT) has found the gap between real world and official CO2 emissions in the EU is now 40 per cent, stating "less than half of the on-paper CO2 emission reductions in recent years translate into real world reductions." It also states that "the divergence translates into increase fuel costs on the order of (EU) \$450 per year."<sup>20</sup> Even under the new Worldwide harmonised Light vehicles Test Procedure (WLTP), the ICCT predicts the difference between real-world and laboratory will be 31 per cent in 2025.<sup>21</sup>

Furthermore, the US Environment Protection Agency (EPA) publishes a report which estimates real-world CO2 emissions and fuel economy of cars sold in the US each year. The report states that the difference between real-world and lab results on CO2 values is on average 25 per cent and 20 per cent for fuel economy values.<sup>22</sup>

It is important to consider the difference between real-world and laboratory testing results when estimating expected fuel savings as a result of a CO2 standard.

It is also important to consider the type of fuel to be used and the cost of the fuel. For example, petrol-engine vehicles with very low CO2 emissions are likely to require higher octane (95RON) fuel, which will be required to obtain the greatest efficiency from these engines. Whilst these vehicles may use fewer litres per 100km, the cost per litre will be higher than regular unleaded (91RON) petrol. It is unclear whether the Government's estimated fuel savings have considered this.

## Comparison of vehicles from other countries

---

The CO2 RIS on page 24 compares 12 Australian vehicle models with equivalent models in the UK. Overall, the table shows that Australian vehicle models emit 27 per cent more CO2 g/km than their equivalent counterparts. The factors contributing to this difference could be due to the fact that 9 of the UK models are manual transmissions, compared to only 4 Australian variants. The UK variants appear to be mostly 2WD, while some of the Australian variants are 4WD, and some of the engine sizes in the UK variants are smaller than the Australian ones.

If the Government implements its announcement of February 2016 to allow Australians to import new vehicles from the UK (and Japan), Australians will be able to purchase these cars listed in the Government's CO2 RIS. As the AAA said in its submission to the CO2 RIS, allowing Australians to import new cars will deliver increased competition and put further downward pressure on vehicle costs, delivering environmental and safety benefits. Given Government Ministers refer to the lower CO2 of vehicle emissions in the UK compared to Australia, the AAA again urges the Government to bring forward legislation that allows consumers to import new vehicles.

Further, low CO2 emitting vehicles are already available on the Australian market. However, Australians do not purchase them in significant numbers. According to the National Transport Commission, if Australians had purchased the most efficient models on the market, Australia's national average CO2 emissions intensity for the light vehicle fleet would have been 75g/km.<sup>23</sup> Therefore, the availability of more fuel-efficient vehicles, i.e. those listed on page 24 of the CO2 RIS, does not necessarily mean that vehicle emissions will automatically reduce. This suggests that other factors such as vehicle characteristics and/or vehicle price are important consideration to consumers when they are purchasing new vehicles.

# AAA position going forward

---

As stated above and in the AAA submission to the CO2 RIS, the AAA is committed to reducing the environmental impact of motoring and supports a CO2 standard for light vehicles which is appropriate for Australian conditions and is introduced over a reasonable timeframe, and does not unduly restrict vehicle choice and increase costs to the consumer.

Given the Government's current proposal is expected to impact substantially on the cost of new cars and vehicle choice, and potentially vehicle safety, the AAA calls on the Government revise the current proposal. The AAA is committed to working with the Government to develop a more reasonable approach to CO2 standards that takes into account vehicle and fuel standards, and balances the need to reduce emissions while not unduly impacting on vehicle choice and driving up the cost of new cars.

# Endnotes

- <sup>1</sup> ABMARC, Analysis of the Australian 2015 new light vehicle fleet and review of technology to improve light vehicle efficiency, 2016. See page 74
- <sup>2</sup> Joint Media Release, The Hon. Paul Fletcher MP, Minister for Urban Infrastructure, The Hon. Greg Hunt MP, Minister for Environment, the Hon. Josh Frydenberg MP, Minister for Resources, Energy and Northern Australia, Turnbull Government to review approach to vehicle emissions, 31 October 2015.
- <sup>3</sup> ABMARC, Analysis of the Australian 2015 new light vehicle fleet and review of technology to improve light vehicle efficiency, 2016. See page 74.
- <sup>4</sup> Australian Government, Draft Regulation Impact Statement, Improving the efficiency of new light vehicles, 2016. See page 32.
- <sup>5</sup> Australian Government, Draft Regulation Impact Statement, Improving the efficiency of new light vehicles, 2016. See page 20.
- <sup>6</sup> Australian Government, Draft Regulation Impact Statement, Improving the efficiency of new light vehicles, 2016. See page 20.
- <sup>7</sup> Climate Change Authority, Light vehicle emissions standards for Australia, 2014. p.53
- <sup>8</sup> Climate Change Authority, Light vehicle emissions standards for Australia, 2014. See page 69
- <sup>9</sup> US Environmental Protection Agency & Department of Transportation, 2017 and later model year light-duty vehicle greenhouse gas emissions and corporate average fuel economy standards, Final Rule. See pages 6 & 184.
- <sup>10</sup> ABMARC, Analysis of the Australian 2015 new light vehicle fleet and review of technology to improve light vehicle efficiency, 2016. See page 25.
- <sup>11</sup> US Environmental Protection Agency & Department of Transportation, 2017 and later model year light-duty vehicle greenhouse gas emissions and corporate average fuel economy standards, Final Rule. See page 49.
- <sup>12</sup> Australian Government, Draft Regulation Impact Statement, Improving the efficiency of new light vehicles, 2016. See page 96.
- <sup>13</sup> National Transport Commission, Carbon dioxide emissions intensity for new Australian light vehicles 2016, 2017. See page 44.
- <sup>14</sup> The Centre for International Economics, Reducing greenhouse gas emissions from light vehicles, 2016. p.27.
- <sup>15</sup> Australian Government, Draft Regulation Impact Statement, Improving the efficiency of new light vehicles, 2016. See page 96.
- <sup>16</sup> The Centre for International Economics, Reducing greenhouse gas emissions from light vehicles, 2016
- <sup>17</sup> Australian Bureau of Statistics, 9309.0 – Motor Vehicle Census, Australia, 31 January 2016.
- <sup>18</sup> ABMARC, Analysis of the Australian 2015 new light vehicle fleet and review of technology to improve light vehicle efficiency, 2016. See page 7.
- <sup>19</sup> VFACTS, National Report, New Vehicle Sales December 2016
- <sup>20</sup> International Council on Clean Transportation, From Laboratory to Road: A 2015 update of official and ‘real world’ fuel consumption and CO2 values for passenger cars in Europe, pp. ii-iii.
- <sup>21</sup> International Council on Clean Transportation, From Laboratory to Road: A 2015 update of official and ‘real world’ fuel consumption and CO2 values for passenger cars in Europe. See page iii.
- <sup>22</sup> Environmental Protection Agency, Light-duty automotive technology, carbon dioxide emissions, and fuel economy trends: 1975 through 2016. See page 2.
- <sup>23</sup> National Transport Commission, Carbon dioxide emissions intensity for new Australian light vehicles 2016, 2017. See page 2.

**Mailing Address:**  
GPO Box 1555  
Canberra ACT 2601

**P** 02 6247 7311  
**T** @aaacomms  
**W** [www.aaa.asn.au](http://www.aaa.asn.au)

**Address:**  
103 Northbourne Ave  
Canberra ACT 2601

