Key Recommendations

- Immediately introduce strong vehicle fuel efficiency (CO₂) standards to start in 2017 that bring Australian standards into line with current European Union standards by 2020, and a further phased approach to reach the EU’s 2021 standard by 2023.
- Align with Euro 6 noxious emissions standard and Euro VI noxious emissions standard for heavy vehicles.
- Include a review mechanism to ensure Australia’s standards keep up with international standards and improvements from new technologies.
- Any Regulatory Impact Statement (RIS) that is conducted should adequately consider the broader benefits of improving fuel efficiency CO₂ standards for light vehicles including carbon emissions reductions, health, fuel security and energy productivity. It should also consider a range of potential 2020 and 2023 targets being pursued in leading markets such as the EU. Similarly, any RIS conducted on noxious emissions standards should consider the broad benefits of improving standards including health and air quality.
- Reform the Fuel Tax Credit Scheme to remove incentives for inefficient vehicle use, with a cap of $20,000 per claimant.
- Review the luxury car tax and consider application of different thresholds based on CO₂ emissions to encourage consumers to purchase more efficient vehicles.
- Maintain and strengthen Australian Renewable Energy Agency (ARENA) and the Clean Energy Finance Corporation (CEF) to allow investment support for electric vehicle infrastructure and other innovative transport energy solutions. This includes restoring ARENA’s grant making function and original funding.
- Support accelerated uptake of Electric Vehicles (EVs) including:
  a) In 2017, set a target for 50 per cent of all new car sales in Australia to be EVs by 2026.
  b) In 2017, introduce an Australian Electric Vehicle Strategy that should include:
     - tax rebates and/or other preferential tax treatments that result in low cost or at a minimum comparative price equalisation for EVs compared to similar conventional vehicles;
     - mechanisms for fleet purchasers to bulk purchase EVs to increase government and corporate uptake;
     - a plan to coordinate efforts with State Governments, Councils, and the private sector to roll out infrastructure charge points in high traffic areas that are accessible to all, such as public transport park and rides, car parks, shopping centres, playgrounds and sporting venues;
     - low cost financial support to roll out infrastructure such as a loan pay back scheme for SMEs, extend the mandate of CEF and use of Green bonds;
     - a plan to support EV charge points in homes, including regulating connection fees, time of day rates, and requiring landlords to provide permission to a lessee to be able to install plug-in or EV chargers (unless special situation) where the lessee must pay for the charge points and their maintenance;
     - acceleration of work being undertaken by Standards Australia to set standards to harmonise EV plugs and billing methods; and
     - resourcing for a promotion and education campaign to build confidence in the EV market.
Background

The Australian Conservation Foundation (ACF) is pleased to have the opportunity to provide a submission to the Australian Government’s Ministerial Forum on Vehicle Emissions.

ACF is strongly supportive of the establishment of mandatory fuel efficiency (CO₂) vehicle emissions standards and complementary policies and measures to reduce carbon pollution from Australia’s transport sector. In addition, ACF supports aggressive measures to reduce noxious pollutants from both light and heavy vehicles including alignment with Euro 6 emissions standards for light vehicles and Euro VI emissions standards for heavy vehicles.

These two types of standards should be addressed together if possible. Otherwise, a CO₂ standard could result in a shift to diesel passenger vehicles with negative impacts to urban air quality. Vehicle emissions standards offer a significant opportunity for Australia to reduce greenhouse pollution, improve the quality of our air particularly in urban environments, reduce dependency on imported fossil fuels, and offer savings for vehicle owners.

*Global warming requires urgent action and strong standards*

The Paris Climate Agreement set the world on a path to keep global warming to less than 2°C and to pursue efforts to limit the increase to 1.5°C. It also set up a long term goal of achieving net zero carbon pollution within the second half of the century with an earlier goal to achieve global peaking of greenhouse gas emissions as soon as possible.

Australia is currently out of sync with these goals. The government’s 26 to 28 per cent carbon pollution reduction target based on 2005 levels by 2030 is in line with 3°C to 4°C of warming.¹ Much stronger targets are needed to drive the reductions that are needed to keep global warming below 1.5°C. ACF recommends emissions reduction targets of at least:

- 25 per cent on 2000 levels by 2020,
- 40-60 per cent by 2025,
- 60-80 per cent by 2030, and
- Zero net carbon emissions by 2040-2050.

This target range is in line with a 75 per cent chance of avoiding 2°C of global warming, and a 50 per cent chance of avoiding 1.5°C of warming.²

In addition, the most recent quarterly report of Australia’s National Greenhouse Gas Inventory showed that Australia’s carbon pollution is moving in the wrong direction—carbon emissions are going up. The government’s Emissions Reduction Fund has not resulted in an overall reduction to Australia’s carbon emissions. Much more needs to be done.

Australia’s increasing carbon pollution is occurring alongside growing indications that global warming is reaching emergency levels.³ This is been evidenced through record-breaking heat, some of the worst coal bleaching in history, dangerous sea level rise, a growing reduction in Antarctic icesheets and a host of related indicators.

The transport sector’s emissions accounted for 17 per cent of Australia’s national inventory and are estimated to have increased by 0.6 per cent over the year to September 2015.⁴ Passenger and light commercial vehicles

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contribute around 62 percent of the transport sector’s emissions and are therefore an important focus for emissions reduction.⁵

Avoid delay in setting national light vehicle fuel efficiency (CO₂) standard and improved noxious emissions standards

Australia should not delay the process of implementing mandatory light vehicle fuel efficiency standards or improving noxious emissions standards.

Although car manufacturing is set to cease in Australia 2017⁶, there will be a hangover of locally produced vehicles. A phased approach combined with fleet averaging will allow for them to be sold despite the new standard. Fleet averaging will also provide sufficient protection for consumer choice.

Vehicles emissions reductions need to be part of a clean energy transformation

Australia’s vehicle emissions standards need to sit squarely within efforts to transform Australia’s energy sector and achieve net zero carbon pollution by no later than 2050 (see recommended targets above). Cleaning up Australia’s electricity grid (i.e., removing the carbon emissions) with a shift from fossil fuel generation to renewable energy is a critical part of this process and directly related to our efforts to reduce emissions from our transport sector.

ACF is calling on the government to set a target for clean renewable energy to power 100 per cent of Australia’s electricity by 2035, and 100 per cent of all Australia’s energy (electricity, transport and industrial processes) by 2050. Clean electricity is a prerequisite to mass electrification of our transport sector and needs to go hand in hand with efforts to reduce vehicle emissions. This will be essential if we are to cut emissions from transport in line with climate targets to achieve zero net emissions.

Set a target to at least double Australia’s Energy Productivity by 2030

Energy efficiency holds enormous potential for Australia. Australia can achieve a doubling of our energy productivity by 2030—and it is possible alongside strong economic growth.⁷

The National Energy Productivity Plan’s objective of a 40 per cent improvement in energy productivity by 2030 should be increased to ensure that Australia benefits from the many gains that are available through aggressively improving our energy productivity, including those available through ambitious vehicle emissions standards.

A strong energy productivity target will help the government to drive energy efficiency across the transport, residential, commercial, and industrial sectors and support regular tightening of standards and efficiency upgrades.

Protecting Australia’s health

An important reason for taking strong action to reduce vehicle emissions is that they contain a range of health-impacting pollutants such as carbon monoxide, nitrogen oxides, particulate matter, volatile organic compounds, and benzene. These harmful substances impact our air quality and our health.

As noted in Environmental Justice Australia’s report, Clearing the air: Why Australia urgently needs effective air pollution laws, the health impacts of air pollution include impaired lung growth in children; increased asthma, coughs and bronchitis; impairment of brain development in babies and small children; low birth

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⁶ The Associated Press, Toyota will end car manufacturing in Australia by 2017, the closure will spell the end of automotive production in the country, February 10, 2014.
weight and adverse birth outcomes; heat attack and stroke; upper respiratory tract irritation and infection; and worsening of existing health problems in people with chronic disease.  

Environmental Justice Australia has captured some of the costs associated with air pollution. In 2000, the total economic cost of motor vehicle air pollution-related mortality and morbidity across Australia was approximately $2.4 billion. In 2005, the NSW Government estimated that air pollution in greater metropolitan Sydney cost between $1.01 billion and $8.4 billion every year in 2003 dollars (approximately $1.28 billion to $10.67 billion in today’s dollars).  

Cost of reducing emissions

Fuel efficiency standards offer a low cost means of reducing emissions. ClimateWorks Australia assessed a range of options for achieving low carbon growth in their Low Carbon Growth Plan for Australia and found that “reducing emissions from cars and light commercial vehicles through improved fuel efficiency presents the lowest cost opportunity to reduce emissions across our economy and could deliver reductions of 4Mt CO\textsubscript{2}e in 2020 and 8.7 Mt CO\textsubscript{2}e in 2024, equivalent to taking 2.2 million cars off the road in 2024.”  

In addition, greater vehicle fuel efficiency results in lower fuel costs for vehicle owners, which more than counters the higher cost of low emission vehicles. ClimateWorks has estimated that although greater fuel efficiency comes with higher up-front costs when purchasing vehicles (an estimate of $2500 per vehicle for a 50 percent efficiency gain in 2024), average car owners would recover these additional costs within 3 years through fuel savings. Based on ClimateWorks’ analysis, this results in net annual savings of $352 for average drivers over a five year period, which is the average length of vehicle ownership.  

The Climate Change Authority has similarly found that: “Implementation of a standard to reduce carbon dioxide emissions to 105g/km is estimated to increase the average cost of a new car in 2025 by about $1500. This, however, would be offset several times by fuel savings of about $8500 over the life of the vehicle, leaving motorists better off.”  

Alignment with other developed countries makes sense

Australia’s vehicle emissions standards currently lag behind most other developed countries. Australia’s standards have been in place since the 1970s and improved somewhat over time, but they have not kept up with current technologies or with standards in other parts of the world. Importantly, Australia does not have a carbon emissions standard despite the fact that three-quarters of the light vehicles sold globally are subject to a carbon emissions standard. In the absence of a similar standard, Australia has allowed itself to be used as a dumping ground for foreign-made vehicles that are too inefficient for other markets.  

About 1 million new light vehicles are purchased in Australia each year (1.1 million in 2014) and about 4 percent of Australia’s 16 million vehicle fleet is retired each year. This provides a significant opportunity to start converting our vehicles to a higher standard.  

With Australia’s vehicle manufacturing ending in 2017, all of the demand for new vehicles will be met with imports. There is no further need to protect domestic manufacturers or provide them adjustment periods.  

Reducing energy security risk

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8 Environmental Justice Australia, Clearing the air: why Australia urgently needs effective national air pollution laws.  
9 Environmental Justice Australia, Clearing the air: why Australia urgently needs effective national air pollution laws.  
Australia has limited crude oil available domestically and as a result is increasingly reliant upon imports for transport fuels.\textsuperscript{16} That puts Australia at the mercy of fuel imports and increases our energy security risk. Reducing this risk is in the national interest.

In summary, there is an extremely strong case for Australia to set vehicle carbon emissions standards that align with EU standards with a phase-in period to achieve alignment. Vehicle technologies that achieve this standard are already available.

**Vehicle Fuel Efficiency (CO\textsubscript{2}) Standards**

As noted above, there is a strong case for Australia to set vehicle carbon emissions standards that align with EU standards.

ACF recommends that the Government immediately introduce vehicle fuel efficiency standards to start in 2017 that bring Australian standards into line with current European Union standards by 2020, and a further phased approach to reach the EU’s 2021 standard by 2023.

Overall fuel efficiency (measured in grams of CO\textsubscript{2} emitted per kilometre) in Australia was 188 g/km in 2014 (an average of 177g/km for passenger vehicles and 235g/km for light commercial vehicles). The EU passenger vehicle fleet standard for 2015 is 130g/km.\textsuperscript{17} By 2021, the EU passenger car standard (phased in from 2020), will be a fleet average to be achieved by all new cars of 95g/km. The light commercial vehicle standard is 147 g/km of CO\textsubscript{2} for 2020.

The fact that vehicle manufacturing in Australia is expected to end in 2017, means lead time for introduction of vehicle emissions standards should not be required. Combined with a strategy to increase low and zero emission vehicles in Australia, rapid improvements in vehicle technology, and the fact that manufacturers are already preparing for stronger standards in the EU and USA, the higher EU standard as a fleet average with a phase in period should be fully achievable by 2023.

The Climate Change Authority (CCA) has done useful work on mandatory standards, which provides recommended standards for consideration. Under the CCA’s approach the first phase of the new standard would be introduced to take effect from 2018, based on the view that car manufacturing in Australia would end in 2018.\textsuperscript{18} Since it will be ceasing earlier, there is justification for moving the start of new standards up to 2017.\textsuperscript{19}

CCA’s proposed standards would progressively reduce carbon dioxide emissions from new light vehicles to 105g/km in 2025, almost half the level current at the time of their report, which was 192g/km.\textsuperscript{20} CCA aligned their proposed standard with the United States. This alignment has merit, but Australia can and should reach higher with a target that aims to meet the EU standard allowing for a reasonable catch up period.

ACF recommends that any Regulatory Impact Statement (RIS) undertaken should fully consider the broad benefits of improving fuel efficiency CO\textsubscript{2} standards for light vehicles. These include emissions reductions, health, fuel security and energy productivity. Any RIS conducted should also consider a range of potential 2020 and 2023 targets being pursued in leading markets such as the EU.

**Review of EU standards shows positive reductions and compliance results**

A 2014 review of EU standards found that the existing 2015 CO\textsubscript{2} standard for passenger cars led an emissions drop from 160g/km in 2006 to 132 g/km in 2012—a 17% reduction and about twice the reduction that


\textsuperscript{19} The Associated Press, Toyota will end car manufacturing in Australia by 2017, the closure will spell the end of automotive production in the country, February 10, 2014.

occurred before mandatory emissions targets. The 2015 target of 130g/km was close to being reached two years in advance and most manufacturers had met their individual 2015 target at the time of the review. The reduction required from 2015 to 2020 (fully phased in by 2021) is 27 percent for all manufacturers. Some manufacturers were also well on their way to meeting their 2020 target. In addition, it was found that a number of commercially available vehicle models able to meet the 2020 CO₂ emissions target were already available as early as 2014.

Similarly, the 2017 standard for light commercial vehicles was close to being met several years in advance. Most key manufacturers were already ‘overcomplying’ with their 2017 target and in line to meet their 2020 targets.²¹

This review makes it clear that technologies are available to meet higher standards, and manufacturers are already planning for future standards. Australia does not need to delay standards to allow for this to occur.

**Fleet average standard**

ACF supports a fleet average standard (i.e., legally binding efficiency standards that a manufacturer or importer of vehicles is required to meet as the average across its fleet of passenger or light commercial vehicles). Fleet averaging and a phased approach to increasing standards (as outlined above to align with EU standards) would allow for immediate implementation of a CO₂ standard.

Fleet averaging gives importers the ability to shift away from higher emission stock without being penalised due to their current holdings and also allows for consumer choice when purchasing light vehicles. There should be incentives in place to encourage purchasing of low and zero emissions vehicles. The combination of fleet averaging and a phased approach to targets provides notice and a period for the adjustment to the higher standards to be made.

The CCA analysis resulted in a proposal that includes a phased approach, takes into account local manufacturing and allows for fleet averaging.²² Their work further validates these key elements as means to institute new and stricter standards.

**Include a review process**

A review process and timeframe are necessary to ensure that mandatory standards are periodically reviewed to ensure that Australia maintains best practice standards as technologies and standards in other parts of the world improve. By 2023, it is likely that the make-up of light vehicles in Australia and in the global marketplace will have shifted dramatically toward zero emission vehicles. As set out below, a target to encourage greater uptake of EVs would help drive this shift. If fleet averaging remains an option, then these vehicles will offer a much lower fleet average.

**Noxious emissions**

**Noxious emissions standards**

Australia’s noxious emissions standards are less stringent than those in comparable countries. For example, the Euro 6 standard or equivalent is currently in force in the EU, USA and Japan. It is reasonable for this standard to be adopted by Australia. In particular, the standard would make a 55 per cent improvement to oxides of nitrogen emissions from diesel. This improvement is worth pursuing.²³

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Similarly, the Euro VI standard for heavy vehicles which improve emission limits for oxides of nitrogen by up to 80% and emission limits for particulate matter by up to 66% compared to the current Euro V standard are significant and worthwhile improvements.

ACF recommends that Euro 6 noxious emissions standard and Euro VI standard for heavy vehicles be set for Australia. ACF also recommends that any Regulatory Impact Statement that is conducted adequately considers the broader benefits of improving noxious emission standards including health and air quality.

**Fuel quality standards**

New emissions standards (particularly Euro 6 noxious emissions standard) will likely need to be combined with changes to Australian fuel quality standards. These changes should be informed by the current review of the Fuel Quality Standards Act. As acknowledged in the Vehicle Emissions Discussions Paper (page 12), Australia meets international best practice for sulphur limits in diesel of 10ppm. Australia’s sulphur limits for petrol, however, are far from the 10ppm standard that has been adopted by most developed countries. Australia’s sulphur limits of 150ppm for regular unleaded petrol and 50ppm for premium unleaded petrol point to a significant difference between the two and between Australia and other developed countries. This difference needs to be addressed. It is unlikely that many consumers choosing to purchase regular petrol understand the sulphur implications of the choice and Australia is too far from international practice for these sulphur limits to be acceptable. The fact that New Zealand has a sulphur limit of 50ppm for all grades of petrol means Australia’s allowance of 150ppm for regular unleaded petrol points to poor regulatory settings more than technical ability to adjust. Development of fuel quality standards should not be cause for delay of a fuel efficiency CO₂ standard.

**Accelerated retirement of pre-1996 trucks**

According to the Truck Industry Council, the national truck fleet comprised 582,029 vehicles in January 2014 and the average age across all trucks is 13.84 years. In comparison, the UK average is 7.8 years and the USA is 6.7 years. Approximately 30 per cent of the trucks currently on Australia’s roads were first registered prior to 1996. These old trucks have a massive environmental cost. Just 1 truck built prior to the introduction of emissions standards in 1996 emits the equivalent in harmful particulate matter as does 60 trucks built after the introduction of Euro 4 emissions standards in 2007. Efforts to address vehicle emissions in Australia should include a plan for accelerated reduction in pre-1996 vehicles.

**Complementary measures**

**Support accelerated uptake of electric vehicles and battery storage**

Globally the transport sector is set to fundamentally change forever with the accelerated uptake of electric vehicles (EVs) along with the integration of ‘smart’ network-connected technologies in distributed generation and battery storage.

How Australia responds to this opportunity will depend on government, industry and consumer responses to both EVs and advances in, and roll out of, battery storage technologies.

In addition to ambitious vehicle emissions standards starting in 2017, ACF recommends a strong coordinated approach across government jurisdictions to drive an accelerated roll out of EVs. All levels of Government should be encouraged to support growth in consumer demand for EVs and this support should be coordinated through a COAG. This could include potentially harmonising State Government programs such as preferential registration fees or stamp duty for low and zero emission vehicles and conversion of Government fleets. The Australian Capital Territory model that bases the level of stamp duty on CO₂ output or the Queensland model where electric and hybrid vehicles have the lowest stamp duty provide good examples.

In general, more targeted taxes and charges that add a cost penalty to higher emission vehicles should be

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considered as complementary means of changing consumer demand. In addition, ACF agrees with the Federal Chamber of Automotive Industries, which “would like to see more government input to infrastructure and incentives designed to accelerate the uptake of alternative-fuel vehicles in Australia.”

Specifically, ACF recommends the following to support accelerated uptake of EVs:

c) In 2017, set a target for 50 per cent of all new car sales in Australia to be EVs by 2026.
d) In 2017, introduce an Australian Electric Vehicle Strategy that should include:

- tax rebates and/or other preferential tax treatments that result in low cost or at a minimum comparative price equalisation for EVs compared to similar conventional vehicles;
- mechanisms for fleet purchasers to bulk purchase EV’s to increase government and corporate uptake;
- a plan to coordinate efforts with State Governments, Councils, and the private sector to roll out infrastructure charge points in high traffic areas that are accessible to all, such as public transport park and rides, car parks, shopping centres, playgrounds and sporting venues;
- low cost financial support to roll out infrastructure such as a loan pay back scheme for SMEs, extend the mandate of Clean Energy Finance Corporation and use of Green bonds;
- a plan to support EV charge points in homes, including regulating connection fees, time of day rates, and requiring landlords to provide permission to a lessee to be able to install plug-in or EV chargers (unless special situation) where the lessee must pay for the charge points and their maintenance;
- acceleration of work being undertaken by Standards Australia to set standards to harmonise EVs plugs and billing methods; and
- resourcing for a promotion and education campaign to build confidence in the EV market.

**Finance mechanisms**

**Fuel Tax Credit**

ACF recommends that the Fuel Tax Credit Scheme be reformed, with a cap of $20,000 per claimant. In the 2015-16 federal budget, the notorious Fuel Tax Credits Scheme cost the taxpayer more than $6bn. About 40 per cent of the value of the credit scheme goes to the mining industry. For some large companies this is worth tens of millions of dollars.

Parties should commit to cap the Fuel Tax Credit Scheme at $20,000 per claimant, so that those businesses making small claims would remain unaffected, but the perverse incentive to maintain inefficient practices is removed for larger claimants. The cap should be phased in over a few years, starting at a cap of $80,000 in 2017-18, and stepping down by $20,000 a year until the final $20,000 cap is reached. This would save an estimated $15.4bn over the forward estimates.

**Luxury car tax**

ACF recommend that the Government review the luxury car tax and consider application of different thresholds based on CO\textsubscript{2} emissions to encourage consumers to purchase more efficient vehicles. This should

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be combined with Euro 6 noxious emission standards to ensure that any shift to diesel vehicles does not increase noxious emissions.

**Maintain and strengthen ARENA and the CEFC**

The Australian Renewable Energy Agency (ARENA) and the Clean Energy Finance Corporation (CEFC) have played an essential role in facilitating the development and commercialisation of renewable energy projects in Australia.

The CEFC mandate could be expanded to be more innovative and support a range of other projects including more community renewables, roll out of EV infrastructure and other technologies. ARENA’s ability to provide grant funding to early stage research and development of renewable technologies should be restored, and it is important that their original funding be maintained to provide resourcing for this critical part of the innovation chain.

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The ACF community speaks out for a healthy environment, Australia’s special places, climate action and for lasting social and economic change.

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