

Submission to Environment and Communications Legislation Committee

Inquiry into the Motor Vehicle Standards (Cheaper Transport) Bill 2014

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Committee Secretary
Senate Standing Committee on Environment and Communications
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Motor Vehicle Standards (Cheaper Transport) Bill 2014

Dear Ms McDonald

Thankyou for your request to respond to the Senate Committee's Inquiry into the Vehicle Standards (Cheaper Transport) Bill 2014. My interest in reducing greenhouse gas emissions from light vehicles, stems from the topic being addressed in my PhD: "*The Use of Economic Instruments in Managing the Environmental Externalities of Road Transport*".

It is important that the Senate Committee considers the recommendation for the Bill, which will address the following issues:

- Emissions from the transport sector is the second fastest growing source of greenhouse gas emissions and road transport emissions is the largest sub-sector (85 per cent);
- Australia remains the only OECD country without an official fuel efficiency target;
- In the G20 Brisbane Summit in 2014, the Australian government agreed to an Energy Efficiency Plan to prioritise improving vehicle emission standards, by introducing more stringent fuel-efficiency requirements for new vehicles.

Australia's average emissions intensity for new passenger vehicles of 182 g/km was **43 per cent higher** than the European average of 127 g/km in 2013 and well below other countries as shown in Table 1 of the attached Appendix.

Proposed CO2 emission standards

Senator Milne, introduced the Motor Vehicle Standards (Cheaper Transport) Bill in the Senate on 9 July 2014, proposing efficiency CO2 emission standards that will apply to average sales of vehicle's sold by manufacturers, importers or sellers of passenger and light commercial vehicles. The standards will "not commence until 2017, once Australia's automotive manufacturers have wound down their operations and will not impact on domestic employment." The standards will apply to the average of a seller's fleet of passenger or light commercial vehicles" if they sell more than 1,000 of their vehicles in a year. The standards will be phased in across several periods, from a nominated commencement date in 2017:

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- 130g/km for 2017 (70 per cent of vehicles), 2018 (80 per cent of vehicles), 2019 (90 per cent of vehicles) and 2020 (100 per cent of vehicles).
 - 95g/km for 2021 (80 percent of vehicles), 2022 (90 percent of vehicles) and 2023 (100 percent of vehicles)

The proposed Motor Vehicle Standards (Cheaper Transport) Bill 2014 is supported on the following grounds:

- The proposed standards will meet the international standards shown in Table 1 of the attached Appendix;
- Importers of new vehicles will be required to meet such standards;
- Considerable lead time will not be required when all new vehicles are imported;
- New vehicles imported into Australia are meeting such regulatory emission standards in their country of manufacture;
- The standards will restrict importers “dumping” high CO₂ emitting passenger and commercial vehicles that cannot be sold in other markets, as shown in Table 2 and Table 3 of the attached Appendix;
- The standards will reverse current car purchasing trends: declining sales in small vehicle and increasing sales in high emitting vehicles. Thus offsetting any technological improvements in energy efficiency and fuel economy benefits.¹
- The standards will address the low uptake of hybrid and electric vehicles;
- The standards will inform consumers as to what constitutes a “fuel efficient low CO₂ emitting vehicle”.

Recommendations made to Senate Committee on proposed Motor Vehicle Standards

The following recommendations are made to the Senate Committee, in order to assist the car industry to meet the proposed regulatory CO₂ emission standards and encourage consumers into choosing fuel efficient, low CO₂ emitting vehicles:

1. Standards for passenger vehicles and light commercial vehicles

The proposed regulation of CO₂ emission standards adopts EU regulatory emission standards. However EU’s average CO₂ emission target for 2021 of 95g/km only applies to passenger vehicles, with a separate target of 147g/km for light commercial vehicles by 2020, as shown in the attached Appendix. Thus making it difficult for importers to meet the proposed CO₂ emissions targets of 95g/km by 2021 for all net light vehicles sold in Australia.

In Australia, commercial vehicles account for 18 per cent of new vehicle sales, and have higher CO₂ emissions as shown in the attached Appendix. Consequently separate emission standards can be introduced for light commercial vehicles, which allows for more stringent CO₂ emission standards be applied to passenger vehicles.

¹ Fionn Rogan et al., “Impacts of an emission based private car taxation policy- first year ex-post analysis” (2011) 45 *Transportation Research Part A: Policy and Practice* 583

Most international CO₂ emission standards adopt separate standards for passenger vehicles and light commercial vehicles, as shown in Table 1 of the Appendix.

Recommendation 1.

- Apply the proposed regulatory CO₂ emission standards to passenger vehicles and introduce regulatory CO₂ emission standards for light commercial vehicles.

Further discussion on European emission standards for commercial vehicles is provided in the Appendix.

2. Super credits or other incentives to encourage innovation

To support innovation and alternative fuelled vehicles being imported into Australia, regulatory emission standards should provide for super credits or incentives to dealers of car manufacturers to encourage the technological development and sales of low emission vehicles.

It is important to encourage dealers of car manufacturers to bring to the market, vehicles with “best in the class” emissions. The National Transport Commission report in 2015, stated that had consumers purchased such vehicles, the national average carbon emissions intensity would have reduced to 95 g/km, a 50 per cent reduction.²

Recommendation 2.

Support innovation and the technological development of low emission vehicles by introducing Super Credits or other incentives.

3. Combine regulatory emission standards with economic instruments

Australia will need to reduce the average CO₂ emissions for new passenger vehicles by around 28 percent, (from an average CO₂ emissions of 182g/km in 2014 to the regulatory CO₂ emissions target of 130g/km) by 2020. This reduction in average emissions intensity for new passenger vehicles cannot be met by just introducing regulatory CO₂ emission standards for new light vehicles.

European Union Member States achieved an average emission for new passenger vehicles of 127g/km in 2013, earlier than the CO₂ emission target of 130g/km by 2015. The target was achieved by combining regulatory emission standards with additional economic instruments, such as reforming vehicle purchase taxes and the company car tax regime. The success of such reformed taxation policy instruments were analysed in the following publications:

² National Transport Commission, 2015, “Carbon Dioxide Emissions Intensity for New Australian Light Vehicles, 2014”.

- **Anna Mortimore 2014**, 'Reforming vehicle taxes on new car purchases can reduce road transport emissions - ex post evidence', in *Australian Tax Forum*, vol.29, Tax Institute, Australia.
- **Anna Mortimore 2011**, 'What now for environmental sustainability? Government fails to link the Australian car FBT concession to vehicle emissions', in *Australian Tax Forum*, vol.26, no.3, Taxation Institute of Australia, Australia.

The introduction of regulation CO2 emission standards together with economic instruments reduced United Kingdom's average CO2 emissions intensity from new passenger vehicles to 128 g/km in 2013 as shown in the following table. To achieve this standard requires a shift in car purchasing trends of new vehicles in the following CO2 emissions bands:

Table. Consumer's choice of vehicle by emission band in the UK compared to Australia in 2013

CO2 Band	United Kingdom %	Australia %	Difference %
0-75 g/km	0.3	0.1	-0.2
76 – 130 g/km	39.5	6.7	-32.8
131 – 200 g/km	52.9	51.4	-1.5
Over 200 g/km	7.3	41.7	34.4

Source: National Transport Commission, May 2014, "Carbon Dioxide Emissions from New Australian Vehicles 2013" Pages 1-66: 39.

The UK's average CO2 emissions intensity of new vehicles was 42 per cent lower than Australia's average emissions intensity of 182 g/km in 2013. Australian's apparent 'love of large cars' as shown in the above Table, (34.4% of vehicle sales over 200g/km compared to UK's 7.3%) was similar in the UK and other member states, before the introduction of such regulatory and economic instruments.

For instance, Ireland like Australia found smaller cars numbers declining compared to the growing trend in larger SUV vehicles in 2007. After reforming vehicle taxes at the time of purchase (stamp duty) on the basis of CO2 emissions, sales of high emitting new private vehicles (>170 – 225) shifted from 34 per cent in 2007 to 3 per cent in 2010, and sales of smaller vehicles (120 – 140g/km) increased from 23 per cent to 41 per cent³. In effect, car purchasing trends in Australia can also shift from high CO2 emitting vehicles to lower emitting vehicles, (like in the UK and Ireland) providing the appropriate economic instruments are applied.

³ Refer to further discussion on the effectiveness of reforming vehicle taxes in the article: A Mortimore, 2014, "Reforming vehicle taxes on new car purchases can reduce road transport emissions – ex post evidence" *Australian Tax Forum*, vol.26, no.3, Taxation Institute of Australia, Australia.

Recommendation 3.

Support importers of new light vehicles to meet the regulatory Motor Vehicle Standards proposed by the Bill, by introducing or reforming existing economic instruments that will encourage car-purchasing trends to lower CO2 emitting vehicles.

I trust that the submission will assist the Committee's inquiry on the proposed introduction of Motor Vehicle Standards.

Kind regards

Dr Mortimore

Appendix

1. International regulatory average CO2 emissions target for new vehicles
2. Manufacturers average CO2 emissions for new passenger vehicles in the EU compared to Australia
3. Separate regulatory CO2 emission standards for light commercial vehicles in the European Union
4. Separate average CO2 emission intensities for passenger vehicles and light commercial vehicles.

1. International regulatory emission targets

Well over 70 per cent of new vehicles sold in the world are subject to mandatory CO₂ emissions standards, and ambitious targets have been enacted or proposed as shown in the following table.

Table 1. International regulatory average CO₂ emission targets for new vehicles

Jurisdiction	Basis for standard	Target		Target		Targeted fleet
		CO ₂ g/km 2015	L/100km	CO ₂ g/km 2020	L/100km	
EU	CO ₂ emissions (GHG)	130g (achieved in 2013)	5.6L	95 (2021)	4.1L	Passenger and SUV's
*US	Fuel economy /GHG	175g (2016)	7.5L	111 (2025)		Passenger and Light trucks
*US California	Fuel economy/GHG	34.mpg 160g (2016)	6.9L			Passenger and Light trucks
South Korea (Republic)	Fuel economy/ GHG	140g	5.8L			Passenger and SUV's
China	Fuel economy	161	6.9L	117	5.0L	Passenger and SUV's
India (proposed)	GHG	130 (2016)	6.3L	113 (2021)	4.8L	Passenger and SUV's
*Canada	GHG	157 (2016)	6.3			Passenger and Light trucks
*Mexico	Fuel economy/ GHG	153 (2016)	6.5			Passenger and Light trucks

Regulatory emission standards prepared by Global Fuel Economy Initiative sighted in

<http://www.fiafoundation.org/our-work/global-fuel-economy-initiative>

US Standards: EPA and NHTSA standards between 2017-

2025, <http://www.epa.gov/otaq/climate/documents/420f12051.pdf>

2. Manufacturers average CO₂ emissions for new passenger vehicles in the EU compared to Australia

Car manufacturers will meet the average of CO₂ emission standards in the country of manufacture or in the country where the cars are imported, as shown in Table 2. The difference in the average CO₂ emissions intensity between EU and Australia is attributable to CO₂ emission standards and economic instruments being imposed in the EU and not in Australia.

This means there are no restrictions on the number of high CO₂ emitting vehicles sold in Australia, because importers of new vehicles are not required to meet any regulatory CO₂ emission standards. Nor is the 'polluter pays principle' imposed on consumers choosing to buy high CO₂ emitting vehicles.

Table 2.* Car manufacturers average CO2 emissions intensity of new vehicles sold in the European Union compared to Australia, 2013.

Make	Average vehicle CO2 emissions intensity (g/km)		
	European Union	Australia	Percentage difference (%)
Toyota	116	188	62
General Motors	136	205	51
Ford	122	189	55
Volkswagen	127	152	20
Nissan	131	194	48
Renault	110	185	68
Peugeot	115	167	45
All makes	127	182	43

- Source: National Transport Commission, 2015, "Carbon Dioxide Emissions Intensity for New Australian Light Vehicles 2014" The above table is an extract from Table 18.

3. Separate regulatory CO2 emission standards for light commercial vehicles in the European Union

The European Union have separate regulatory CO2 emission standards for light commercial vehicles, which account for 11 per cent of new vehicles. The European Commission introduced the following emission standards for commercial vehicles.

- 175g/km by 2017; and
- 147g/km by 2020

In 2014, the average CO2 emission for commercial vehicles in the EU was 169g/km, which is lower than the 2017 target.

Table 3.* Car manufacturers average CO2 emissions intensity of new light commercial vehicles sold in the European Union compared to Australia, 2013.

Make	Average vehicle CO2 emissions intensity (g/km)		
	European Union	Australia	Percentage difference (%)
General Motors	180	236	31
Ford	188	240	28
Nissan	194	242	25
Renault	166	208	25

- Source: National Transport Commission, 2015, "Carbon Dioxide Emissions Intensity for New Australian Light Vehicles 2014" The above table is an extract from Table 20.

4. Separate average CO2 emissions intensities for passenger vehicle CO2 emissions and light commercial vehicles

Annual sales of new vehicles comprised of: 81 per cent for passenger vehicles and 19 per cent for light commercial vehicles in 2014.

Table 4. Average carbon dioxide intensities for new passenger and light commercial vehicles.

Year	Passenger vehicles		Light commercial vehicles	
	Average CO2 emissions intensity (g/km)	Sales	Average CO2 emissions intensity (g/km)	Sales
2012	190	882,507	238	196,461
2013	182	899,769	236	203,729
2014	177	883,761	235	197,191

- Source: National Transport Commission, 2015, "Carbon Dioxide Emissions Intensity for New Australian Light Vehicles 2014" The above table is an extract from Table 21.

Most reduction in average CO2 emissions intensities has been from new passenger vehicles, which supports the recommendation to have separate regulatory emissions targets for average CO2 emissions intensities for passenger vehicles and light commercial vehicles.