



Submission:

**CO2 Emissions Standards
November 2011**

by the
Sustainable Energy Association of Australia

www.seaaus.com.au

Executive Summary

Strong signals to the market will bring more rapid change, and all existing data show that the vehicle market is capable of rapid change.

In Australia, vehicle fuel efficiency standards and housing energy efficiency standards are a symptom of inadequate measures on sustainability. Improving the efficiency of the Australian fleet will improve affordability by providing Australians with greener vehicles that cost less to operate.

A minimum average annual 5% reduction target to 2015, with an average 10% per annum target starting from 2016 to 2020 should be applied.

A failure to create significant gains in the efficiency of manufactured vehicles in Australia will guarantee that vehicles manufactured in Australia are not competitive in future vehicle markets where energy efficiency and low emissions are increasingly desirable attributes in purchasing decisions of both domestic and fleet customers.

However, with a host of drivers for change including increases in the rate of innovation development of new products; continuous decreases in developmental lag from new technology to deployment; new supply side capabilities from nations, particularly China and Korea, ramping up production and driving increased market competition and new choice; growing consumer expectations, particularly driven by higher level of communication between consumers via on-line consumer blog sites; a desire by corporates to be greener, translated to purchase decisions by fleet managers with the support of CFOs. These drivers added to regulatory signals from government could potentially drive rates of change greater than 10% per annum to cleaner technologies.

Preamble

There have been significant gains in the design of vehicles in the past decade, driven primarily by innovations from the European market. Vehicle safety has changed substantially in the last ten years, following the adoption of new safety standards in Europe (European New Car Assessment Programme, or Euro NCAP) with the emergence of dual airbags becoming standard equipment for many passenger cars, and vehicle emissions for vehicles in the European market have also been substantially reduced.

In Australia, vehicle fuel efficiency standards and housing energy efficiency standards are a symptom of inadequate measures on sustainability. Improving the efficiency of the Australian fleet will improve affordability by providing Australians with greener vehicles that cost less to operate.

In creating an overriding directive for the consideration of economic efficiency, there is a single underlying assumption that efficiency is the single most important goal of a market. This assumption does not necessarily mean that an economically efficient market is the best choice when the market ignores important externalities and that are as a consequence become subordinate to economic efficiency.

Efficiency is an important goal of the economy, but it needs to be inclusive of sustainability, and desirability of goals and outcomes for the benefit of the community. For example decisions that are solely on the basis of simple economic models that then use economic efficiency as primary driver do not account for the cost of a range of externalities, and so these factors are not appropriately reflected in economic decisions.

A sustainable society depends on much more than efficient allocation of goods and services, issues such as:

- the sustainability of resources,
- the efficiency of the use of resources in a manner that minimises the long term cost to society;
- the issue of social equity and fairness (minimization of the impact on the disadvantaged which can create an additional drain on resources).

Where an economically efficient system is able to account appropriately for these externalities then the overriding economic efficiency directive is right. However, without being able to account for the externalities, economic efficiency can produce a suboptimal result, and economic efficiency may end with us putting a price of everything without a fair appraisal of the value of anything.

A raft of measures built on delivering lower emissions vehicles and bolstered with regulatory measures for modernisation of the fleet has the potential to reduce:

- air pollution (higher standard engines in cars);
- carbon emissions (fuel efficient cars);
- out of pocket expenditure (fuel efficient cars);
- motor vehicle accident occurrences (safer cars);
- motor vehicle accident injuries (safer cars);
- hospital queues (safer cars).

Q1 Do you support the setting of staged short and medium term targets?

Yes – failing to create significant gains in the efficiency of manufactured vehicles in Australia will guarantee that vehicles manufactured in Australia are not competitive in future vehicle markets where energy efficiency and low emissions are increasingly desirable attributes in purchasing decisions.

Q2 If yes, do you consider 2020 is the logical date for a firm second stage target?

Product cycles and market evolution for rapidly advancing technology can be as short as five years mean. Low rates of take-up of new devices occurs under the nice to have but will live without for a while – for example dishwashers (believe it or not) have been slow to be adopted at less than 2% per year for the last 50 years.

Strong rates of take up in the order of 10% per year will mean that most of the population will have adopted a technology within 10 years – that was what happened with VCRs and mobile phones.

Aggressive rates of replacement 20% year and can pretty much complete deployment of the whole market in around five years – we have seen it in car safety with airbags, and we'll probably see it with the transition from incandescent lights to compact fluorescent lights.

Q3 Do you consider it is appropriate to set a target beyond 2020 at this stage?

Rather than a specifically legislated target, an indicative statement that also indicates that if the market is not delivering through product innovation (as it might) then further government intervention might be required.

Q4 Do you consider 2010 is the appropriate base year for determining the targets?

Yes.

Q5 What rate of CO2 emissions reduction do you consider is achievable by 2015 and 2020 in Australia?

The car industry in Australia has already received substantial assistance from the taxpayer over the past decade, and has been exposed to strong market signals for a number of years to initiate changes in fuel consumption over the past five years. Strong targets therefore should not be surprising. A minimum 5% target to 2015, with a 10% per annum target starting from 2016.

As stated earlier, failing to create significant gains in the efficiency of manufactured vehicles in Australia will guarantee that vehicles manufactured in Australia are not competitive in future vehicle markets where energy efficiency and low emissions are increasingly desirable attributes in purchasing decisions.

Q6 What do you think is a reasonable CO2 target for the Australian new light vehicle fleet in 2015 and 2020?

A trajectory that is designed to catch up with European standards by 2020.

Q7 Are there any impediments to Australia achieving the more ambitious rates of reduction embodied in Scenarios 5 and 6 above?.

The only impediment to change at more ambitious rates is a lack of willingness to do so.

Q8 Do stakeholders have any information on costs and benefits of standards which would assist the Department of Infrastructure and Transport in the preparation of the cost benefit analysis for the implementation RIS?

Zoepf 2011 is informative showing that a five-year product development cycle is appropriate for modeling the automotive industry, and that rates of change of 10% per annum are common and 20% per annum is achievable with

Q9 Should Australia set a single set of CO2 targets for all light vehicles, or is there merit in establishing separate targets for passenger vehicles (cars and SUVs) and for LCVs (utes and vans)?

The target should be shared and not be lower for one group or another; improving energy efficiency in motor vehicles is the all-encompassing objective here.

Q10 Do you support the idea of bonus credits for new technology vehicles (such as EVs), flex fuel vehicles and other technologies, or should the CO2 standard be purely performance based, treating all vehicles on the same basis (using the CO2 emissions result on the standard ADR test)?

SEA does not support bonus credits or 'phantom' credits that do not deliver a tangible outcome in emissions reductions.

Q12 Do you support an attribute based standard? and

Q13 If so, do you have a preference for mass or footprint?

SEA supports an attribute-based standard, and accepts the conclusions of ICCT (2010) study that highlights the inherent disadvantages of the mass-based framework, it should be supplanted by size-based standards.

Q16 Do you agree that the current VFACTS database (supplemented and audited as necessary) is suitable as the primary data source for assessing and reporting compliance with the standards?

Yes.

Q17 Do you also agree that data collected for the purposes of the standard should be made publicly available on an annual basis?

Yes.

Q18 Do you agree that the Motor Vehicle Standards Act is the most appropriate primary legislation under which to write appropriate CO2 regulations?

Yes.

Q21 Do you consider there is merit in allowing manufacturers to pool, or is it an approach that manufacturers are unlikely to pursue?

Pooling should not be allowed - improving energy efficiency in motor vehicles is the all-encompassing objective here.

Q22 Do you think there is sufficient merit to warrant the inclusion of banking and trading systems as a feature of Australia's CO2 standards? and

Q23 Do you agree such systems are only possible where annual targets are set?

Annual target are not necessary, targets for 2015 and 2020 allow greater flexibility for the manufacturer to adapt within a 5 year product cycle, and means banking and trading is not necessary.

Q24 Do you agree that financial penalties are the most effective way to address non-compliance?

Q25 If not, what alternative would you suggest??

Financial penalties are appropriate, and a make-good provision (purchase of carbon offsets in addition to the fine) should be applied.

Other issues

SEA supports a price on carbon but recognises that there are significant other subsidies that distort the cost of energy. Many analyses only consider the economic efficiency of greenhouse gas abatement costs – the need for cleaner energy across the nation is not only about abatement.

While dealing with greenhouse gas emissions creating dangerous climate change is certainly the main game of developing low emissions technologies supporting greener economies, action on sustainable energy also delivers new jobs in the education, research, government, business and community sectors across the economy. Further, other important policy objectives achieved in supporting a clean economy includes energy security, energy price certainty, energy management and community values that are created through complementary measures. Measures created through emissions reductions for motor vehicles must translate into knowledge gain for Australian research for and intellectual property development for Australia.

New greener, less polluting, safer vehicles will not only reduce fuel consumption and greenhouse gas emissions, improve air quality in the city, but also improve safety standards on Australian roads, potentially saving lives. Regulatory changes that focus tax law and other tools to ensure that both fleets and private motorists are simultaneously incentivised and required to upgrade to low-emission vehicles. Where corporate fleets gain incentives funded by the taxpayer, those fleets must in return be required to share relevant data on performance, efficiency gains and cost savings.

We need both regulatory measures and market signals to improve energy efficiency and reduce greenhouse gas emissions in Australian vehicles. The Federal Government must implement a raft of measures, not only mandating levels of fuel efficiency of the national vehicle fleet, but also establishing appropriate taxation relief and rebates for fuel-efficient cars and commercial vehicles. The Government should also engage with the motor trade industry and seek their support for proactive change, including through a collaboration to reduce delivery charges levied on green cars. Such measures will create a rapid uptake of green vehicles.

Strong signals to the market will bring more rapid change, and all existing data show that the vehicle market is capable of rapid change (Zoepf 2011).

If the adoption rate of electric vehicles follows that of other motor vehicle technologies (as documented by Zoepf 2011), electric vehicles even at a modest cumulative adoption rate of 5% per annum from 2015 could well exceed 25% of new car sales by 2020. As a comparator, a 2009 study by the University of California (CET 2009) study has indicated 18% of car sales in the US could be 18% by 2020. However, with a host of drivers for change including increases in the rate of innovation development of new products, continuous decreases in developmental lag from new technology to deployment, new supply side capabilities from nations, particularly China and Korea, ramping up production driving increased market competition and new choice, growing consumer expectations, particularly driven by higher level of communication between consumers via on-line consumer blog sites, a desire by corporates to be greener, translated to purchase decisions by fleet managers with the support of CFOs, mixed with regulatory signals from government could potentially drive rates of change greater than 10% per annum.

References.

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EFTE (2011) *How clean are Europe's cars? An analysis of carmaker progress towards EU CO2 targets in 2010*. European Federation for Transport and Environment (T&E)

ICCT (2010) Fuel Economy and GHG Standards Design Series - Size or Mass? The Technical Rationale for Selecting Size as an Attribute for Vehicle Efficiency Standards White Paper Number 9, July 2010, John German and Nic Lutsey, International Council on Clean Transportation.

About the Sustainable Energy Association of Australia (SEA)

The peak body for sustainable energy

SEA promotes the development and adoption of sustainable energy technologies and services that minimise the use of energy through sustainable energy practices and maximise the use of energy from sustainable sources.

SEA 2030 VISION

'On behalf of the people of Australia, the Association will vigorously promote the development and adoption of sustainable energy so that by the year 2030 more than 30% of Australia's energy use in and across all states and territories is displaced by sustainable energy practices so that energy demand is more than 30% below that measured in the year 2000, and that more than 30% of energy use is derived from sustainable sources.'

About SEA

SEA is a chamber of businesses variously promoting, developing and/or adopting sustainable energy technologies and services that minimise the use of energy through sustainable energy practices and maximise the use of energy from sustainable sources.

SEA is building relationships with businesses that aspire to be more sustainable in their own energy use, are providing the commercial solution to climate change through their products and services, or indirectly through their actions adopting more sustainable energy practices in their own business. Many businesses are acting to support the development of the best policy outcomes for the industry by becoming SEA members.

The role of governments is to build frameworks of governance that establish clear market signals for change and growth, and allow Australia's innovative businesses to respond and deliver market-based solutions.

A key role of SEA is to offer policy options to governments building those frameworks.

SEA supports action on sustainable energy in every region and in all sectors of Australia's economy.

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