4 August 2017

Ms Judi Zielke
Deputy Secretary
Ministerial Forum on Vehicle Emissions
Department of Infrastructure and Regional Development (DI&RD)
CANBERRA ACT

FUEL EFFICIENCY STANDARD FOR LIGHT VEHICLES

Dear Judi

Gas Energy Australia is pleased to make comments on the proposed design of the *Fuel Efficiency Standard for Light Vehicles* circulated by DI&RD on 11 July 2017.

By way of background, Gas Energy Australia (GEA) is the national peak industry body for the bulk of the downstream gaseous fuels industry, including Liquefied Petroleum Gas (LPG), Liquefied Natural Gas (LNG) and Compressed Natural Gas (CNG). The industry comprises major companies and small to medium businesses in the alternative gaseous fuels supply chain; refiners, fuel marketers, equipment manufacturers, vehicle converters, consultants and other providers of services to the industry.

Overview

Gaseous fuels are a significant source of energy in Australia, providing energy for homes and businesses and fuel to power vehicles. The LPG sector alone in 2016 had domestic production totaling almost 2 million tonnes. *The Energy in Australia 2014* publication by the Bureau of Resources and Energy Economics (BREE) estimated that 3 per cent of energy consumption in the transport sector is autogas (LPG) and that natural gas (LNG and CNG) accounted for approximately 2 per cent of transport energy consumption[1].

The role of gaseous fuels in the Australian transport sector is significant with:

- almost 380,000 LPG powered vehicles;
- in excess of 3,300 dispensers supplying Autogas to Australians every day;
- over 4,000 CNG buses; and
- over 3,700 natural gas powered rigid trucks and non-freight carrying vehicles.

Additionally, gaseous fuels are Australian fuels, the greater use of which increases Australia's energy security as we are less reliant on imported fuels. Gaseous fuels are also locally produced and distributed, generating jobs and economic benefits for Australia.

GEA has previously applauded the Government's actions in establishing the Ministerial Forum on Vehicle Emissions and taking a whole-of-government approach to vehicle emissions, ie examining CO_2

[1] Bureau of Resources and Energy Economics "Energy in Australia" 2014

Gas Energy Australia
ABN 11 002 703951
Suite 7 16 National Circuit Barton ACT 2600
Telephone: 02 6176 3100 Fax: 02 6176 0207
www.gasenergygaustralia.asn.au

emissions, noxious tailpipe emissions and fuel quality together. In keeping with this position, we consider it critical that the proposed fuel efficiency standard for light vehicles is not developed in isolation.

The research report[2] prepared for DI&RD to assist it develop a fuel efficiency standard for light vehicles highlights the danger of developing such a standard independent of other vehicle emissions issues. Its modelling suggest meeting CO_2 emission targets would be accompanied by greater dieselisation of Australia's light vehicle fleet. This highlights the danger that focusing on one aspect of vehicle emissions might change consumer behaviour to such an extent that other undesirable results could occur.

In other words, by looking at reducing CO_2 emissions in isolation as indicated in DI&RD's proposed fuel efficiency standard, dieselisation of the fleet could occur which would result in worse outcomes for air quality, human health and mortality. This has been the experience in Europe over recent years. And it is not credible to pretend the World Health Organisation's conclusion that diesel particulates are cancer causing and that there is no safe level of airborne particulates, is only a problem for overseas countries and does not apply in Australia. It is a problem for Australians and this pollution is estimated to be causing up to 3,000 deaths a year in Australia[3].

Gaseous fuels vehicles are much better for the environment than their petrol and diesel counterparts. And gas vehicles are competitive with electric vehicles when well-to-wheel considerations are taken into account.

- Autogas emits up to 22 per cent less CO_2 and 68 per cent less NO_x than petrol; and
- Autogas emits 95 per cent less NO_x and 120 times less small particulate emissions than diesel[4].
- Similarly, CNG passenger vehicles reduce GHG emissions by up to 23 per cent compared to petrol and 7 per cent compared to diesel; and
- CNG heavy-duty vehicles generate 16 per cent fewer GHG than their diesel counterparts and LNG heavy-duty vehicles generate 6 per cent fewer GHG than their diesel counterparts.[5]

Reflecting this, GEA is concerned that the DI&RD paper outlining the proposed standard does not include discussion of the timing of the adoption Euro 6 and the interaction of the two. The Government should be designing its CO_2 target in conjunction with adoption of Euro 6 emission standards. This would allow Australia to maximise the benefits that these vehicles offer in relation to fuel saving technologies and pollutant emissions.

- Developing a CO_2 target independent of Euro 6 would produce sub-optimal results for Australia.

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[2] ABMARC "Analysis of the Australian 2015 New Light Vehicle Fleet and Review of Technology to Improve Light Vehicle Efficiency", December 2016

[3] Australian and New Zealand Journal of Public Health, Dr Adrian Barnett, "It's safe to say there's no safe level of air pollution" October 2014.

[4] WLPGA, www.auto-gas.net

[5] NGVA Europe "Greenhouse Gas Intensity of Natural Gas" July 2017

That said, like other industry associations, in particular the FCAI and AAA, GEA is broadly supportive of a fuel efficiency standard for light duty vehicles. However, the standard proposed by DI&RD needs refinement and improvement before we can support it as it stands, and like those other industry associations, GEA does not support Australia adopting more stringent standards than those applying in Europe, Japan or the United States.

At the same time, GEA supports Australia moving quickly to adopt its own fuel efficiency standard. The quicker Australia adopts a fuel efficiency standard the faster Australian motorists can reap the benefits of lower fuel costs and contribute to Australia reducing its greenhouse gas emissions.

Design features

As the proposed standard is presented, it contains one target for the total vehicle fleet, ie one target that covers light commercial vehicles (LCVs), passenger vehicles (PMVs) and sports utility vehicles (SUVs). GEA does not support this design feature and instead recommends the adoption of two targets – one for LCVs and another target for PMVs and SUVs.

- Setting a separate target for LCVs avoids imposing a heavier burden on manufacturers who sell a higher proportion of LCVs.

- Some technologies that could be utilised to improve the efficiency of PMVs could compromise attributes valued by consumers in the LCV market.

GEA is also concerned that the proposed standard does not include any consideration of "well-to-wheel" emissions. As the result, the proposed standard would favour the uptake of electric vehicles.

- Greater use of electric vehicles would reduce tailpipe emissions. But it is negligent to overlook the effect on emissions of requiring more electricity, which in Australia is primarily generated by burning coal. When this is taken into account, the positive CO_2 story from the uptake of electric vehicles is not as significant.

    - In addition, the proposed standard further favours electric vehicles by providing additional credits for the sale of electric vehicles. The Government should reduce these credits to take account of the true impact on emissions from the uptake of electric vehicles.

In relation to the details of the proposed fuel efficiency standard for light vehicles, GEA is supportive of the intention to allow banking of CO_2 credits – "…if the distributer has surplus credits at the end of a calendar year, these credits can be carried forward…". GEA also supports trading of credits. Both the European and US fuel efficiency standards incorporate such flexibility.

Further, it is worth noting that both the European and US fuel efficiency standards also provide credits for off-cycle technologies (ie not measured during the official drive cycle test) that reduce CO_2 emissions.

- The European regulation of CO_2 standards includes an Eco-innovation clause where technologies applied to vehicles that can demonstrate CO_2 reductions off-cycle are eligible to receive an emission reduction of up to 7g CO_2/km.

- The US Environmental Protection Agency provides multipliers on vehicle production numbers for vehicles that are alternatively fueled or utilise advanced technologies.

Australia's fuel efficiency standard needs to have the same sort of flexibility if it is to be able to lower Australian motorists' fuel costs.

In particular, GEA recommends Australia's standard should allow for the generation of off-cycle credits through the accredited conversion of vehicles to run on gaseous fuels.

- Government policy should recognise that retrofitting new light vehicles in a way that reduces their emissions, eg, converting it to run on autogas or CNG, would make a significant contribution to lowering emissions. There should be a mechanism in the guidelines to allow for gas vehicles to be included in the credit-based system. This is particularly important as there are currently no new gas vehicles being manufactured in Australia and none being imported, so the only way to get more environment friendly gas vehicles on the road is to retrofit vehicles to run on gas.

    - Also, the Government should implement a mechanism to allow for the trading of credits between vehicle distributors and approved installers of retrofit alternative fuel systems on new or 'as new' vehicles.

    - Alternative fuel vehicles, including gaseous fuelled ones, should be included in the Government's fuel efficiency standard regulations and its *Green Vehicle Guide*.

Conclusions and recommendations

The emissions performance of gas powered vehicles is significantly better than their petrol and diesel counterparts. It is also comparable to electric vehicles when calculations are taken on a well-to-wheel basis. More gas vehicles would reduce reliance on increasingly imported liquid fuel and unlike electric cars, would not increase the burden on an already overstretched electricity network. Gas vehicles are also much more affordable and practical than electric vehicles, especially for low-income households living outside the metropolitan areas of Australia's major cities.

It is critical that the Government's fuel efficiency standard incorporates the suggestions made in this submission so that gas powered vehicles can help Australia meets its commitment at the 2015 Paris Climate Agreement. Importantly, they can do this while leveraging Australian expertise and creating local jobs, and at the same time keeping motoring affordable for Australian families and businesses.

In particular, Gas Energy Australia strongly supports the introduction of a fuel efficiency standard for light vehicles which includes:

- ***two targets – one for LCVs and another target for PMVs and SUVs;***

- ***no unjustified assistance for electric vehicles by ignoring electricity generated emissions and providing additional credits for such vehicles;***

- ***the flexibility to bank and trade credits; and***

- ***the further flexibility to provide credits for off-cycle technologies such as the generation of credits through the accredited conversion of vehicles to run on gaseous fuels and enabling vehicle distributors and approved installers of retrofit alternative fuel systems to trade these credits.***

We would be more than happy to discuss our comments with you in more detail.

Yours sincerely

John Griffiths
Chief Executive Officer