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Director— Internal Communications and Creative Services
Communication Branch
Department of Infrastructure,
Transport, Regional Development
and Communications

Via email to vemissions@infrastructure.gov.au

GEA RESPONSE TO THE MINISTERIAL FORUM ON VEHICLE EMISSIONS

Dear Director

Gas Energy Australia (GEA) welcomes the opportunity to respond to the Draft Regulation Impact Statement—*Heavy Vehicle Emission Standards for Cleaner Air*.

By way of background, GEA is the national peak body which represents the bulk of the downstream gaseous fuels industry, which covers 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 gas fuels supply chain including producers, refiners, distributors, transporters, retailers, vehicle manufacturers, equipment manufacturers and suppliers, installers, educators and consultants.

GEA supports the Government's efforts to reduce heavy vehicle emissions and considers it critical for Australia to be brought into alignment with international standards adopted by major vehicle markets internationally such as the United States and Japan.

GEA considers that the optimal option to reduce noxious emissions from new heavy road vehicles presented in the Regulation Impact Statement (RIS), is Option 3 -: (Increased mandatory standards - mandate Euro VI (and equivalent US and Japanese standards) for heavy vehicles under the Road Vehicle Standards Act 2018 (RVSA). GEA considers that the introduction of increased mandatory standards under Option 3, will improve environmental and health outcomes for Australians, along with realising significant benefits from keeping pace with international standards. As this will reduce technical and commercial barriers to the supply of the latest heavy vehicle models fitted with the latest safety and fuel saving technologies as standard.

GEA also considers there to be a number of areas where the government can go further, to achieve greater health and environmental outcomes. This includes the introduction of more stringent vehicle emission standards at an earlier date than proposed in the RIS and the limiting of carbon emissions through the introduction of heavy vehicle standards.

Option 3 -: Increased mandatory standards

GEA considers that Option 3, which includes mandating improved noxious emissions performance for heavy vehicles by determining a new ADR under RSVA, is the optimal option for the introduction of more stringent standards. As noted in the RIS, Australia's existing standards are unlikely to continue delivering reductions in oxides of nitrogen (NOx) and particulate matter (PM) emissions in the longer term. 'Total heavy vehicle travel is predicted to grow by 66 per cent between 2016 and 2040 and heavy vehicle diesel fuel consumption is predicted to grow by 56 per cent over the same period' and in the absence of more stringent standards, PM and NOx emissions from heavy vehicles will increase out to 2050.

The introduction of more stringent standards to encourage the use of cleaner alternatives through fuel switching should be considered as an affordable way to improve Australia's air quality and reduce significant threats to human health posed by heavy vehicle emissions. Under Option 3, NOx emissions from the heavy vehicle fleet will be up to 81 per cent lower than expected under business as usual in 2050.

There is significant scope for the heavy vehicle sector to contribute to the Government's environmental objectives, with heavy vehicles accounting for a disproportionate share of noxious road vehicle emissions. Australia has vast supplies of affordable LPG and natural gas which both have a low carbon and noxious chemical content. Hence, the gaseous fuels industry has significant capability to assist the transport sector to achieve improved emission and environmental outcomes through the introduction of these increased mandatory standards.

Earlier commencement of Euro VI

GEA considers that Australia can achieve greater health and environmental benefits through the introduction of mandatory standards earlier than the proposed date in the RIS for new heavy vehicle models of 1 July 2027 and 1 July 2028 for all new heavy vehicles. As noted above, Australia has vast resources of gas fuels available for the heavy transport sector, with the ability to meet Euro VI standards today. Heavy vehicle manufacturers such as Scania and Iveco, currently have available for purchase in Australia, Euro VI gas powered heavy vehicles which also help to reduce CO2 emissions, along with NOx and PM. These viable

alternatives to diesel powered heavy vehicles can meet the stringent emissions standards under Euro VI and also contribute to reduced carbon emissions, and costs. As such, GEA considers that these increased mandatory standards should be introduced earlier, to take advantage of the development work already done by overseas manufacturers in achieving Euro VI emissions for heavy vehicles Australia.

Carbon emissions

GEA also considers that increased mandatory standards for heavy vehicles should not just be limited to NO_x, PM and ultrafine particulate emissions. They should also seek to reduce carbon emissions. The transport sector is the second largest source of emissions in the Australian economy, with emissions from heavy vehicles growing by 109 percent between 1990-2017¹. With all Australian States and Territories committing to a net zero target by 2050 or earlier, it is critical for the heavy vehicle sector to begin to reduce carbon emissions through fuel switching. Emissions reductions should not be limited to the introduction of more stringent standards for NO_x and PM emissions, particularly as focusing on one aspect of emissions may change consumer behaviour to such an extent that other undesirable results occur.

Gas fuels as a means to meet the more stringent heavy vehicle standards

As mentioned above, gas powered transport solutions utilise proven low emission technologies currently available and offer a number of advantages for operators in meeting increased mandatory standards for heavy vehicles. Gas fuelled vehicles have negligible levels of noxious emissions, particularly when compared to diesel vehicles, with gas powered heavy vehicles providing up to a 15 percent reduction in CO₂ emissions, up to a 60 percent reduction in NO_x, up to a 99 percent reduction in PM² and up to a 99 percent reduction in Sulfur Oxide³.

These environmental and health benefits can be realised now and well into the medium term through the increased use of fossil-based gas fuels such as LNG, LPG and CNG and in relation to CO₂ abatement, much bigger ones in the longer term through the use of decarbonised gases such as bioLPG, biomethane and green hydrogen.

¹Climate Analytics, Australia Climate Factsheets - Vehicle Emissions, March 2019
<https://climateanalytics.org/media/australiacclimatefactsheets2019-transportsector>

²Scania, Iveco, 2019

³Energies, A Review on Liquefied Natural Gas as Fuels for Dual Fuel Engines: Opportunities, Challenges and Responses, 23 November 2020

Gas powered vehicles can also offer cost advantages over traditional heavy vehicle fuels such as diesel. One example is the heavy-duty dual fuel (HDDF) system which substitutes LPG for diesel. Sixteen Volvo HDDF prime movers operated by national freight and logistics company Rivet Energy have been fitted with modified engines which substitute LPG for diesel by 23%. These HDDF trucks operate across Victoria, NSW, SA and Queensland and deliver LPG on bulk and multi-drop delivery runs to businesses every day of the year. On average per year, each vehicle saves around 7% in fuel costs and reduces carbon emissions by almost 8,000 kilograms, which is equivalent to taking four cars off the road.

Conclusion

In conclusion, GEA considers that Option 3 presented in the RIS, which seeks to implement increased mandatory standards for heavy vehicles, is the optimal option for improving the environment, especially air quality, and reducing harm to the health of Australians. In addition, GEA sees opportunities for the Government to go further in its pursuit of cleaner heavy vehicles and include CO₂ emissions in its mandatory standards. Gas fuels can make a significant contribution to these goals while minimising costs. Moreover, greater use of gas fuels would also pave the way for the use of renewable gases in the future which would further reduce CO₂ emissions to zero without the very high costs of rolling out electric charging and hydrogen refuelling infrastructure.

GEA welcomes the opportunity to discuss these issues in greater detail. If you have any questions regarding this submission, please do not hesitate to contact GEA's Policy Adviser Melissa Dimovski at mdimovski@gasenergyaustralia.asn.au.

For your consideration.

Yours sincerely

A handwritten signature in black ink, appearing to read "John Griffiths", with a horizontal line drawn through it.

John Griffiths
Chief Executive Officer
Gas Energy Australia